

# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**WELD\_SPARBOE 2 PAD**

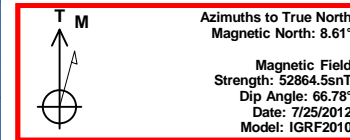
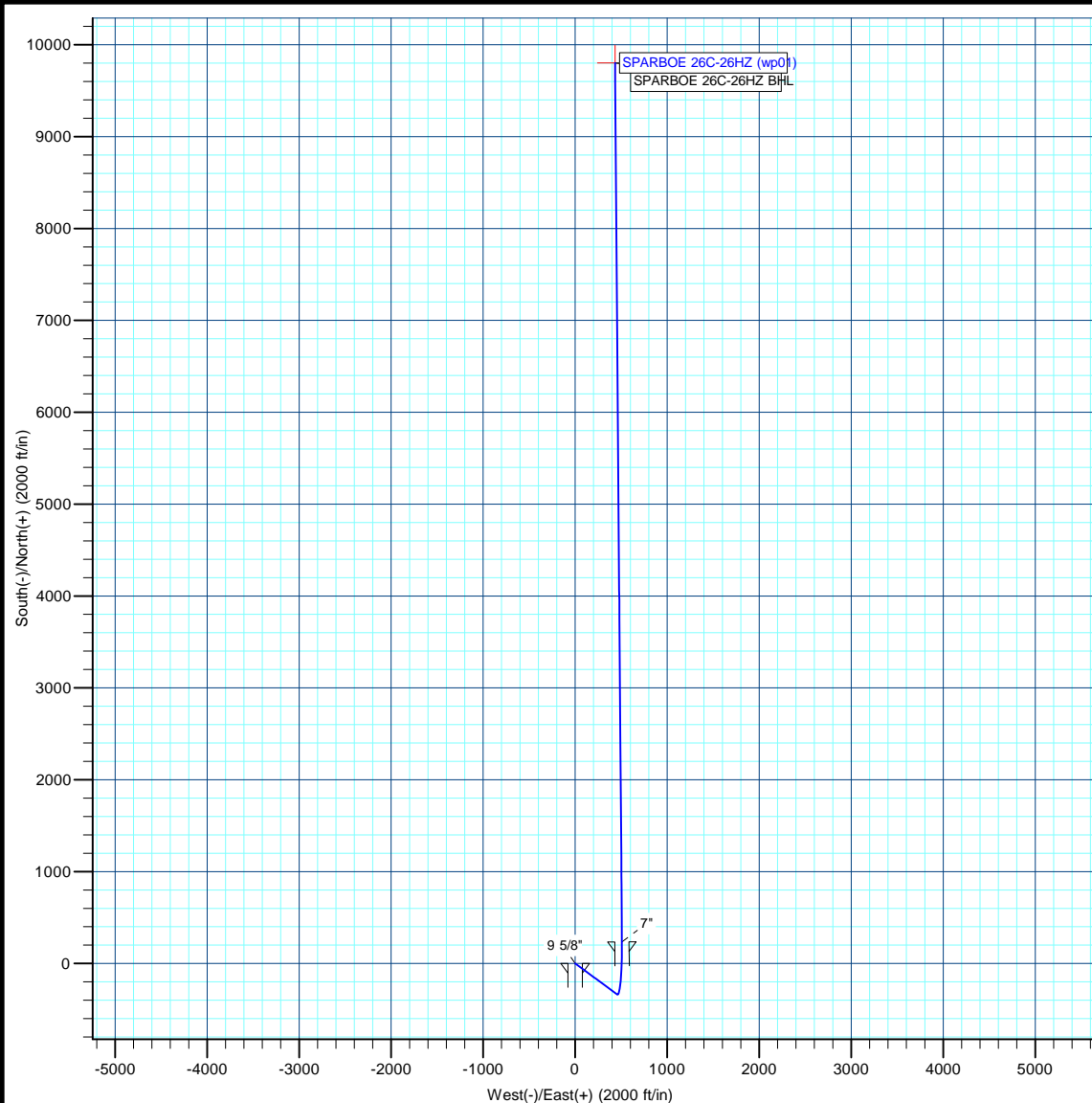
**SPARBOE 26C-26HZ**

**SPARBOE 26C-26HZ**

**Plan: SPARBOE 26C-26HZ (wp01)**

## **Standard Planning Report**

**25 July, 2012**



Project: COLORADO NORTHERN ZONE - 83  
Site: WELD\_SPARBOE 2 PAD  
Well: SPARBOE 26C-26HZ  
Wellbore: SPARBOE 26C-26HZ  
Section:  
SHL:  
Design: SPARBOE 26C-26HZ (wp01)  
Latitude: 40.088610  
Longitude: -104.624546  
GL: 4946.00  
KB: GL +RKB @ 4963.00ft

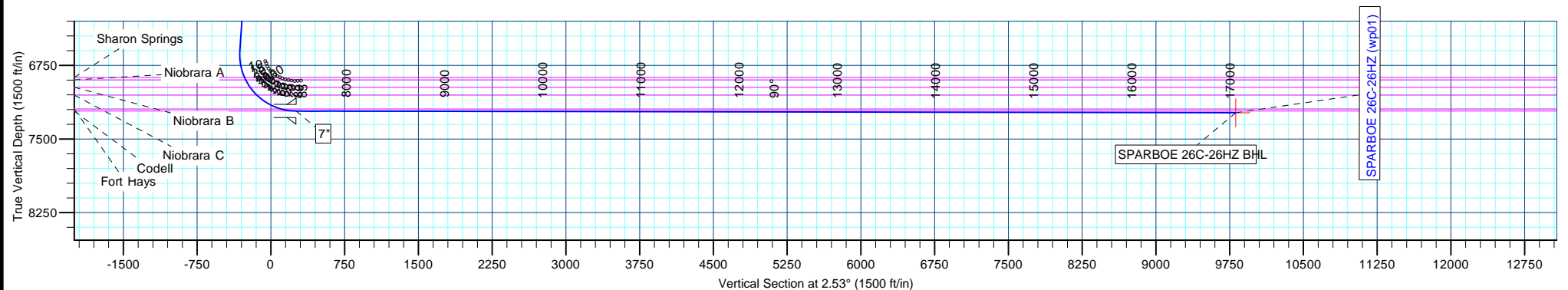
WELL DETAILS: SPARBOE 26C-26HZ						
+N/-S	+E/-W	Northing	Ground Level: Easting	4946.00	Latitude	Longitude
0.00	0.00	1276334.39	3244938.93	40.088610	-104.624546	Slot

CASING DETAILS			
TVD	MD	Name	Size
1300.00	1300.00	9 5/8"	9-5/8
7216.00	7576.69	7"	7

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
809.00	809.00	Fox Hills
4962.00	4983.27	Sussex
6873.00	6912.74	Sharon Springs
6898.00	6940.42	Niobrara A
6972.00	7026.83	Niobrara B
7054.00	7135.00	Niobrara C
7194.00	7418.06	Fort Hays
7216.00	7576.69	Codell

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
SPARBOE 26C-26HZ BHL	7233.00	9801.66	432.66	40.115517	-104.622999	Point

SECTION DETAILS								
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00	0.00
1827.16	6.54	126.35	1826.45	-11.06	15.03	2.00	126.35	-10.39
6638.54	6.54	126.35	6606.49	-336.05	456.60	0.00	0.00	-315.59
7576.69	89.90	359.55	7216.00	235.00	508.00	10.00	-126.63	257.17
7614.24	89.90	359.55	7216.07	272.55	507.70	0.01	-146.83	294.68
17143.66	89.90	359.55	7233.00	9801.66	432.66	0.00	0.00	9811.20



# Anadarko Petroleum Corp

## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well SPARBOE 26C-26HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL +RKB @ 4963.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL +RKB @ 4963.00ft
<b>Site:</b>	WELD_SPARBOE 2 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SPARBOE 26C-26HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	SPARBOE 26C-26HZ		
<b>Design:</b>	SPARBOE 26C-26HZ (wp01)		

<b>Project</b>	COLORADO NORTHERN ZONE - 83		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

<b>Site</b>	WELD_SPARBOE 2 PAD			
<b>Site Position:</b>		<b>Northing:</b>	1,276,334.39 usft	<b>Latitude:</b> 40.088610
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,244,938.93 usft	<b>Longitude:</b> -104.624546
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b> 0.57 °

<b>Well</b>	SPARBOE 26C-26HZ			
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	1,276,334.39 usft
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	3,244,938.93 usft
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	<b>Ground Level:</b> 4,946.00 ft

<b>Wellbore</b>	SPARBOE 26C-26HZ				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	7/25/2012	8.61	66.78	52,865

<b>Design</b>	SPARBOE 26C-26HZ (wp01)			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	2.53

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	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	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,827.16	6.54	126.35	1,826.45	-11.06	15.03	2.00	2.00	0.00	126.35	
6,638.54	6.54	126.35	6,606.49	-336.05	456.60	0.00	0.00	0.00	0.00	
7,576.69	89.90	359.55	7,216.00	235.00	508.00	10.00	8.89	-13.52	-126.63	
7,614.24	89.90	359.55	7,216.07	272.55	507.70	0.01	0.00	0.00	-146.83	
17,143.66	89.90	359.55	7,233.00	9,801.66	432.66	0.00	0.00	0.00	0.00	SPARBOE 26C-26HZ

# Anadarko Petroleum Corp

## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well SPARBOE 26C-26HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL +RKB @ 4963.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL +RKB @ 4963.00ft
<b>Site:</b>	WELD_SPARBOE 2 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SPARBOE 26C-26HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	SPARBOE 26C-26HZ		
<b>Design:</b>	SPARBOE 26C-26HZ (wp01)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	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
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
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
809.00	0.00	0.00	809.00	0.00	0.00	0.00	0.00	0.00	0.00
Fox Hills									
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8"									
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
1,600.00	2.00	126.35	1,599.98	-1.03	1.41	-0.97	2.00	2.00	0.00
1,700.00	4.00	126.35	1,699.84	-4.14	5.62	-3.88	2.00	2.00	0.00
1,800.00	6.00	126.35	1,799.45	-9.30	12.64	-8.74	2.00	2.00	0.00
1,827.16	6.54	126.35	1,826.45	-11.06	15.03	-10.39	2.00	2.00	0.00
Start 4811.37 hold at 1827.16 MD									
1,900.00	6.54	126.35	1,898.81	-15.98	21.71	-15.01	0.00	0.00	0.00
2,000.00	6.54	126.35	1,998.16	-22.74	30.89	-21.35	0.00	0.00	0.00
2,100.00	6.54	126.35	2,097.51	-29.49	40.07	-27.69	0.00	0.00	0.00
2,200.00	6.54	126.35	2,196.86	-36.24	49.25	-34.04	0.00	0.00	0.00
2,300.00	6.54	126.35	2,296.21	-43.00	58.42	-40.38	0.00	0.00	0.00
2,400.00	6.54	126.35	2,395.56	-49.75	67.60	-46.72	0.00	0.00	0.00
2,500.00	6.54	126.35	2,494.91	-56.51	76.78	-53.07	0.00	0.00	0.00
2,600.00	6.54	126.35	2,594.26	-63.26	85.96	-59.41	0.00	0.00	0.00
2,700.00	6.54	126.35	2,693.60	-70.02	95.14	-65.75	0.00	0.00	0.00
2,800.00	6.54	126.35	2,792.95	-76.77	104.31	-72.10	0.00	0.00	0.00
2,900.00	6.54	126.35	2,892.30	-83.53	113.49	-78.44	0.00	0.00	0.00
3,000.00	6.54	126.35	2,991.65	-90.28	122.67	-84.78	0.00	0.00	0.00
3,100.00	6.54	126.35	3,091.00	-97.04	131.85	-91.13	0.00	0.00	0.00
3,200.00	6.54	126.35	3,190.35	-103.79	141.02	-97.47	0.00	0.00	0.00
3,300.00	6.54	126.35	3,289.70	-110.54	150.20	-103.81	0.00	0.00	0.00
3,400.00	6.54	126.35	3,389.04	-117.30	159.38	-110.16	0.00	0.00	0.00
3,500.00	6.54	126.35	3,488.39	-124.05	168.56	-116.50	0.00	0.00	0.00
3,600.00	6.54	126.35	3,587.74	-130.81	177.73	-122.84	0.00	0.00	0.00
3,700.00	6.54	126.35	3,687.09	-137.56	186.91	-129.19	0.00	0.00	0.00
3,800.00	6.54	126.35	3,786.44	-144.32	196.09	-135.53	0.00	0.00	0.00
3,900.00	6.54	126.35	3,885.79	-151.07	205.27	-141.87	0.00	0.00	0.00
4,000.00	6.54	126.35	3,985.14	-157.83	214.45	-148.22	0.00	0.00	0.00
4,100.00	6.54	126.35	4,084.48	-164.58	223.62	-154.56	0.00	0.00	0.00
4,200.00	6.54	126.35	4,183.83	-171.34	232.80	-160.90	0.00	0.00	0.00
4,300.00	6.54	126.35	4,283.18	-178.09	241.98	-167.25	0.00	0.00	0.00
4,400.00	6.54	126.35	4,382.53	-184.84	251.16	-173.59	0.00	0.00	0.00
4,500.00	6.54	126.35	4,481.88	-191.60	260.33	-179.93	0.00	0.00	0.00
4,600.00	6.54	126.35	4,581.23	-198.35	269.51	-186.28	0.00	0.00	0.00
4,700.00	6.54	126.35	4,680.58	-205.11	278.69	-192.62	0.00	0.00	0.00

# Anadarko Petroleum Corp

## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well SPARBOE 26C-26HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL +RKB @ 4963.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL +RKB @ 4963.00ft
<b>Site:</b>	WELD_SPARBOE 2 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SPARBOE 26C-26HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	SPARBOE 26C-26HZ		
<b>Design:</b>	SPARBOE 26C-26HZ (wp01)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,800.00	6.54	126.35	4,779.92	-211.86	287.87	-198.96	0.00	0.00	0.00
4,900.00	6.54	126.35	4,879.27	-218.62	297.04	-205.31	0.00	0.00	0.00
4,983.27	6.54	126.35	4,962.00	-224.24	304.69	-210.59	0.00	0.00	0.00
<b>Sussex</b>									
5,000.00	6.54	126.35	4,978.62	-225.37	306.22	-211.65	0.00	0.00	0.00
5,100.00	6.54	126.35	5,077.97	-232.13	315.40	-217.99	0.00	0.00	0.00
5,200.00	6.54	126.35	5,177.32	-238.88	324.58	-224.34	0.00	0.00	0.00
5,300.00	6.54	126.35	5,276.67	-245.64	333.76	-230.68	0.00	0.00	0.00
5,400.00	6.54	126.35	5,376.02	-252.39	342.93	-237.02	0.00	0.00	0.00
5,500.00	6.54	126.35	5,475.36	-259.14	352.11	-243.36	0.00	0.00	0.00
5,600.00	6.54	126.35	5,574.71	-265.90	361.29	-249.71	0.00	0.00	0.00
5,700.00	6.54	126.35	5,674.06	-272.65	370.47	-256.05	0.00	0.00	0.00
5,800.00	6.54	126.35	5,773.41	-279.41	379.64	-262.39	0.00	0.00	0.00
5,900.00	6.54	126.35	5,872.76	-286.16	388.82	-268.74	0.00	0.00	0.00
6,000.00	6.54	126.35	5,972.11	-292.92	398.00	-275.08	0.00	0.00	0.00
6,100.00	6.54	126.35	6,071.46	-299.67	407.18	-281.42	0.00	0.00	0.00
6,200.00	6.54	126.35	6,170.81	-306.43	416.35	-287.77	0.00	0.00	0.00
6,300.00	6.54	126.35	6,270.15	-313.18	425.53	-294.11	0.00	0.00	0.00
6,400.00	6.54	126.35	6,369.50	-319.94	434.71	-300.45	0.00	0.00	0.00
6,500.00	6.54	126.35	6,468.85	-326.69	443.89	-306.80	0.00	0.00	0.00
6,600.00	6.54	126.35	6,568.20	-333.44	453.07	-313.14	0.00	0.00	0.00
6,638.54	6.54	126.35	6,606.49	-336.05	456.60	-315.59	0.00	0.00	0.00
<b>Start DLS 10.00 TFO -126.63</b>									
6,650.00	5.93	117.41	6,617.88	-336.71	457.65	-316.20	10.00	-5.34	-77.98
6,700.00	5.70	66.46	6,667.66	-336.91	462.23	-316.19	10.00	-0.46	-101.90
6,750.00	8.93	35.32	6,717.26	-332.75	466.75	-311.84	10.00	6.45	-62.29
6,800.00	13.29	22.41	6,766.32	-324.26	471.19	-303.17	10.00	8.73	-25.82
6,850.00	17.99	15.97	6,814.46	-311.52	475.50	-290.24	10.00	9.39	-12.89
6,900.00	22.81	12.15	6,861.31	-294.61	479.67	-273.17	10.00	9.64	-7.63
6,912.74	24.05	11.41	6,873.00	-289.65	480.71	-268.17	10.00	9.73	-5.79
<b>Sharon Springs</b>									
6,940.42	26.76	10.04	6,898.00	-277.98	482.91	-256.42	10.00	9.77	-4.98
<b>Niobrara A</b>									
6,950.00	27.69	9.62	6,906.52	-273.66	483.66	-252.07	10.00	9.80	-4.37
7,000.00	32.61	7.79	6,949.74	-248.84	487.43	-227.11	10.00	9.83	-3.65
7,026.83	35.26	7.00	6,972.00	-233.99	489.35	-212.19	10.00	9.86	-2.94
<b>Niobrara B</b>									
7,050.00	37.55	6.40	6,990.65	-220.34	490.95	-198.47	10.00	9.88	-2.60
7,100.00	42.49	5.29	7,028.93	-188.36	494.21	-166.38	10.00	9.90	-2.22
7,135.00	45.96	4.63	7,054.00	-164.05	496.32	-142.00	10.00	9.91	-1.88
<b>Niobrara C</b>									
7,150.00	47.45	4.38	7,064.29	-153.16	497.18	-131.09	10.00	9.92	-1.73
7,200.00	52.42	3.59	7,096.46	-115.00	499.83	-92.84	10.00	9.93	-1.56
7,250.00	57.39	2.91	7,125.20	-74.17	502.14	-51.95	10.00	9.94	-1.37
7,300.00	62.36	2.30	7,150.29	-30.98	504.10	-8.72	10.00	9.94	-1.22
7,350.00	67.33	1.74	7,171.54	14.23	505.69	36.52	10.00	9.95	-1.12
7,400.00	72.31	1.22	7,188.78	61.13	506.89	83.43	10.00	9.95	-1.04
7,418.06	74.11	1.04	7,194.00	78.42	507.23	100.71	10.00	9.95	-1.00
<b>Fort Hays</b>									
7,450.00	77.29	0.73	7,201.89	109.36	507.71	131.65	10.00	9.96	-0.97
7,500.00	82.26	0.26	7,210.76	158.55	508.13	180.80	10.00	9.96	-0.94
7,550.00	87.24	359.79	7,215.33	208.32	508.15	230.53	10.00	9.96	-0.92
7,576.69	89.90	359.55	7,216.00	235.00	508.00	257.18	10.00	9.96	-0.92

# Anadarko Petroleum Corp

## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well SPARBOE 26C-26HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL +RKB @ 4963.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL +RKB @ 4963.00ft
<b>Site:</b>	WELD_SPARBOE 2 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SPARBOE 26C-26HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	SPARBOE 26C-26HZ		
<b>Design:</b>	SPARBOE 26C-26HZ (wp01)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Start DLS 0.01 TFO -146.83 - Codell - 7"									
7,600.00	89.90	359.55	7,216.04	258.31	507.82	280.46	0.01	0.00	0.00
7,614.22	89.90	359.55	7,216.07	272.53	507.70	294.65	0.00	0.00	0.00
Start 9529.44 hold at 7614.21 MD									
7,614.24	89.90	359.55	7,216.07	272.55	507.70	294.68	3.34	-2.79	-1.83
7,700.00	89.90	359.55	7,216.22	358.31	507.03	380.32	0.00	0.00	0.00
7,800.00	89.90	359.55	7,216.40	458.31	506.24	480.19	0.00	0.00	0.00
7,900.00	89.90	359.55	7,216.57	558.30	505.45	580.05	0.00	0.00	0.00
8,000.00	89.90	359.55	7,216.75	658.30	504.67	679.91	0.00	0.00	0.00
8,100.00	89.90	359.55	7,216.93	758.30	503.88	779.78	0.00	0.00	0.00
8,200.00	89.90	359.55	7,217.11	858.29	503.09	879.64	0.00	0.00	0.00
8,300.00	89.90	359.55	7,217.28	958.29	502.30	979.51	0.00	0.00	0.00
8,400.00	89.90	359.55	7,217.46	1,058.29	501.52	1,079.37	0.00	0.00	0.00
8,500.00	89.90	359.55	7,217.64	1,158.28	500.73	1,179.24	0.00	0.00	0.00
8,600.00	89.90	359.55	7,217.82	1,258.28	499.94	1,279.10	0.00	0.00	0.00
8,700.00	89.90	359.55	7,218.00	1,358.28	499.15	1,378.97	0.00	0.00	0.00
8,800.00	89.90	359.55	7,218.17	1,458.27	498.37	1,478.83	0.00	0.00	0.00
8,900.00	89.90	359.55	7,218.35	1,558.27	497.58	1,578.70	0.00	0.00	0.00
9,000.00	89.90	359.55	7,218.53	1,658.27	496.79	1,678.56	0.00	0.00	0.00
9,100.00	89.90	359.55	7,218.71	1,758.26	496.00	1,778.43	0.00	0.00	0.00
9,200.00	89.90	359.55	7,218.88	1,858.26	495.22	1,878.29	0.00	0.00	0.00
9,300.00	89.90	359.55	7,219.06	1,958.26	494.43	1,978.16	0.00	0.00	0.00
9,400.00	89.90	359.55	7,219.24	2,058.25	493.64	2,078.02	0.00	0.00	0.00
9,500.00	89.90	359.55	7,219.42	2,158.25	492.86	2,177.89	0.00	0.00	0.00
9,600.00	89.90	359.55	7,219.60	2,258.25	492.07	2,277.75	0.00	0.00	0.00
9,700.00	89.90	359.55	7,219.77	2,358.24	491.28	2,377.62	0.00	0.00	0.00
9,800.00	89.90	359.55	7,219.95	2,458.24	490.49	2,477.48	0.00	0.00	0.00
9,900.00	89.90	359.55	7,220.13	2,558.24	489.71	2,577.34	0.00	0.00	0.00
10,000.00	89.90	359.55	7,220.31	2,658.23	488.92	2,677.21	0.00	0.00	0.00
10,100.00	89.90	359.55	7,220.48	2,758.23	488.13	2,777.07	0.00	0.00	0.00
10,200.00	89.90	359.55	7,220.66	2,858.23	487.34	2,876.94	0.00	0.00	0.00
10,300.00	89.90	359.55	7,220.84	2,958.23	486.56	2,976.80	0.00	0.00	0.00
10,400.00	89.90	359.55	7,221.02	3,058.22	485.77	3,076.67	0.00	0.00	0.00
10,500.00	89.90	359.55	7,221.19	3,158.22	484.98	3,176.53	0.00	0.00	0.00
10,600.00	89.90	359.55	7,221.37	3,258.22	484.19	3,276.40	0.00	0.00	0.00
10,700.00	89.90	359.55	7,221.55	3,358.21	483.41	3,376.26	0.00	0.00	0.00
10,800.00	89.90	359.55	7,221.73	3,458.21	482.62	3,476.13	0.00	0.00	0.00
10,900.00	89.90	359.55	7,221.91	3,558.21	481.83	3,575.99	0.00	0.00	0.00
11,000.00	89.90	359.55	7,222.08	3,658.20	481.04	3,675.86	0.00	0.00	0.00
11,100.00	89.90	359.55	7,222.26	3,758.20	480.26	3,775.72	0.00	0.00	0.00
11,200.00	89.90	359.55	7,222.44	3,858.20	479.47	3,875.59	0.00	0.00	0.00
11,300.00	89.90	359.55	7,222.62	3,958.19	478.68	3,975.45	0.00	0.00	0.00
11,400.00	89.90	359.55	7,222.79	4,058.19	477.89	4,075.32	0.00	0.00	0.00
11,500.00	89.90	359.55	7,222.97	4,158.19	477.11	4,175.18	0.00	0.00	0.00
11,600.00	89.90	359.55	7,223.15	4,258.18	476.32	4,275.05	0.00	0.00	0.00
11,700.00	89.90	359.55	7,223.33	4,358.18	475.53	4,374.91	0.00	0.00	0.00
11,800.00	89.90	359.55	7,223.50	4,458.18	474.74	4,474.77	0.00	0.00	0.00
11,900.00	89.90	359.55	7,223.68	4,558.17	473.96	4,574.64	0.00	0.00	0.00
12,000.00	89.90	359.55	7,223.86	4,658.17	473.17	4,674.50	0.00	0.00	0.00
12,100.00	89.90	359.55	7,224.04	4,758.17	472.38	4,774.37	0.00	0.00	0.00
12,200.00	89.90	359.55	7,224.22	4,858.16	471.59	4,874.23	0.00	0.00	0.00
12,300.00	89.90	359.55	7,224.39	4,958.16	470.81	4,974.10	0.00	0.00	0.00
12,400.00	89.90	359.55	7,224.57	5,058.16	470.02	5,073.96	0.00	0.00	0.00
12,500.00	89.90	359.55	7,224.75	5,158.15	469.23	5,173.83	0.00	0.00	0.00

# Anadarko Petroleum Corp

## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well SPARBOE 26C-26HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL +RKB @ 4963.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL +RKB @ 4963.00ft
<b>Site:</b>	WELD_SPARBOE 2 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SPARBOE 26C-26HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	SPARBOE 26C-26HZ		
<b>Design:</b>	SPARBOE 26C-26HZ (wp01)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,600.00	89.90	359.55	7,224.93	5,258.15	468.44	5,273.69	0.00	0.00	0.00
12,700.00	89.90	359.55	7,225.10	5,358.15	467.66	5,373.56	0.00	0.00	0.00
12,800.00	89.90	359.55	7,225.28	5,458.14	466.87	5,473.42	0.00	0.00	0.00
12,900.00	89.90	359.55	7,225.46	5,558.14	466.08	5,573.29	0.00	0.00	0.00
13,000.00	89.90	359.55	7,225.64	5,658.14	465.29	5,673.15	0.00	0.00	0.00
13,100.00	89.90	359.55	7,225.81	5,758.13	464.51	5,773.02	0.00	0.00	0.00
13,200.00	89.90	359.55	7,225.99	5,858.13	463.72	5,872.88	0.00	0.00	0.00
13,300.00	89.90	359.55	7,226.17	5,958.13	462.93	5,972.75	0.00	0.00	0.00
13,400.00	89.90	359.55	7,226.35	6,058.12	462.14	6,072.61	0.00	0.00	0.00
13,500.00	89.90	359.55	7,226.53	6,158.12	461.36	6,172.48	0.00	0.00	0.00
13,600.00	89.90	359.55	7,226.70	6,258.12	460.57	6,272.34	0.00	0.00	0.00
13,700.00	89.90	359.55	7,226.88	6,358.11	459.78	6,372.20	0.00	0.00	0.00
13,800.00	89.90	359.55	7,227.06	6,458.11	458.99	6,472.07	0.00	0.00	0.00
13,900.00	89.90	359.55	7,227.24	6,558.11	458.21	6,571.93	0.00	0.00	0.00
14,000.00	89.90	359.55	7,227.41	6,658.10	457.42	6,671.80	0.00	0.00	0.00
14,100.00	89.90	359.55	7,227.59	6,758.10	456.63	6,771.66	0.00	0.00	0.00
14,200.00	89.90	359.55	7,227.77	6,858.10	455.84	6,871.53	0.00	0.00	0.00
14,300.00	89.90	359.55	7,227.95	6,958.09	455.06	6,971.39	0.00	0.00	0.00
14,400.00	89.90	359.55	7,228.12	7,058.09	454.27	7,071.26	0.00	0.00	0.00
14,500.00	89.90	359.55	7,228.30	7,158.09	453.48	7,171.12	0.00	0.00	0.00
14,600.00	89.90	359.55	7,228.48	7,258.09	452.69	7,270.99	0.00	0.00	0.00
14,700.00	89.90	359.55	7,228.66	7,358.08	451.91	7,370.85	0.00	0.00	0.00
14,800.00	89.90	359.55	7,228.84	7,458.08	451.12	7,470.72	0.00	0.00	0.00
14,900.00	89.90	359.55	7,229.01	7,558.08	450.33	7,570.58	0.00	0.00	0.00
15,000.00	89.90	359.55	7,229.19	7,658.07	449.54	7,670.45	0.00	0.00	0.00
15,100.00	89.90	359.55	7,229.37	7,758.07	448.76	7,770.31	0.00	0.00	0.00
15,200.00	89.90	359.55	7,229.55	7,858.07	447.97	7,870.18	0.00	0.00	0.00
15,300.00	89.90	359.55	7,229.72	7,958.06	447.18	7,970.04	0.00	0.00	0.00
15,400.00	89.90	359.55	7,229.90	8,058.06	446.39	8,069.91	0.00	0.00	0.00
15,500.00	89.90	359.55	7,230.08	8,158.06	445.61	8,169.77	0.00	0.00	0.00
15,600.00	89.90	359.55	7,230.26	8,258.05	444.82	8,269.63	0.00	0.00	0.00
15,700.00	89.90	359.55	7,230.43	8,358.05	444.03	8,369.50	0.00	0.00	0.00
15,800.00	89.90	359.55	7,230.61	8,458.05	443.25	8,469.36	0.00	0.00	0.00
15,900.00	89.90	359.55	7,230.79	8,558.04	442.46	8,569.23	0.00	0.00	0.00
16,000.00	89.90	359.55	7,230.97	8,658.04	441.67	8,669.09	0.00	0.00	0.00
16,100.00	89.90	359.55	7,231.15	8,758.04	440.88	8,768.96	0.00	0.00	0.00
16,200.00	89.90	359.55	7,231.32	8,858.03	440.10	8,868.82	0.00	0.00	0.00
16,300.00	89.90	359.55	7,231.50	8,958.03	439.31	8,968.69	0.00	0.00	0.00
16,400.00	89.90	359.55	7,231.68	9,058.03	438.52	9,068.55	0.00	0.00	0.00
16,500.00	89.90	359.55	7,231.86	9,158.02	437.73	9,168.42	0.00	0.00	0.00
16,600.00	89.90	359.55	7,232.03	9,258.02	436.95	9,268.28	0.00	0.00	0.00
16,700.00	89.90	359.55	7,232.21	9,358.02	436.16	9,368.15	0.00	0.00	0.00
16,800.00	89.90	359.55	7,232.39	9,458.01	435.37	9,468.01	0.00	0.00	0.00
16,900.00	89.90	359.55	7,232.57	9,558.01	434.58	9,567.88	0.00	0.00	0.00
17,000.00	89.90	359.55	7,232.74	9,658.01	433.80	9,667.74	0.00	0.00	0.00
17,100.00	89.90	359.55	7,232.92	9,758.00	433.01	9,767.61	0.00	0.00	0.00
17,143.66	89.90	359.55	7,233.00	9,801.66	432.66	9,811.20	0.00	0.00	0.00
TD at 17143.66 - SPARBOE 26C-26HZ BHL									

# Anadarko Petroleum Corp

## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well SPARBOE 26C-26HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL +RKB @ 4963.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL +RKB @ 4963.00ft
<b>Site:</b>	WELD_SPARBOE 2 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SPARBOE 26C-26HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	SPARBOE 26C-26HZ		
<b>Design:</b>	SPARBOE 26C-26HZ (wp01)		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
- Shape									
SPARBOE 26C-26HZ B	0.00	0.00	7,233.00	9,801.66	432.66	1,286,139.82	3,245,274.81	40.115517	-104.622999
- plan hits target center									
- Point									

Casing Points					
Measured Depth	Vertical Depth	Name		Casing Diameter	Hole Diameter
(ft)	(ft)			(")	(")
1,300.00	1,300.00	9 5/8"		9-5/8	12-1/4
7,576.69	7,216.00	7"		7	8-3/4

Formations						
Measured Depth	Vertical Depth	Name		Lithology	Dip	Dip Direction
(ft)	(ft)				(°)	(°)
809.00	809.00	Fox Hills				
4,983.27	4,962.00	Sussex				
6,912.74	6,873.00	Sharon Springs				
6,940.42	6,898.00	Niobrara A				
7,026.83	6,972.00	Niobrara B				
7,135.00	7,054.00	Niobrara C				
7,418.06	7,194.00	Fort Hays				
7,576.69	7,216.00	Codell				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(ft)	(ft)	+N/-S	+E/-W		
(ft)	(ft)	(ft)	(ft)		
1,500.00	1,500.00	0.00	0.00	Start Build 2.00	
1,827.16	1,826.45	-11.06	15.03	Start 4811.37 hold at 1827.16 MD	
6,638.54	6,606.49	-336.05	456.60	Start DLS 10.00 TFO -126.63	
7,576.69	7,216.00	235.00	508.00	Start DLS 0.01 TFO -146.83	
7,614.22	7,216.07	272.53	507.70	Start 9529.44 hold at 7614.21 MD	
17,143.66	7,233.00	9,801.66	432.66	TD at 17143.66	