

# **US ROCKIES WATTENBERG PLANNING**

**WELD-NAD83-UTMFT13N  
2N-65W-13 Swartz No2 Pad  
SWARTZ 26C-12HZ**

**Plan A**

**Plan: Permit Rev-1**

## **Standard Planning Report**

**30 July, 2015**

Design: Permit Rev-1

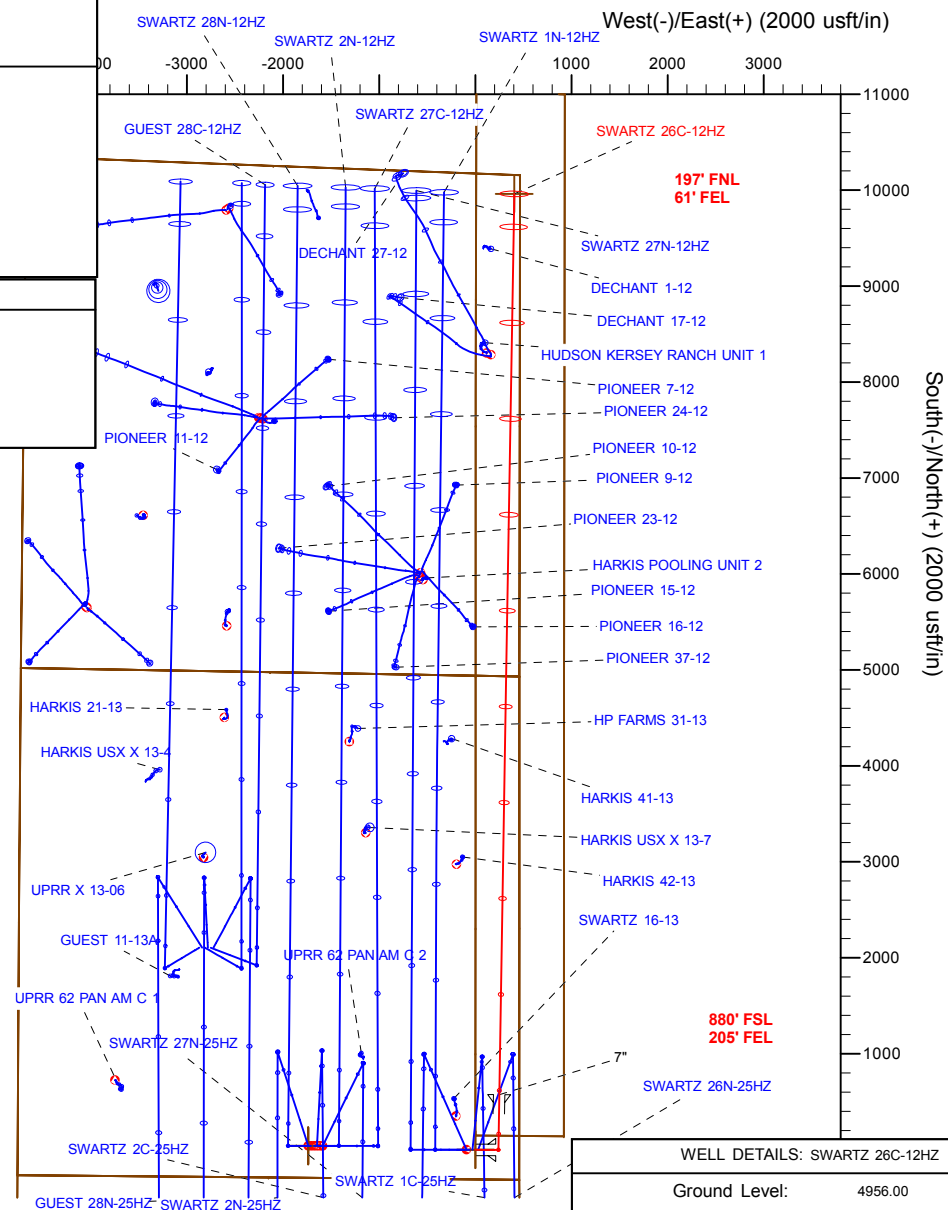
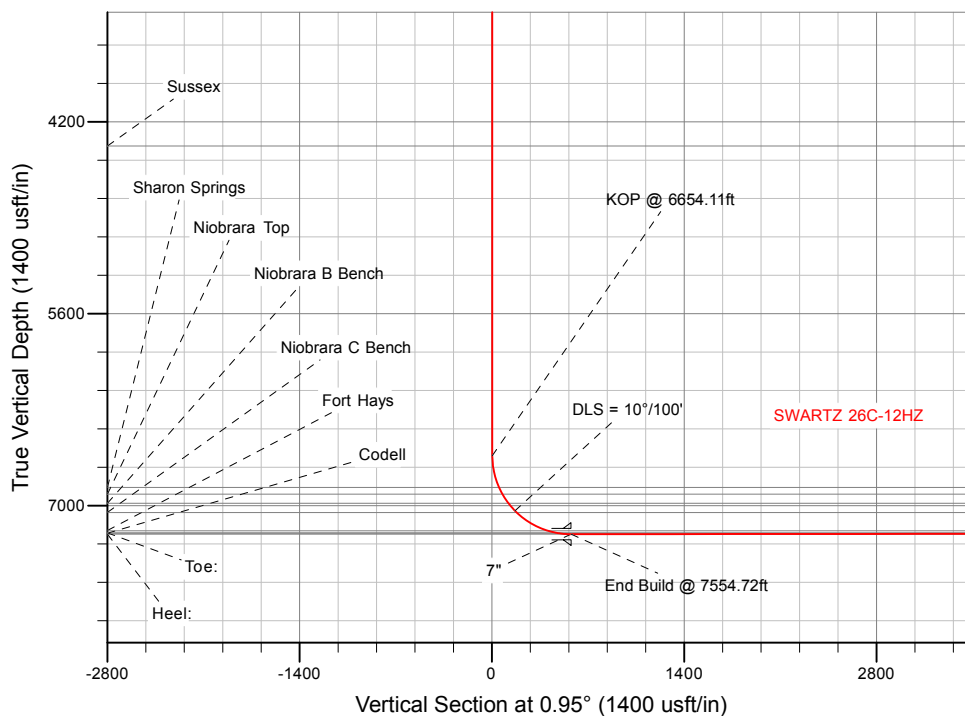
# US ROCKIES WATTENBERG PLANNING

## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	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	90.00	913.29	0.00	58.03	1.50	90.00	0.96	
4	1716.67	10.00	90.00	1701.13	0.00	196.95	0.00	0.00	3.27	
5	2216.67	0.00	0.00	2198.60	0.00	240.47	2.00	180.00	3.99	
6	6654.11	0.00	0.00	6636.04	0.00	240.47	0.00	0.00	3.99	
7	7554.72	90.06	0.95	7209.00	573.49	249.94	10.00	0.95	577.55	
8	16944.33	90.06	0.95	7199.00	9961.82	404.88	0.00	0.00	9967.16	SWARTZ 26C-12HZ Toe

## WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
SWARTZ 26C-12HZ_SHL	0.00	0.00	0.00	40.131976	-104.604581	Point
SWARTZ 26C-12HZ_ToE	7199.00	9961.82	404.88	40.159332	-104.603132	Point

WELL DETAILS: SWARTZ 26C-12HZ

Ground Level: 4956.00

RKB = 17' @ 4973.00usft (D Rig)

Plan: Permit Rev-1 (SWARTZ 26C-12HZ/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 26C-12HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 4973.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 4973.00usft (D Rig)
<b>Site:</b>	2N-65W-13 Swartz No2 Pad	<b>North Reference:</b>	True
<b>Well:</b>	SWARTZ 26C-12HZ	<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)		

<b>Site</b>	2N-65W-13 Swartz No2 Pad			
<b>Site Position:</b>		<b>Northing:</b>	14,575,037.83 usft	<b>Latitude:</b> 40.131978
<b>From:</b>	Lat/Long	<b>Easting:</b>	1,750,820.88 usft	<b>Longitude:</b> -104.605010
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b> 0.25 °

Well	SWARTZ 26C-12HZ					
Well Position	+N/-S	-0.73 usft	Northing:	14,575,037.64 usft	Latitude:	40.131976
	+E/-W	119.91 usft	Easting:	1,750,940.80 usft	Longitude:	-104.604581
Position Uncertainty		3.28 usft	Wellhead Elevation:	0.00 usft	Ground Level:	4,956.00 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	7/29/2015	8.20	66.72	52,572

<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	0.95

<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	
916.67	10.00	90.00	913.29	0.00	58.03	1.50	1.50	0.00	90.00	
1,716.67	10.00	90.00	1,701.13	0.00	196.95	0.00	0.00	0.00	0.00	
2,216.67	0.00	0.00	2,198.60	0.00	240.47	2.00	-2.00	0.00	180.00	
6,654.11	0.00	0.00	6,636.04	0.00	240.47	0.00	0.00	0.00	0.00	
7,554.72	90.06	0.95	7,209.00	573.49	249.94	10.00	10.00	0.10	0.95	
16,944.33	90.06	0.95	7,199.00	9,961.82	404.88	0.00	0.00	0.00	0.00	SWARTZ 26C-12HZ_

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well SWARTZ 26C-12HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 4973.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 4973.00usft (D Rig)
<b>Site:</b>	2N-65W-13 Swartz No2 Pad	<b>North Reference:</b>	True
<b>Well:</b>	SWARTZ 26C-12HZ	<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 - SWARTZ 26C-12HZ_Drilling Window - 2N-R65W-Sec. 12_Section lines</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	90.00	300.00	0.00	0.33	0.01	1.50	1.50	0.00	
400.00	2.25	90.00	399.96	0.00	2.94	0.05	1.50	1.50	0.00	
500.00	3.75	90.00	499.82	0.00	8.18	0.14	1.50	1.50	0.00	
600.00	5.25	90.00	599.51	0.00	16.02	0.27	1.50	1.50	0.00	
700.00	6.75	90.00	698.96	0.00	26.48	0.44	1.50	1.50	0.00	
800.00	8.25	90.00	798.10	0.00	39.53	0.66	1.50	1.50	0.00	
900.00	9.75	90.00	896.87	0.00	55.17	0.91	1.50	1.50	0.00	
916.67	10.00	90.00	913.29	0.00	58.03	0.96	1.50	1.50	0.00	
<b>End Nudge @ 916.67ft</b>										
1,000.00	10.00	90.00	995.35	0.00	72.50	1.20	0.00	0.00	0.00	
1,100.00	10.00	90.00	1,093.84	0.00	89.87	1.49	0.00	0.00	0.00	
1,200.00	10.00	90.00	1,192.32	0.00	107.23	1.78	0.00	0.00	0.00	
1,300.00	10.00	90.00	1,290.80	0.00	124.60	2.07	0.00	0.00	0.00	
1,382.46	10.00	90.00	1,372.00	0.00	138.91	2.30	0.00	0.00	0.00	
<b>Fox Hills</b>										
1,400.00	10.00	90.00	1,389.28	0.00	141.96	2.35	0.00	0.00	0.00	
1,500.00	10.00	90.00	1,487.76	0.00	159.32	2.64	0.00	0.00	0.00	
1,600.00	10.00	90.00	1,586.24	0.00	176.69	2.93	0.00	0.00	0.00	
1,700.00	10.00	90.00	1,684.72	0.00	194.05	3.22	0.00	0.00	0.00	
1,716.67	10.00	90.00	1,701.14	0.00	196.95	3.27	0.00	0.00	0.00	
<b>Begin Drop @ 1716.67ft</b>										
1,800.00	8.33	90.00	1,783.40	0.00	210.22	3.49	2.00	-2.00	0.00	
1,816.77	8.00	90.00	1,800.00	0.00	212.61	3.52	2.00	-2.00	0.00	
<b>9 5/8"</b>										
1,900.00	6.33	90.00	1,882.58	0.00	222.99	3.70	2.00	-2.00	0.00	
2,000.00	4.33	90.00	1,982.14	0.00	232.28	3.85	2.00	-2.00	0.00	
2,100.00	2.33	90.00	2,081.96	0.00	238.10	3.95	2.00	-2.00	0.00	
2,200.00	0.33	90.00	2,181.93	0.00	240.42	3.99	2.00	-2.00	0.00	
2,216.67	0.00	0.00	2,198.60	0.00	240.47	3.99	2.00	-2.00	0.00	
<b>End Drop @ 2216.67ft</b>										
2,300.00	0.00	0.00	2,281.93	0.00	240.47	3.99	0.00	0.00	0.00	
2,400.00	0.00	0.00	2,381.93	0.00	240.47	3.99	0.00	0.00	0.00	
2,500.00	0.00	0.00	2,481.93	0.00	240.47	3.99	0.00	0.00	0.00	
2,600.00	0.00	0.00	2,581.93	0.00	240.47	3.99	0.00	0.00	0.00	
2,700.00	0.00	0.00	2,681.93	0.00	240.47	3.99	0.00	0.00	0.00	
2,800.00	0.00	0.00	2,781.93	0.00	240.47	3.99	0.00	0.00	0.00	
2,900.00	0.00	0.00	2,881.93	0.00	240.47	3.99	0.00	0.00	0.00	
3,000.00	0.00	0.00	2,981.93	0.00	240.47	3.99	0.00	0.00	0.00	
3,100.00	0.00	0.00	3,081.93	0.00	240.47	3.99	0.00	0.00	0.00	
3,200.00	0.00	0.00	3,181.93	0.00	240.47	3.99	0.00	0.00	0.00	
3,300.00	0.00	0.00	3,281.93	0.00	240.47	3.99	0.00	0.00	0.00	
3,400.00	0.00	0.00	3,381.93	0.00	240.47	3.99	0.00	0.00	0.00	
3,500.00	0.00	0.00	3,481.93	0.00	240.47	3.99	0.00	0.00	0.00	
3,600.00	0.00	0.00	3,581.93	0.00	240.47	3.99	0.00	0.00	0.00	
3,700.00	0.00	0.00	3,681.93	0.00	240.47	3.99	0.00	0.00	0.00	
3,800.00	0.00	0.00	3,781.93	0.00	240.47	3.99	0.00	0.00	0.00	
3,900.00	0.00	0.00	3,881.93	0.00	240.47	3.99	0.00	0.00	0.00	

# Anadarko

## Planning Report

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<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 4973.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 4973.00usft (D Rig)
<b>Site:</b>	2N-65W-13 Swartz No2 Pad	<b>North Reference:</b>	True
<b>Well:</b>	SWARTZ 26C-12HZ	<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)
4,000.00	0.00	0.00	3,981.93	0.00	240.47	3.99	0.00	0.00	0.00
4,100.00	0.00	0.00	4,081.93	0.00	240.47	3.99	0.00	0.00	0.00
4,200.00	0.00	0.00	4,181.93	0.00	240.47	3.99	0.00	0.00	0.00
4,300.00	0.00	0.00	4,281.93	0.00	240.47	3.99	0.00	0.00	0.00
4,394.07	0.00	0.00	4,376.00	0.00	240.47	3.99	0.00	0.00	0.00
<b>Sussex</b>									
4,400.00	0.00	0.00	4,381.93	0.00	240.47	3.99	0.00	0.00	0.00
4,500.00	0.00	0.00	4,481.93	0.00	240.47	3.99	0.00	0.00	0.00
4,600.00	0.00	0.00	4,581.93	0.00	240.47	3.99	0.00	0.00	0.00
4,700.00	0.00	0.00	4,681.93	0.00	240.47	3.99	0.00	0.00	0.00
4,800.00	0.00	0.00	4,781.93	0.00	240.47	3.99	0.00	0.00	0.00
4,900.00	0.00	0.00	4,881.93	0.00	240.47	3.99	0.00	0.00	0.00
5,000.00	0.00	0.00	4,981.93	0.00	240.47	3.99	0.00	0.00	0.00
5,100.00	0.00	0.00	5,081.93	0.00	240.47	3.99	0.00	0.00	0.00
5,200.00	0.00	0.00	5,181.93	0.00	240.47	3.99	0.00	0.00	0.00
5,300.00	0.00	0.00	5,281.93	0.00	240.47	3.99	0.00	0.00	0.00
5,400.00	0.00	0.00	5,381.93	0.00	240.47	3.99	0.00	0.00	0.00
5,500.00	0.00	0.00	5,481.93	0.00	240.47	3.99	0.00	0.00	0.00
5,600.00	0.00	0.00	5,581.93	0.00	240.47	3.99	0.00	0.00	0.00
5,700.00	0.00	0.00	5,681.93	0.00	240.47	3.99	0.00	0.00	0.00
5,800.00	0.00	0.00	5,781.93	0.00	240.47	3.99	0.00	0.00	0.00
5,900.00	0.00	0.00	5,881.93	0.00	240.47	3.99	0.00	0.00	0.00
6,000.00	0.00	0.00	5,981.93	0.00	240.47	3.99	0.00	0.00	0.00
6,100.00	0.00	0.00	6,081.93	0.00	240.47	3.99	0.00	0.00	0.00
6,200.00	0.00	0.00	6,181.93	0.00	240.47	3.99	0.00	0.00	0.00
6,300.00	0.00	0.00	6,281.93	0.00	240.47	3.99	0.00	0.00	0.00
6,400.00	0.00	0.00	6,381.93	0.00	240.47	3.99	0.00	0.00	0.00
6,500.00	0.00	0.00	6,481.93	0.00	240.47	3.99	0.00	0.00	0.00
6,600.00	0.00	0.00	6,581.93	0.00	240.47	3.99	0.00	0.00	0.00
6,654.11	0.00	0.00	6,636.04	0.00	240.47	3.99	0.00	0.00	0.00
<b>KOP @ 6654.11ft</b>									
6,700.00	4.59	0.95	6,681.88	1.84	240.50	5.82	10.00	10.00	0.00
6,800.00	14.59	0.95	6,780.36	18.47	240.78	22.46	10.00	10.00	0.00
6,891.54	23.74	0.95	6,866.73	48.49	241.27	52.48	10.00	10.00	0.00
<b>Sharon Springs</b>									
6,900.00	24.59	0.95	6,874.45	51.95	241.33	55.95	10.00	10.00	0.00
6,947.45	29.33	0.95	6,916.73	73.46	241.68	77.45	10.00	10.00	0.00
<b>Niobrara Top</b>									
7,000.00	34.59	0.95	6,961.30	101.26	242.14	105.26	10.00	10.00	0.00
7,027.43	37.33	0.95	6,983.50	117.37	242.41	121.37	10.00	10.00	0.00
<b>Niobrara B Bench</b>									
7,100.00	44.59	0.95	7,038.27	164.90	243.19	168.91	10.00	10.00	0.00
<b>DLS = 10°/100'</b>									
7,116.69	46.26	0.95	7,049.98	176.79	243.39	180.80	10.00	10.00	0.00
<b>Niobrara C Bench</b>									
7,200.00	54.59	0.95	7,103.01	240.93	244.45	244.95	10.00	10.00	0.00
7,300.00	64.59	0.95	7,153.57	327.06	245.87	331.09	10.00	10.00	0.00
7,384.18	73.01	0.95	7,183.98	405.46	247.16	409.50	10.00	10.00	0.00
<b>Fort Hays</b>									
7,400.00	74.59	0.95	7,188.40	420.65	247.41	424.69	10.00	10.00	0.00
7,465.13	81.10	0.95	7,202.10	484.27	248.46	488.32	10.00	10.00	0.00
<b>Codell</b>									
7,500.00	84.59	0.95	7,206.44	518.86	249.03	522.92	10.00	10.00	0.00

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well SWARTZ 26C-12HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 4973.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 4973.00usft (D Rig)
<b>Site:</b>	2N-65W-13 Swartz No2 Pad	<b>North Reference:</b>	True
<b>Well:</b>	SWARTZ 26C-12HZ	<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)
7,554.72	90.06	0.95	7,209.00	573.49	249.94	577.56	10.00	10.00	0.00
End Build @ 7554.72ft - Heel: - 7"									
7,600.00	90.06	0.95	7,208.95	618.77	250.68	622.84	0.00	0.00	0.00
7,700.00	90.06	0.95	7,208.84	718.75	252.33	722.84	0.00	0.00	0.00
7,800.00	90.06	0.95	7,208.74	818.74	253.98	822.84	0.00	0.00	0.00
7,900.00	90.06	0.95	7,208.63	918.73	255.63	922.84	0.00	0.00	0.00
8,000.00	90.06	0.95	7,208.52	1,018.71	257.28	1,022.84	0.00	0.00	0.00
8,100.00	90.06	0.95	7,208.42	1,118.70	258.93	1,122.84	0.00	0.00	0.00
8,200.00	90.06	0.95	7,208.31	1,218.68	260.58	1,222.84	0.00	0.00	0.00
8,300.00	90.06	0.95	7,208.20	1,318.67	262.23	1,322.84	0.00	0.00	0.00
8,400.00	90.06	0.95	7,208.10	1,418.66	263.88	1,422.84	0.00	0.00	0.00
8,500.00	90.06	0.95	7,207.99	1,518.64	265.53	1,522.84	0.00	0.00	0.00
8,600.00	90.06	0.95	7,207.88	1,618.63	267.18	1,622.84	0.00	0.00	0.00
8,700.00	90.06	0.95	7,207.78	1,718.62	268.84	1,722.84	0.00	0.00	0.00
8,800.00	90.06	0.95	7,207.67	1,818.60	270.49	1,822.84	0.00	0.00	0.00
8,900.00	90.06	0.95	7,207.56	1,918.59	272.14	1,922.84	0.00	0.00	0.00
9,000.00	90.06	0.95	7,207.46	2,018.58	273.79	2,022.84	0.00	0.00	0.00
9,100.00	90.06	0.95	7,207.35	2,118.56	275.44	2,122.84	0.00	0.00	0.00
9,200.00	90.06	0.95	7,207.24	2,218.55	277.09	2,222.84	0.00	0.00	0.00
9,300.00	90.06	0.95	7,207.14	2,318.53	278.74	2,322.84	0.00	0.00	0.00
9,400.00	90.06	0.95	7,207.03	2,418.52	280.39	2,422.84	0.00	0.00	0.00
9,500.00	90.06	0.95	7,206.93	2,518.51	282.04	2,522.84	0.00	0.00	0.00
9,600.00	90.06	0.95	7,206.82	2,618.49	283.69	2,622.84	0.00	0.00	0.00
9,700.00	90.06	0.95	7,206.71	2,718.48	285.34	2,722.84	0.00	0.00	0.00
9,800.00	90.06	0.95	7,206.61	2,818.47	286.99	2,822.84	0.00	0.00	0.00
9,900.00	90.06	0.95	7,206.50	2,918.45	288.64	2,922.84	0.00	0.00	0.00
10,000.00	90.06	0.95	7,206.39	3,018.44	290.29	3,022.84	0.00	0.00	0.00
10,100.00	90.06	0.95	7,206.29	3,118.43	291.94	3,122.84	0.00	0.00	0.00
10,200.00	90.06	0.95	7,206.18	3,218.41	293.59	3,222.84	0.00	0.00	0.00
10,300.00	90.06	0.95	7,206.07	3,318.40	295.24	3,322.84	0.00	0.00	0.00
10,400.00	90.06	0.95	7,205.97	3,418.38	296.89	3,422.84	0.00	0.00	0.00
10,500.00	90.06	0.95	7,205.86	3,518.37	298.54	3,522.84	0.00	0.00	0.00
10,600.00	90.06	0.95	7,205.75	3,618.36	300.19	3,622.84	0.00	0.00	0.00
10,700.00	90.06	0.95	7,205.65	3,718.34	301.84	3,722.84	0.00	0.00	0.00
10,800.00	90.06	0.95	7,205.54	3,818.33	303.49	3,822.84	0.00	0.00	0.00
10,900.00	90.06	0.95	7,205.43	3,918.32	305.14	3,922.84	0.00	0.00	0.00
11,000.00	90.06	0.95	7,205.33	4,018.30	306.79	4,022.84	0.00	0.00	0.00
11,100.00	90.06	0.95	7,205.22	4,118.29	308.44	4,122.84	0.00	0.00	0.00
11,200.00	90.06	0.95	7,205.12	4,218.27	310.09	4,222.84	0.00	0.00	0.00
11,300.00	90.06	0.95	7,205.01	4,318.26	311.74	4,322.84	0.00	0.00	0.00
11,400.00	90.06	0.95	7,204.90	4,418.25	313.39	4,422.84	0.00	0.00	0.00
11,500.00	90.06	0.95	7,204.80	4,518.23	315.04	4,522.84	0.00	0.00	0.00
11,600.00	90.06	0.95	7,204.69	4,618.22	316.69	4,622.84	0.00	0.00	0.00
11,700.00	90.06	0.95	7,204.58	4,718.21	318.34	4,722.84	0.00	0.00	0.00
11,800.00	90.06	0.95	7,204.48	4,818.19	319.99	4,822.84	0.00	0.00	0.00
11,900.00	90.06	0.95	7,204.37	4,918.18	321.64	4,922.84	0.00	0.00	0.00
12,000.00	90.06	0.95	7,204.26	5,018.17	323.29	5,022.84	0.00	0.00	0.00
12,100.00	90.06	0.95	7,204.16	5,118.15	324.94	5,122.84	0.00	0.00	0.00
12,200.00	90.06	0.95	7,204.05	5,218.14	326.59	5,222.84	0.00	0.00	0.00
12,300.00	90.06	0.95	7,203.94	5,318.12	328.24	5,322.84	0.00	0.00	0.00
12,400.00	90.06	0.95	7,203.84	5,418.11	329.89	5,422.84	0.00	0.00	0.00
12,500.00	90.06	0.95	7,203.73	5,518.10	331.54	5,522.84	0.00	0.00	0.00
12,600.00	90.06	0.95	7,203.63	5,618.08	333.19	5,622.84	0.00	0.00	0.00
12,700.00	90.06	0.95	7,203.52	5,718.07	334.84	5,722.84	0.00	0.00	0.00

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well SWARTZ 26C-12HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 4973.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 4973.00usft (D Rig)
<b>Site:</b>	2N-65W-13 Swartz No2 Pad	<b>North Reference:</b>	True
<b>Well:</b>	SWARTZ 26C-12HZ	<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)
12,800.00	90.06	0.95	7,203.41	5,818.06	336.49	5,822.84	0.00	0.00	0.00
12,900.00	90.06	0.95	7,203.31	5,918.04	338.14	5,922.84	0.00	0.00	0.00
13,000.00	90.06	0.95	7,203.20	6,018.03	339.79	6,022.84	0.00	0.00	0.00
13,100.00	90.06	0.95	7,203.09	6,118.01	341.44	6,122.84	0.00	0.00	0.00
13,200.00	90.06	0.95	7,202.99	6,218.00	343.09	6,222.84	0.00	0.00	0.00
13,300.00	90.06	0.95	7,202.88	6,317.99	344.74	6,322.83	0.00	0.00	0.00
13,400.00	90.06	0.95	7,202.77	6,417.97	346.39	6,422.83	0.00	0.00	0.00
13,500.00	90.06	0.95	7,202.67	6,517.96	348.04	6,522.83	0.00	0.00	0.00
13,600.00	90.06	0.95	7,202.56	6,617.95	349.69	6,622.83	0.00	0.00	0.00
13,700.00	90.06	0.95	7,202.45	6,717.93	351.34	6,722.83	0.00	0.00	0.00
13,800.00	90.06	0.95	7,202.35	6,817.92	352.99	6,822.83	0.00	0.00	0.00
13,900.00	90.06	0.95	7,202.24	6,917.91	354.64	6,922.83	0.00	0.00	0.00
14,000.00	90.06	0.95	7,202.13	7,017.89	356.29	7,022.83	0.00	0.00	0.00
14,100.00	90.06	0.95	7,202.03	7,117.88	357.94	7,122.83	0.00	0.00	0.00
14,200.00	90.06	0.95	7,201.92	7,217.86	359.59	7,222.83	0.00	0.00	0.00
14,300.00	90.06	0.95	7,201.82	7,317.85	361.24	7,322.83	0.00	0.00	0.00
14,400.00	90.06	0.95	7,201.71	7,417.84	362.89	7,422.83	0.00	0.00	0.00
14,500.00	90.06	0.95	7,201.60	7,517.82	364.54	7,522.83	0.00	0.00	0.00
14,600.00	90.06	0.95	7,201.50	7,617.81	366.19	7,622.83	0.00	0.00	0.00
14,700.00	90.06	0.95	7,201.39	7,717.80	367.84	7,722.83	0.00	0.00	0.00
14,800.00	90.06	0.95	7,201.28	7,817.78	369.50	7,822.83	0.00	0.00	0.00
14,900.00	90.06	0.95	7,201.18	7,917.77	371.15	7,922.83	0.00	0.00	0.00
15,000.00	90.06	0.95	7,201.07	8,017.76	372.80	8,022.83	0.00	0.00	0.00
15,100.00	90.06	0.95	7,200.96	8,117.74	374.45	8,122.83	0.00	0.00	0.00
15,200.00	90.06	0.95	7,200.86	8,217.73	376.10	8,222.83	0.00	0.00	0.00
15,300.00	90.06	0.95	7,200.75	8,317.71	377.75	8,322.83	0.00	0.00	0.00
15,400.00	90.06	0.95	7,200.64	8,417.70	379.40	8,422.83	0.00	0.00	0.00
15,500.00	90.06	0.95	7,200.54	8,517.69	381.05	8,522.83	0.00	0.00	0.00
15,600.00	90.06	0.95	7,200.43	8,617.67	382.70	8,622.83	0.00	0.00	0.00
15,700.00	90.06	0.95	7,200.32	8,717.66	384.35	8,722.83	0.00	0.00	0.00
15,800.00	90.06	0.95	7,200.22	8,817.65	386.00	8,822.83	0.00	0.00	0.00
15,900.00	90.06	0.95	7,200.11	8,917.63	387.65	8,922.83	0.00	0.00	0.00
16,000.00	90.06	0.95	7,200.01	9,017.62	389.30	9,022.83	0.00	0.00	0.00
16,100.00	90.06	0.95	7,199.90	9,117.60	390.95	9,122.83	0.00	0.00	0.00
16,200.00	90.06	0.95	7,199.79	9,217.59	392.60	9,222.83	0.00	0.00	0.00
16,300.00	90.06	0.95	7,199.69	9,317.58	394.25	9,322.83	0.00	0.00	0.00
16,400.00	90.06	0.95	7,199.58	9,417.56	395.90	9,422.83	0.00	0.00	0.00
16,500.00	90.06	0.95	7,199.47	9,517.55	397.55	9,522.83	0.00	0.00	0.00
16,600.00	90.06	0.95	7,199.37	9,617.54	399.20	9,622.83	0.00	0.00	0.00
16,700.00	90.06	0.95	7,199.26	9,717.52	400.85	9,722.83	0.00	0.00	0.00
16,800.00	90.06	0.95	7,199.15	9,817.51	402.50	9,822.83	0.00	0.00	0.00
16,900.00	90.06	0.95	7,199.05	9,917.50	404.15	9,922.83	0.00	0.00	0.00
16,944.33	90.06	0.95	7,199.00	9,961.82	404.88	9,967.16	0.00	0.00	0.00
TD Well @ 16944.33ft - SWARTZ 26C-12HZ_Toe									

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well SWARTZ 26C-12HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 4973.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 4973.00usft (D Rig)
<b>Site:</b>	2N-65W-13 Swartz No2 Pad	<b>North Reference:</b>	True
<b>Well:</b>	SWARTZ 26C-12HZ	<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 26C-12HZ_SH-	0.00	0.00	0.00	0.00	0.00	14,575,037.64	1,750,940.80	40.131976	-104.604581
- plan hits target center									
- Point									
2N-R65W-Sec. 25_Secti	0.00	0.00	0.00	40.48	-1,736.62	14,575,070.39	1,749,204.01	40.132087	-104.610794
- plan misses target center by 1737.09usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Polygon									
Point 1			0.00	-5,575.96	-3,064.67	14,569,480.86	1,746,164.18		
Point 2			0.00	-5,592.14	-413.46	14,569,476.47	1,748,815.43		
Point 3			0.00	-5,609.35	2,238.63	14,569,471.06	1,751,467.57		
Point 4			0.00	-8,247.40	2,259.94	14,566,833.13	1,751,500.62		
Point 5			0.00	-10,884.05	2,281.32	14,564,196.60	1,751,533.73		
Point 6			0.00	-10,912.19	-413.54	14,564,156.47	1,748,839.02		
Point 7			0.00	-11,002.15	-3,033.15	14,564,054.86	1,746,219.83		
Point 8			0.00	-8,271.55	-3,044.64	14,566,785.38	1,746,196.20		
2N-R65W-Sec. 13_Secti	0.00	0.00	0.00	40.48	-1,736.62	14,575,070.39	1,749,204.01	40.132087	-104.610794
- plan misses target center by 1737.09usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Polygon									
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	14,579,973.38	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	14,574,750.83	1,746,181.69		
Point 8			0.00	2,332.94	-3,010.80	14,577,389.92	1,746,182.86		
SWARTZ 26C-12HZ_Dri	0.00	0.00	0.00	0.00	0.00	14,575,037.64	1,750,940.80	40.131976	-104.604581
- plan hits target center									
- Polygon									
Point 1			0.00	140.49	920.23	14,575,182.22	1,751,860.39		
Point 2			0.00	149.27	0.36	14,575,186.91	1,750,940.49		
Point 3			0.00	1,000.81	1.02	14,576,038.44	1,750,937.36		
Point 4			0.00	2,307.38	2.04	14,577,345.00	1,750,932.57		
Point 5			0.00	4,931.58	2.58	14,579,969.18	1,750,921.44		
Point 6			0.00	7,543.22	5.75	14,582,580.81	1,750,912.99		
Point 7			0.00	8,863.28	7.39	14,583,900.86	1,750,908.76		
Point 8			0.00	10,171.31	9.02	14,585,208.89	1,750,904.57		
Point 9			0.00	11,029.24	10.13	14,586,066.81	1,750,901.86		
Point 10			0.00	10,998.19	930.09	14,586,039.86	1,751,821.95		
Point 11			0.00	4,930.92	922.58	14,579,972.61	1,751,841.43		
Point 12			0.00	140.49	920.23	14,575,182.22	1,751,860.39		
2N-R65W-Sec. 12_Secti	0.00	0.00	0.00	40.48	-1,736.62	14,575,070.39	1,749,204.01	40.132087	-104.610794
- plan misses target center by 1737.09usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Polygon									
Point 1			0.00	10,311.40	-2,932.44	14,585,368.65	1,746,225.73		
Point 2			0.00	10,213.49	-365.25	14,585,282.16	1,748,793.33		
Point 3			0.00	10,115.80	2,202.09	14,585,195.89	1,751,361.08		
Point 4			0.00	7,504.68	2,199.03	14,582,584.78	1,751,369.63		
Point 5			0.00	4,893.27	2,196.04	14,579,973.38	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	1,746,208.49		
2N-R65W-Sec. 24_Secti	0.00	0.00	0.00	40.48	-1,736.62	14,575,070.39	1,749,204.01	40.132087	-104.610794
- plan misses target center by 1737.09usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Polygon									
Point 1			0.00	-306.12	-3,023.71	14,574,750.83	1,746,181.69		



# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well SWARTZ 26C-12HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 4973.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 4973.00usft (D Rig)
<b>Site:</b>	2N-65W-13 Swartz No2 Pad	<b>North Reference:</b>	True
<b>Well:</b>	SWARTZ 26C-12HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	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	14,572,099.15	1,751,433.61				
Point 5	0.00	-5,609.35	2,238.63	14,569,471.06	1,751,467.57				
Point 6	0.00	-5,592.14	-413.46	14,569,476.47	1,748,815.43				
Point 7	0.00	-5,575.96	-3,064.67	14,569,480.86	1,746,164.18				
Point 8	0.00	-2,941.37	-3,043.57	14,572,115.51	1,746,173.56				
SWARTZ 26C-12HZ_To	0.00	0.00	7,199.00	9,961.82	404.88	14,585,001.16	1,751,301.36	40.159332	-104.603132
- plan hits target center									
- Point									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
1,816.77	1,800.00	9 5/8"		9-5/8	13-1/2
7,554.72	7,209.00	7"		7	8-3/4

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,382.46	1,372.00	Fox Hills		0.00	
4,394.07	4,376.00	Sussex		0.00	
6,891.54	6,866.73	Sharon Springs		0.00	
6,947.45	6,916.73	Niobrara Top		0.00	
7,027.43	6,983.50	Niobrara B Bench		0.00	
7,116.69	7,049.98	Niobrara C Bench		0.00	
7,384.18	7,183.98	Fort Hays		0.00	
16,944.33	7,199.00	Toe:		0.00	
7,465.13	7,202.10	Codell		0.00	
7,554.72	7,209.00	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
916.67	913.29	0.00	58.03	End Nudge @ 916.67ft
1,716.67	1,701.14	0.00	196.95	Begin Drop @ 1716.67ft
2,216.67	2,198.60	0.00	240.47	End Drop @ 2216.67ft
6,654.11	6,636.04	0.00	240.47	KOP @ 6654.11ft
7,100.00	7,038.27	164.90	243.19	DLS = 10°/100'
7,554.72	7,209.00	573.49	249.94	End Build @ 7554.72ft
16,944.33	7,199.00	9,961.82	404.88	TD Well @ 16944.33ft