

# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**WELD\_SPARBOE 2 PAD**

**SPARBOE 1N-26HZ**

**Sparboe 1N-26HZ**

**Plan: Sparboe 1N-26HZ (wp01)**

## **Standard Planning Report**

**25 July, 2012**



# Anadarko Petroleum Corp

## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well SPARBOE 1N-26HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	RKB + GL @ 4970.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	RKB + GL @ 4970.00ft
<b>Site:</b>	WELD_SPARBOE 2 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SPARBOE 1N-26HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Sparboe 1N-26HZ		
<b>Design:</b>	Sparboe 1N-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		

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

Well	SPARBOE 1N-26HZ					
Well Position	+N/-S	-0.38 ft	Northing:	1,276,333.72 usft	Latitude:	40.088609
	+E/-W	-30.22 ft	Easting:	3,244,908.72 usft	Longitude:	-104.624654
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,953.00 ft

<b>Wellbore</b>	Sparboe 1N-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	52,864

<b>Design</b>	Sparboe 1N-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	0.78

<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	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,521.54	4.43	150.63	1,521.32	-7.46	4.20	2.00	2.00	0.00	150.63	
6,413.57	4.43	150.63	6,398.73	-336.81	189.58	0.00	0.00	0.00	0.00	
7,352.34	90.00	359.55	7,010.00	235.00	208.00	10.00	9.12	-16.09	-151.00	
7,355.34	90.03	359.55	7,010.00	237.99	207.98	1.00	1.00	0.00	0.00	
16,921.49	90.03	359.55	7,005.00	9,803.85	132.85	0.00	0.00	0.00	0.00	Sparboe 1N-26HZ BH

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<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	RKB + GL @ 4970.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	RKB + GL @ 4970.00ft
<b>Site:</b>	WELD_SPARBOE 2 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SPARBOE 1N-26HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Sparboe 1N-26HZ		
<b>Design:</b>	Sparboe 1N-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
816.00	0.00	0.00	816.00	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
Start Build 2.00 - 9 5/8"									
1,400.00	2.00	150.63	1,399.98	-1.52	0.86	-1.51	2.00	2.00	0.00
1,500.00	4.00	150.63	1,499.84	-6.08	3.42	-6.03	2.00	2.00	0.00
1,521.54	4.43	150.63	1,521.32	-7.46	4.20	-7.40	2.00	2.00	0.00
Start 4892.03 hold at 1521.54 MD									
1,600.00	4.43	150.63	1,599.54	-12.74	7.17	-12.64	0.00	0.00	0.00
1,700.00	4.43	150.63	1,699.25	-19.48	10.96	-19.33	0.00	0.00	0.00
1,800.00	4.43	150.63	1,798.95	-26.21	14.75	-26.01	0.00	0.00	0.00
1,900.00	4.43	150.63	1,898.65	-32.94	18.54	-32.69	0.00	0.00	0.00
2,000.00	4.43	150.63	1,998.35	-39.67	22.33	-39.37	0.00	0.00	0.00
2,100.00	4.43	150.63	2,098.05	-46.41	26.12	-46.05	0.00	0.00	0.00
2,200.00	4.43	150.63	2,197.75	-53.14	29.91	-52.73	0.00	0.00	0.00
2,300.00	4.43	150.63	2,297.45	-59.87	33.70	-59.41	0.00	0.00	0.00
2,400.00	4.43	150.63	2,397.15	-66.60	37.49	-66.09	0.00	0.00	0.00
2,500.00	4.43	150.63	2,496.85	-73.33	41.28	-72.77	0.00	0.00	0.00
2,600.00	4.43	150.63	2,596.56	-80.07	45.07	-79.45	0.00	0.00	0.00
2,700.00	4.43	150.63	2,696.26	-86.80	48.86	-86.13	0.00	0.00	0.00
2,800.00	4.43	150.63	2,795.96	-93.53	52.65	-92.81	0.00	0.00	0.00
2,900.00	4.43	150.63	2,895.66	-100.26	56.44	-99.49	0.00	0.00	0.00
3,000.00	4.43	150.63	2,995.36	-107.00	60.23	-106.17	0.00	0.00	0.00
3,100.00	4.43	150.63	3,095.06	-113.73	64.01	-112.85	0.00	0.00	0.00
3,200.00	4.43	150.63	3,194.76	-120.46	67.80	-119.53	0.00	0.00	0.00
3,300.00	4.43	150.63	3,294.46	-127.19	71.59	-126.21	0.00	0.00	0.00
3,400.00	4.43	150.63	3,394.17	-133.93	75.38	-132.89	0.00	0.00	0.00
3,500.00	4.43	150.63	3,493.87	-140.66	79.17	-139.57	0.00	0.00	0.00
3,600.00	4.43	150.63	3,593.57	-147.39	82.96	-146.25	0.00	0.00	0.00
3,700.00	4.43	150.63	3,693.27	-154.12	86.75	-152.93	0.00	0.00	0.00
3,800.00	4.43	150.63	3,792.97	-160.86	90.54	-159.61	0.00	0.00	0.00
3,900.00	4.43	150.63	3,892.67	-167.59	94.33	-166.29	0.00	0.00	0.00
4,000.00	4.43	150.63	3,992.37	-174.32	98.12	-172.97	0.00	0.00	0.00
4,100.00	4.43	150.63	4,092.07	-181.05	101.91	-179.65	0.00	0.00	0.00
4,200.00	4.43	150.63	4,191.77	-187.78	105.70	-186.34	0.00	0.00	0.00
4,300.00	4.43	150.63	4,291.48	-194.52	109.49	-193.02	0.00	0.00	0.00
4,400.00	4.43	150.63	4,391.18	-201.25	113.28	-199.70	0.00	0.00	0.00
4,500.00	4.43	150.63	4,490.88	-207.98	117.07	-206.38	0.00	0.00	0.00
4,600.00	4.43	150.63	4,590.58	-214.71	120.86	-213.06	0.00	0.00	0.00
4,700.00	4.43	150.63	4,690.28	-221.45	124.65	-219.74	0.00	0.00	0.00

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<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	RKB + GL @ 4970.00ft
<b>Site:</b>	WELD_SPARBOE 2 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SPARBOE 1N-26HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Sparboe 1N-26HZ		
<b>Design:</b>	Sparboe 1N-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	4.43	150.63	4,789.98	-228.18	128.44	-226.42	0.00	0.00	0.00
4,900.00	4.43	150.63	4,889.68	-234.91	132.23	-233.10	0.00	0.00	0.00
4,979.56	4.43	150.63	4,969.00	-240.27	135.24	-238.41	0.00	0.00	0.00
<b>Sussex</b>									
5,000.00	4.43	150.63	4,989.38	-241.64	136.01	-239.78	0.00	0.00	0.00
5,100.00	4.43	150.63	5,089.08	-248.38	139.80	-246.46	0.00	0.00	0.00
5,200.00	4.43	150.63	5,188.79	-255.11	143.59	-253.14	0.00	0.00	0.00
5,300.00	4.43	150.63	5,288.49	-261.84	147.38	-259.82	0.00	0.00	0.00
5,400.00	4.43	150.63	5,388.19	-268.57	151.17	-266.50	0.00	0.00	0.00
5,500.00	4.43	150.63	5,487.89	-275.31	154.96	-273.18	0.00	0.00	0.00
5,600.00	4.43	150.63	5,587.59	-282.04	158.75	-279.86	0.00	0.00	0.00
5,700.00	4.43	150.63	5,687.29	-288.77	162.54	-286.54	0.00	0.00	0.00
5,800.00	4.43	150.63	5,786.99	-295.50	166.33	-293.22	0.00	0.00	0.00
5,900.00	4.43	150.63	5,886.69	-302.23	170.12	-299.90	0.00	0.00	0.00
6,000.00	4.43	150.63	5,986.39	-308.97	173.91	-306.58	0.00	0.00	0.00
6,100.00	4.43	150.63	6,086.10	-315.70	177.70	-313.26	0.00	0.00	0.00
6,200.00	4.43	150.63	6,185.80	-322.43	181.49	-319.94	0.00	0.00	0.00
6,300.00	4.43	150.63	6,285.50	-329.16	185.28	-326.62	0.00	0.00	0.00
6,400.00	4.43	150.63	6,385.20	-335.90	189.07	-333.30	0.00	0.00	0.00
6,413.57	4.43	150.63	6,398.73	-336.81	189.58	-334.21	0.00	0.00	0.00
<b>Start DLS 10.00 TFO -151.00</b>									
6,450.00	2.16	95.78	6,435.10	-338.11	190.96	-335.49	10.00	-6.24	-150.55
6,500.00	5.23	23.74	6,485.01	-336.11	192.81	-333.47	10.00	6.13	-144.08
6,550.00	10.00	11.83	6,534.56	-329.78	194.62	-327.11	10.00	9.54	-23.83
6,600.00	14.92	7.64	6,583.37	-319.15	196.36	-316.46	10.00	9.84	-8.38
6,650.00	19.88	5.50	6,631.07	-304.30	198.03	-301.59	10.00	9.92	-4.27
6,700.00	24.85	4.19	6,677.29	-285.34	199.62	-282.61	10.00	9.95	-2.62
6,750.00	29.84	3.30	6,721.69	-262.43	201.10	-259.68	10.00	9.97	-1.79
6,800.00	34.82	2.64	6,763.93	-235.74	202.47	-232.97	10.00	9.98	-1.32
6,850.00	39.81	2.13	6,803.68	-205.46	203.73	-202.68	10.00	9.98	-1.02
6,900.00	44.81	1.71	6,840.64	-171.83	204.85	-169.04	10.00	9.98	-0.83
6,950.00	49.80	1.36	6,874.54	-135.11	205.83	-132.31	10.00	9.99	-0.69
6,958.54	50.65	1.31	6,880.00	-128.55	205.98	-125.75	10.00	9.99	-0.63
<b>Sharon Springs</b>									
6,999.81	54.78	1.07	6,905.00	-95.73	206.66	-92.92	10.00	9.99	-0.59
<b>Niobrara A</b>									
7,000.00	54.79	1.07	6,905.11	-95.57	206.67	-92.76	10.00	9.99	-0.56
7,050.00	59.79	0.80	6,932.12	-53.52	207.35	-50.71	10.00	9.99	-0.53
7,100.00	64.78	0.56	6,955.36	-9.27	207.87	-6.46	10.00	9.99	-0.48
7,150.00	69.78	0.34	6,974.67	36.83	208.23	39.65	10.00	9.99	-0.44
7,162.94	71.07	0.29	6,979.00	49.02	208.30	51.84	10.00	9.99	-0.42
<b>Niobrara B</b>									
7,200.00	74.78	0.13	6,989.88	84.44	208.43	87.26	10.00	9.99	-0.41
7,250.00	79.77	359.94	7,000.89	133.20	208.46	136.01	10.00	9.99	-0.39
7,300.00	84.77	359.75	7,007.61	182.73	208.32	185.54	10.00	9.99	-0.38
7,352.34	90.00	359.55	7,010.00	235.00	208.00	237.79	10.00	9.99	-0.38
<b>Start DLS 1.00 TFO 0.00 - 7"</b>									
7,355.34	90.03	359.55	7,010.00	237.99	207.98	240.79	1.01	1.01	0.00
<b>Start 9566.15 hold at 7355.34 MD</b>									
7,400.00	90.03	359.55	7,009.98	282.66	207.63	285.44	0.00	0.00	0.00
7,500.00	90.03	359.55	7,009.92	382.65	206.84	385.42	0.00	0.00	0.00
7,600.00	90.03	359.55	7,009.87	482.65	206.06	485.40	0.00	0.00	0.00
7,700.00	90.03	359.55	7,009.82	582.65	205.27	585.37	0.00	0.00	0.00

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<b>Site:</b>	WELD_SPARBOE 2 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SPARBOE 1N-26HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Sparboe 1N-26HZ		
<b>Design:</b>	Sparboe 1N-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)
7,800.00	90.03	359.55	7,009.77	682.64	204.48	685.35	0.00	0.00	0.00
7,900.00	90.03	359.55	7,009.71	782.64	203.70	785.33	0.00	0.00	0.00
8,000.00	90.03	359.55	7,009.66	882.64	202.91	885.31	0.00	0.00	0.00
8,100.00	90.03	359.55	7,009.61	982.63	202.13	985.28	0.00	0.00	0.00
8,200.00	90.03	359.55	7,009.56	1,082.63	201.34	1,085.26	0.00	0.00	0.00
8,300.00	90.03	359.55	7,009.51	1,182.63	200.56	1,185.24	0.00	0.00	0.00
8,400.00	90.03	359.55	7,009.45	1,282.62	199.77	1,285.21	0.00	0.00	0.00
8,500.00	90.03	359.55	7,009.40	1,382.62	198.99	1,385.19	0.00	0.00	0.00
8,600.00	90.03	359.55	7,009.35	1,482.62	198.20	1,485.17	0.00	0.00	0.00
8,700.00	90.03	359.55	7,009.30	1,582.62	197.42	1,585.14	0.00	0.00	0.00
8,800.00	90.03	359.55	7,009.24	1,682.61	196.63	1,685.12	0.00	0.00	0.00
8,900.00	90.03	359.55	7,009.19	1,782.61	195.85	1,785.10	0.00	0.00	0.00
9,000.00	90.03	359.55	7,009.14	1,882.61	195.06	1,885.08	0.00	0.00	0.00
9,100.00	90.03	359.55	7,009.09	1,982.60	194.27	1,985.05	0.00	0.00	0.00
9,200.00	90.03	359.55	7,009.04	2,082.60	193.49	2,085.03	0.00	0.00	0.00
9,300.00	90.03	359.55	7,008.98	2,182.60	192.70	2,185.01	0.00	0.00	0.00
9,400.00	90.03	359.55	7,008.93	2,282.59	191.92	2,284.98	0.00	0.00	0.00
9,500.00	90.03	359.55	7,008.88	2,382.59	191.13	2,384.96	0.00	0.00	0.00
9,600.00	90.03	359.55	7,008.83	2,482.59	190.35	2,484.94	0.00	0.00	0.00
9,700.00	90.03	359.55	7,008.77	2,582.58	189.56	2,584.92	0.00	0.00	0.00
9,800.00	90.03	359.55	7,008.72	2,682.58	188.78	2,684.89	0.00	0.00	0.00
9,900.00	90.03	359.55	7,008.67	2,782.58	187.99	2,784.87	0.00	0.00	0.00
10,000.00	90.03	359.55	7,008.62	2,882.57	187.21	2,884.85	0.00	0.00	0.00
10,100.00	90.03	359.55	7,008.57	2,982.57	186.42	2,984.82	0.00	0.00	0.00
10,200.00	90.03	359.55	7,008.51	3,082.57	185.64	3,084.80	0.00	0.00	0.00
10,300.00	90.03	359.55	7,008.46	3,182.57	184.85	3,184.78	0.00	0.00	0.00
10,400.00	90.03	359.55	7,008.41	3,282.56	184.06	3,284.76	0.00	0.00	0.00
10,500.00	90.03	359.55	7,008.36	3,382.56	183.28	3,384.73	0.00	0.00	0.00
10,600.00	90.03	359.55	7,008.30	3,482.56	182.49	3,484.71	0.00	0.00	0.00
10,700.00	90.03	359.55	7,008.25	3,582.55	181.71	3,584.69	0.00	0.00	0.00
10,800.00	90.03	359.55	7,008.20	3,682.55	180.92	3,684.66	0.00	0.00	0.00
10,900.00	90.03	359.55	7,008.15	3,782.55	180.14	3,784.64	0.00	0.00	0.00
11,000.00	90.03	359.55	7,008.09	3,882.54	179.35	3,884.62	0.00	0.00	0.00
11,100.00	90.03	359.55	7,008.04	3,982.54	178.57	3,984.59	0.00	0.00	0.00
11,200.00	90.03	359.55	7,007.99	4,082.54	177.78	4,084.57	0.00	0.00	0.00
11,300.00	90.03	359.55	7,007.94	4,182.53	177.00	4,184.55	0.00	0.00	0.00
11,400.00	90.03	359.55	7,007.89	4,282.53	176.21	4,284.53	0.00	0.00	0.00
11,500.00	90.03	359.55	7,007.83	4,382.53	175.43	4,384.50	0.00	0.00	0.00
11,600.00	90.03	359.55	7,007.78	4,482.53	174.64	4,484.48	0.00	0.00	0.00
11,700.00	90.03	359.55	7,007.73	4,582.52	173.86	4,584.46	0.00	0.00	0.00
11,800.00	90.03	359.55	7,007.68	4,682.52	173.07	4,684.43	0.00	0.00	0.00
11,900.00	90.03	359.55	7,007.62	4,782.52	172.28	4,784.41	0.00	0.00	0.00
12,000.00	90.03	359.55	7,007.57	4,882.51	171.50	4,884.39	0.00	0.00	0.00
12,100.00	90.03	359.55	7,007.52	4,982.51	170.71	4,984.37	0.00	0.00	0.00
12,200.00	90.03	359.55	7,007.47	5,082.51	169.93	5,084.34	0.00	0.00	0.00
12,300.00	90.03	359.55	7,007.42	5,182.50	169.14	5,184.32	0.00	0.00	0.00
12,400.00	90.03	359.55	7,007.36	5,282.50	168.36	5,284.30	0.00	0.00	0.00
12,500.00	90.03	359.55	7,007.31	5,382.50	167.57	5,384.27	0.00	0.00	0.00
12,600.00	90.03	359.55	7,007.26	5,482.49	166.79	5,484.25	0.00	0.00	0.00
12,700.00	90.03	359.55	7,007.21	5,582.49	166.00	5,584.23	0.00	0.00	0.00
12,800.00	90.03	359.55	7,007.15	5,682.49	165.22	5,684.21	0.00	0.00	0.00
12,900.00	90.03	359.55	7,007.10	5,782.49	164.43	5,784.18	0.00	0.00	0.00
13,000.00	90.03	359.55	7,007.05	5,882.48	163.65	5,884.16	0.00	0.00	0.00
13,100.00	90.03	359.55	7,007.00	5,982.48	162.86	5,984.14	0.00	0.00	0.00

# Anadarko Petroleum Corp

## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well SPARBOE 1N-26HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	RKB + GL @ 4970.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	RKB + GL @ 4970.00ft
<b>Site:</b>	WELD_SPARBOE 2 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SPARBOE 1N-26HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Sparboe 1N-26HZ		
<b>Design:</b>	Sparboe 1N-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)
13,200.00	90.03	359.55	7,006.94	6,082.48	162.07	6,084.11	0.00	0.00	0.00
13,300.00	90.03	359.55	7,006.89	6,182.47	161.29	6,184.09	0.00	0.00	0.00
13,400.00	90.03	359.55	7,006.84	6,282.47	160.50	6,284.07	0.00	0.00	0.00
13,500.00	90.03	359.55	7,006.79	6,382.47	159.72	6,384.04	0.00	0.00	0.00
13,600.00	90.03	359.55	7,006.74	6,482.46	158.93	6,484.02	0.00	0.00	0.00
13,700.00	90.03	359.55	7,006.68	6,582.46	158.15	6,584.00	0.00	0.00	0.00
13,800.00	90.03	359.55	7,006.63	6,682.46	157.36	6,683.98	0.00	0.00	0.00
13,900.00	90.03	359.55	7,006.58	6,782.45	156.58	6,783.95	0.00	0.00	0.00
14,000.00	90.03	359.55	7,006.53	6,882.45	155.79	6,883.93	0.00	0.00	0.00
14,100.00	90.03	359.55	7,006.47	6,982.45	155.01	6,983.91	0.00	0.00	0.00
14,200.00	90.03	359.55	7,006.42	7,082.44	154.22	7,083.88	0.00	0.00	0.00
14,300.00	90.03	359.55	7,006.37	7,182.44	153.44	7,183.86	0.00	0.00	0.00
14,400.00	90.03	359.55	7,006.32	7,282.44	152.65	7,283.84	0.00	0.00	0.00
14,500.00	90.03	359.55	7,006.27	7,382.44	151.87	7,383.82	0.00	0.00	0.00
14,600.00	90.03	359.55	7,006.21	7,482.43	151.08	7,483.79	0.00	0.00	0.00
14,700.00	90.03	359.55	7,006.16	7,582.43	150.29	7,583.77	0.00	0.00	0.00
14,800.00	90.03	359.55	7,006.11	7,682.43	149.51	7,683.75	0.00	0.00	0.00
14,900.00	90.03	359.55	7,006.06	7,782.42	148.72	7,783.72	0.00	0.00	0.00
15,000.00	90.03	359.55	7,006.00	7,882.42	147.94	7,883.70	0.00	0.00	0.00
15,100.00	90.03	359.55	7,005.95	7,982.42	147.15	7,983.68	0.00	0.00	0.00
15,200.00	90.03	359.55	7,005.90	8,082.41	146.37	8,083.66	0.00	0.00	0.00
15,300.00	90.03	359.55	7,005.85	8,182.41	145.58	8,183.63	0.00	0.00	0.00
15,400.00	90.03	359.55	7,005.80	8,282.41	144.80	8,283.61	0.00	0.00	0.00
15,500.00	90.03	359.55	7,005.74	8,382.40	144.01	8,383.59	0.00	0.00	0.00
15,600.00	90.03	359.55	7,005.69	8,482.40	143.23	8,483.56	0.00	0.00	0.00
15,700.00	90.03	359.55	7,005.64	8,582.40	142.44	8,583.54	0.00	0.00	0.00
15,800.00	90.03	359.55	7,005.59	8,682.40	141.66	8,683.52	0.00	0.00	0.00
15,900.00	90.03	359.55	7,005.53	8,782.39	140.87	8,783.49	0.00	0.00	0.00
16,000.00	90.03	359.55	7,005.48	8,882.39	140.08	8,883.47	0.00	0.00	0.00
16,100.00	90.03	359.55	7,005.43	8,982.39	139.30	8,983.45	0.00	0.00	0.00
16,200.00	90.03	359.55	7,005.38	9,082.38	138.51	9,083.43	0.00	0.00	0.00
16,300.00	90.03	359.55	7,005.32	9,182.38	137.73	9,183.40	0.00	0.00	0.00
16,400.00	90.03	359.55	7,005.27	9,282.38	136.94	9,283.38	0.00	0.00	0.00
16,500.00	90.03	359.55	7,005.22	9,382.37	136.16	9,383.36	0.00	0.00	0.00
16,600.00	90.03	359.55	7,005.17	9,482.37	135.37	9,483.33	0.00	0.00	0.00
16,700.00	90.03	359.55	7,005.12	9,582.37	134.59	9,583.31	0.00	0.00	0.00
16,800.00	90.03	359.55	7,005.06	9,682.36	133.80	9,683.29	0.00	0.00	0.00
16,900.00	90.03	359.55	7,005.01	9,782.36	133.02	9,783.27	0.00	0.00	0.00
16,921.49	90.03	359.55	7,005.00	9,803.85	132.85	9,804.75	0.00	0.00	0.00
TD at 16921.49 - Sparboe 1N-26HZ BHL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Sparboe 1N-26HZ BHL	0.00	0.00	7,005.00	9,803.85	132.85	1,286,138.38	3,244,944.79	40.115522	-104.624179
- plan hits target center									
- Point									

# Anadarko Petroleum Corp

## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well SPARBOE 1N-26HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	RKB + GL @ 4970.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	RKB + GL @ 4970.00ft
<b>Site:</b>	WELD_SPARBOE 2 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SPARBOE 1N-26HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Sparboe 1N-26HZ		
<b>Design:</b>	Sparboe 1N-26HZ (wp01)		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
1,300.00	1,300.00	9 5/8"	9-5/8	12-1/4	
7,352.34	7,010.00	7"	7	8-3/4	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
816.00	816.00	Fox Hills			
4,979.56	4,969.00	Sussex			
6,958.54	6,880.00	Sharon Springs			
6,999.81	6,905.00	Niobrara A			
7,162.94	6,979.00	Niobrara B			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,300.00	1,300.00	0.00	0.00	Start Build 2.00	
1,521.54	1,521.32	-7.46	4.20	Start 4892.03 hold at 1521.54 MD	
6,413.57	6,398.73	-336.81	189.58	Start DLS 10.00 TFO -151.00	
7,352.34	7,010.00	235.00	208.00	Start DLS 1.00 TFO 0.00	
7,355.34	7,010.00	237.99	207.98	Start 9566.15 hold at 7355.34 MD	
16,921.49	7,005.00	9,803.85	132.85	TD at 16921.49	