

# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**WELD\_HAYMAKER 14-9HZ PAD**

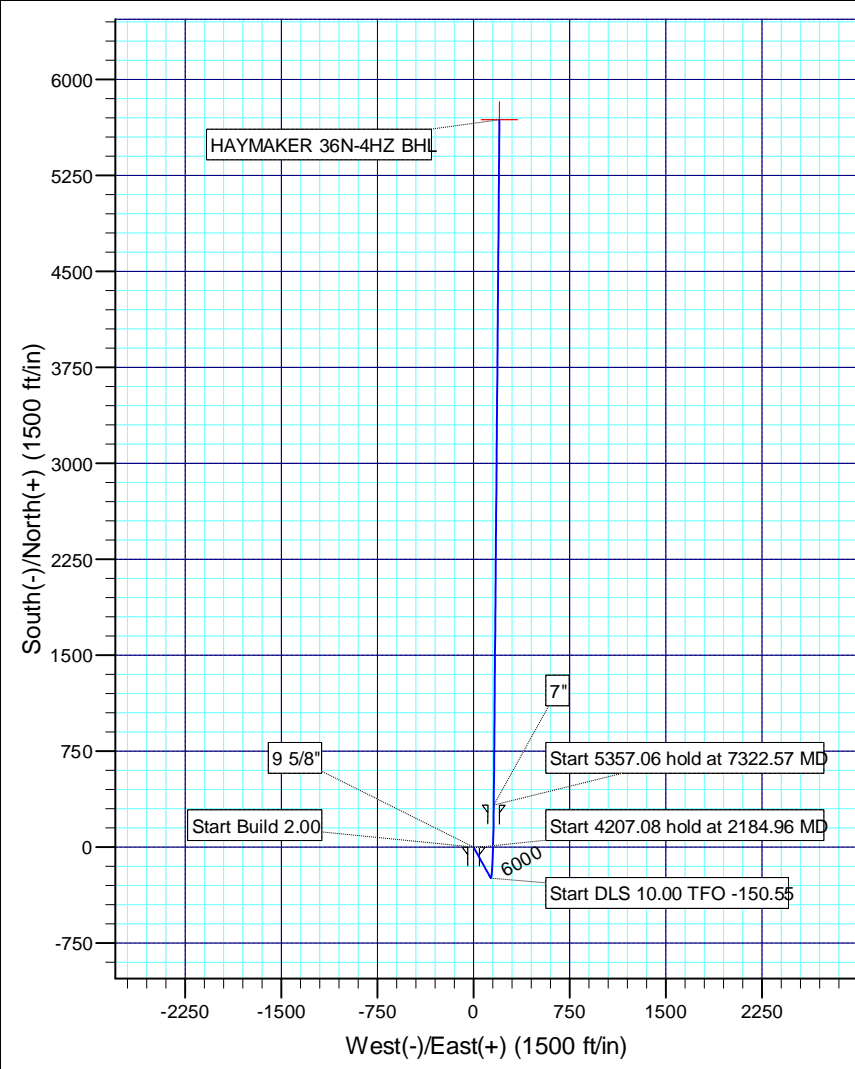
**HAYMAKER 36N-4HZ**

**HAYMAKER 36N-4HZ**

**Plan: HAYMAKER 36N-4HZ (wp01)**

## **Standard Planning Report**

**23 February, 2012**



PROJECT DETAILS: COLORADO NORTHERN ZONE - 83	
Site:	WELD_HAYMAKER 14-9HZ PAD
Well:	HAYMAKER 36N-4HZ
Wellbore:	HAYMAKER 36N-4HZ
Design:	HAYMAKER 36N-4HZ (wp01)
Latitude:	40.147271
Longitude:	-104.669901
GL:	4881.00
KB:	17'RKB + GL @ 4898.00ft



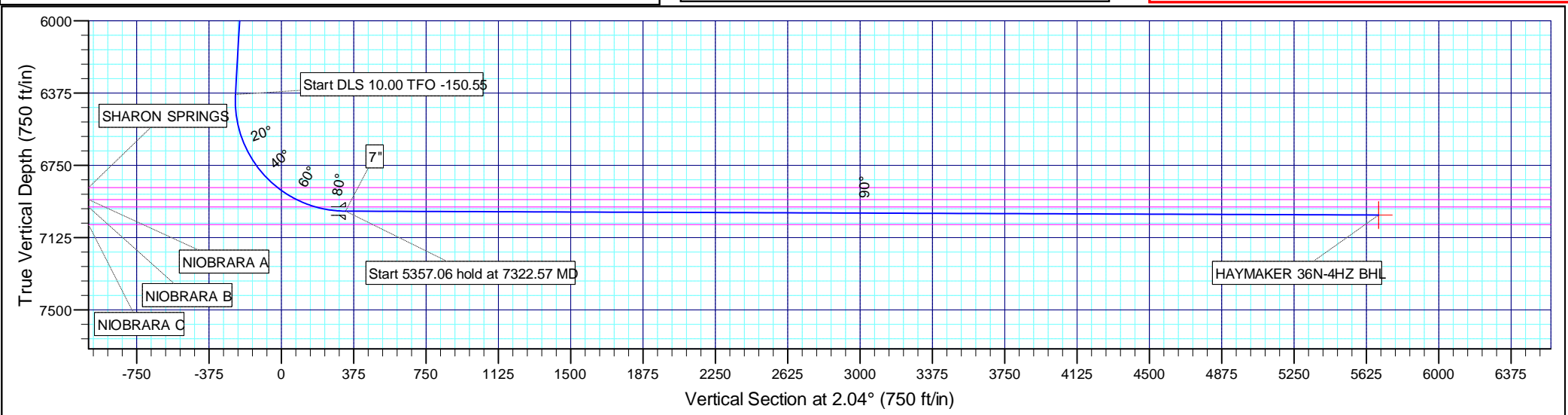
WELL DETAILS: HAYMAKER 36N-4HZ					
Ground Level:		4881.00			
+N-S	+E-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1297580.38	3232049.62	40.147271	-104.669901

DESIGN TARGET DETAILS						
Name	TVD	+N-S	+E-W	Latitude	Longitude	Shape Point
HAYMAKER 36N-4HZ BHL	7008.00	5684.25	202.07	40.162875	-104.669178	

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	2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00	
3	2184.96	3.70	151.07	2184.83	-5.22	2.89	2.00	151.07	-5.12	
4	6392.04	3.70	151.07	6383.14	-242.78	134.20	0.00	0.00	-237.86	
5	7322.16	89.79	0.47	6988.00	327.00	158.00	10.00	-150.55	332.41	
6	7322.57	89.79	0.47	6988.00	327.41	158.00	1.00	161.62	332.82	
7	12679.63	89.79	0.47	7008.00	5684.25	202.07	0.00	0.00	5687.84	HAYMAKER 36N-4HZ BHL

CASING DETAILS				
TVD	MD	Name	Size	
890.00	890.00	9 5/8"	9-5/8	
6988.00	7322.16	7"	7	

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3987.00	3990.89	PARKMAN
4329.00	4333.61	SUSSEX
6866.00	6943.28	SHARON SPRINGS
6928.00	7059.63	NIOBRARA A
6966.00	7164.92	NIOBRARA B



# Anadarko Petroleum Corp

## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well HAYMAKER 36N-4HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	17'RKB + GL @ 4898.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	17'RKB + GL @ 4898.00ft
<b>Site:</b>	WELD_HAYMAKER 14-9HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	HAYMAKER 36N-4HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HAYMAKER 36N-4HZ		
<b>Design:</b>	HAYMAKER 36N-4HZ (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_HAYMAKER 14-9HZ PAD			
Site Position:		Northing:	1,297,580.38 usft	Latitude:	40.147271
From:	Lat/Long	Easting:	3,232,049.63 usft	Longitude:	-104.669901
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.54 °

Well	HAYMAKER 36N-4HZ					
Well Position	+N/-S	0.00 ft	Northing:	1,297,580.38 usft	Latitude:	40.147271
	+E/-W	0.00 ft	Easting:	3,232,049.63 usft	Longitude:	-104.669901
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,881.00 ft

<b>Wellbore</b>	HAYMAKER 36N-4HZ				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	2/23/2012	8.70	66.84	52,935

<b>Design</b>	HAYMAKER 36N-4HZ (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	2.04

<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	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,184.96	3.70	151.07	2,184.83	-5.22	2.89	2.00	2.00	0.00	151.07	
6,392.04	3.70	151.07	6,383.14	-242.78	134.20	0.00	0.00	0.00	0.00	
7,322.16	89.79	0.47	6,988.00	327.00	158.00	10.00	9.26	-16.19	-150.55	
7,322.57	89.79	0.47	6,988.00	327.41	158.00	1.00	-0.95	0.32	161.62	
12,679.63	89.79	0.47	7,008.00	5,684.25	202.07	0.00	0.00	0.00	0.00	HAYMAKER 36N-4HZ

# Anadarko Petroleum Corp

## Planning Report

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<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	17"RKB + GL @ 4898.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	17"RKB + GL @ 4898.00ft
<b>Site:</b>	WELD_HAYMAKER 14-9HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	HAYMAKER 36N-4HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HAYMAKER 36N-4HZ		
<b>Design:</b>	HAYMAKER 36N-4HZ (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
890.00	0.00	0.00	890.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8"									
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
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
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
2,100.00	2.00	151.07	2,099.98	-1.53	0.84	-1.50	2.00	2.00	0.00
2,184.96	3.70	151.07	2,184.83	-5.22	2.89	-5.12	2.00	2.00	0.00
Start 4207.08 hold at 2184.96 MD									
2,200.00	3.70	151.07	2,199.84	-6.07	3.36	-5.95	0.00	0.00	0.00
2,300.00	3.70	151.07	2,299.63	-11.72	6.48	-11.48	0.00	0.00	0.00
2,400.00	3.70	151.07	2,399.42	-17.37	9.60	-17.01	0.00	0.00	0.00
2,500.00	3.70	151.07	2,499.22	-23.01	12.72	-22.55	0.00	0.00	0.00
2,600.00	3.70	151.07	2,599.01	-28.66	15.84	-28.08	0.00	0.00	0.00
2,700.00	3.70	151.07	2,698.80	-34.31	18.96	-33.61	0.00	0.00	0.00
2,800.00	3.70	151.07	2,798.59	-39.95	22.08	-39.14	0.00	0.00	0.00
2,900.00	3.70	151.07	2,898.38	-45.60	25.21	-44.67	0.00	0.00	0.00
3,000.00	3.70	151.07	2,998.17	-51.25	28.33	-50.21	0.00	0.00	0.00
3,100.00	3.70	151.07	3,097.97	-56.89	31.45	-55.74	0.00	0.00	0.00
3,200.00	3.70	151.07	3,197.76	-62.54	34.57	-61.27	0.00	0.00	0.00
3,300.00	3.70	151.07	3,297.55	-68.18	37.69	-66.80	0.00	0.00	0.00
3,400.00	3.70	151.07	3,397.34	-73.83	40.81	-72.34	0.00	0.00	0.00
3,500.00	3.70	151.07	3,497.13	-79.48	43.93	-77.87	0.00	0.00	0.00
3,600.00	3.70	151.07	3,596.92	-85.12	47.05	-83.40	0.00	0.00	0.00
3,700.00	3.70	151.07	3,696.72	-90.77	50.17	-88.93	0.00	0.00	0.00
3,800.00	3.70	151.07	3,796.51	-96.42	53.30	-94.46	0.00	0.00	0.00
3,900.00	3.70	151.07	3,896.30	-102.06	56.42	-100.00	0.00	0.00	0.00
3,990.89	3.70	151.07	3,987.00	-107.20	59.25	-105.02	0.00	0.00	0.00
PARKMAN									
4,000.00	3.70	151.07	3,996.09	-107.71	59.54	-105.53	0.00	0.00	0.00
4,100.00	3.70	151.07	4,095.88	-113.36	62.66	-111.06	0.00	0.00	0.00
4,200.00	3.70	151.07	4,195.67	-119.00	65.78	-116.59	0.00	0.00	0.00
4,300.00	3.70	151.07	4,295.47	-124.65	68.90	-122.12	0.00	0.00	0.00
4,333.61	3.70	151.07	4,329.00	-126.55	69.95	-123.98	0.00	0.00	0.00
SUSSEX									
4,400.00	3.70	151.07	4,395.26	-130.30	72.02	-127.66	0.00	0.00	0.00

# Anadarko Petroleum Corp

## Planning Report

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<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	17"RKB + GL @ 4898.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	17"RKB + GL @ 4898.00ft
<b>Site:</b>	WELD_HAYMAKER 14-9HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	HAYMAKER 36N-4HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HAYMAKER 36N-4HZ		
<b>Design:</b>	HAYMAKER 36N-4HZ (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)
4,500.00	3.70	151.07	4,495.05	-135.94	75.14	-133.19	0.00	0.00	0.00
4,600.00	3.70	151.07	4,594.84	-141.59	78.26	-138.72	0.00	0.00	0.00
4,700.00	3.70	151.07	4,694.63	-147.24	81.39	-144.25	0.00	0.00	0.00
4,800.00	3.70	151.07	4,794.42	-152.88	84.51	-149.78	0.00	0.00	0.00
4,900.00	3.70	151.07	4,894.22	-158.53	87.63	-155.32	0.00	0.00	0.00
5,000.00	3.70	151.07	4,994.01	-164.18	90.75	-160.85	0.00	0.00	0.00
5,100.00	3.70	151.07	5,093.80	-169.82	93.87	-166.38	0.00	0.00	0.00
5,200.00	3.70	151.07	5,193.59	-175.47	96.99	-171.91	0.00	0.00	0.00
5,300.00	3.70	151.07	5,293.38	-181.12	100.11	-177.44	0.00	0.00	0.00
5,400.00	3.70	151.07	5,393.17	-186.76	103.23	-182.98	0.00	0.00	0.00
5,500.00	3.70	151.07	5,492.97	-192.41	106.36	-188.51	0.00	0.00	0.00
5,600.00	3.70	151.07	5,592.76	-198.06	109.48	-194.04	0.00	0.00	0.00
5,700.00	3.70	151.07	5,692.55	-203.70	112.60	-199.57	0.00	0.00	0.00
5,800.00	3.70	151.07	5,792.34	-209.35	115.72	-205.11	0.00	0.00	0.00
5,900.00	3.70	151.07	5,892.13	-215.00	118.84	-210.64	0.00	0.00	0.00
6,000.00	3.70	151.07	5,991.92	-220.64	121.96	-216.17	0.00	0.00	0.00
6,100.00	3.70	151.07	6,091.71	-226.29	125.08	-221.70	0.00	0.00	0.00
6,200.00	3.70	151.07	6,191.51	-231.93	128.20	-227.23	0.00	0.00	0.00
6,300.00	3.70	151.07	6,291.30	-237.58	131.32	-232.77	0.00	0.00	0.00
6,392.04	3.70	151.07	6,383.14	-242.78	134.20	-237.86	0.00	0.00	0.00
<b>Start DLS 10.00 TFO -150.55</b>									
6,400.00	3.03	143.64	6,391.09	-243.17	134.45	-238.24	10.00	-8.39	-93.23
6,500.00	7.79	13.88	6,490.81	-238.71	137.65	-233.67	10.00	4.76	-129.76
6,600.00	17.66	6.18	6,588.24	-217.00	140.91	-211.85	10.00	9.88	-7.70
6,700.00	27.63	3.94	6,680.42	-178.68	144.15	-173.45	10.00	9.96	-2.24
6,800.00	37.61	2.82	6,764.54	-124.94	147.25	-119.63	10.00	9.98	-1.12
6,900.00	47.60	2.12	6,838.05	-57.39	150.13	-52.02	10.00	9.99	-0.70
6,943.28	51.92	1.89	6,866.00	-24.38	151.29	-18.99	10.00	9.99	-0.55
<b>SHARON SPRINGS</b>									
7,000.00	57.59	1.62	6,898.72	21.91	152.70	27.32	10.00	9.99	-0.48
7,059.63	63.55	1.37	6,928.00	73.80	154.05	79.23	10.00	9.99	-0.42
<b>NIORARA A</b>									
7,100.00	67.59	1.21	6,944.69	110.54	154.88	115.97	10.00	9.99	-0.38
7,164.92	74.07	0.98	6,966.00	171.81	156.05	177.25	10.00	9.99	-0.36
<b>NIORARA B</b>									
7,200.00	77.58	0.86	6,974.59	205.82	156.59	211.25	10.00	9.99	-0.34
7,300.00	87.58	0.54	6,987.49	304.85	157.80	310.26	10.00	9.99	-0.32
7,322.16	89.79	0.47	6,988.00	327.00	158.00	332.41	10.00	9.99	-0.32
<b>7"</b>									
7,322.57	89.79	0.47	6,988.00	327.41	158.00	332.82	0.98	-0.93	0.31
<b>Start 5357.06 hold at 7322.57 MD</b>									
7,400.00	89.79	0.47	6,988.29	404.84	158.64	410.22	0.00	0.00	0.00
7,500.00	89.79	0.47	6,988.66	504.83	159.46	510.18	0.00	0.00	0.00
7,600.00	89.79	0.47	6,989.04	604.83	160.29	610.14	0.00	0.00	0.00
7,700.00	89.79	0.47	6,989.41	704.82	161.11	710.10	0.00	0.00	0.00
7,800.00	89.79	0.47	6,989.78	804.82	161.93	810.06	0.00	0.00	0.00
7,900.00	89.79	0.47	6,990.16	904.82	162.75	910.03	0.00	0.00	0.00
8,000.00	89.79	0.47	6,990.53	1,004.81	163.58	1,009.99	0.00	0.00	0.00
8,100.00	89.79	0.47	6,990.90	1,104.81	164.40	1,109.95	0.00	0.00	0.00
8,200.00	89.79	0.47	6,991.28	1,204.80	165.22	1,209.91	0.00	0.00	0.00
8,300.00	89.79	0.47	6,991.65	1,304.80	166.04	1,309.87	0.00	0.00	0.00
8,400.00	89.79	0.47	6,992.02	1,404.80	166.87	1,409.84	0.00	0.00	0.00
8,500.00	89.79	0.47	6,992.40	1,504.79	167.69	1,509.80	0.00	0.00	0.00

# Anadarko Petroleum Corp

## Planning Report

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<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	17°RKB + GL @ 4898.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	17°RKB + GL @ 4898.00ft
<b>Site:</b>	WELD_HAYMAKER 14-9HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	HAYMAKER 36N-4HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HAYMAKER 36N-4HZ		
<b>Design:</b>	HAYMAKER 36N-4HZ (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)	
8,600.00	89.79	0.47	6,992.77	1,604.79	168.51	1,609.76	0.00	0.00	0.00	
8,700.00	89.79	0.47	6,993.14	1,704.78	169.33	1,709.72	0.00	0.00	0.00	
8,800.00	89.79	0.47	6,993.52	1,804.78	170.16	1,809.68	0.00	0.00	0.00	
8,900.00	89.79	0.47	6,993.89	1,904.77	170.98	1,909.65	0.00	0.00	0.00	
9,000.00	89.79	0.47	6,994.26	2,004.77	171.80	2,009.61	0.00	0.00	0.00	
9,100.00	89.79	0.47	6,994.64	2,104.77	172.62	2,109.57	0.00	0.00	0.00	
9,200.00	89.79	0.47	6,995.01	2,204.76	173.45	2,209.53	0.00	0.00	0.00	
9,300.00	89.79	0.47	6,995.38	2,304.76	174.27	2,309.49	0.00	0.00	0.00	
9,400.00	89.79	0.47	6,995.76	2,404.75	175.09	2,409.46	0.00	0.00	0.00	
9,500.00	89.79	0.47	6,996.13	2,504.75	175.91	2,509.42	0.00	0.00	0.00	
9,600.00	89.79	0.47	6,996.50	2,604.75	176.74	2,609.38	0.00	0.00	0.00	
9,700.00	89.79	0.47	6,996.88	2,704.74	177.56	2,709.34	0.00	0.00	0.00	
9,800.00	89.79	0.47	6,997.25	2,804.74	178.38	2,809.30	0.00	0.00	0.00	
9,900.00	89.79	0.47	6,997.62	2,904.73	179.20	2,909.27	0.00	0.00	0.00	
10,000.00	89.79	0.47	6,998.00	3,004.73	180.03	3,009.23	0.00	0.00	0.00	
10,100.00	89.79	0.47	6,998.37	3,104.73	180.85	3,109.19	0.00	0.00	0.00	
10,200.00	89.79	0.47	6,998.74	3,204.72	181.67	3,209.15	0.00	0.00	0.00	
10,300.00	89.79	0.47	6,999.12	3,304.72	182.49	3,309.12	0.00	0.00	0.00	
10,400.00	89.79	0.47	6,999.49	3,404.71	183.32	3,409.08	0.00	0.00	0.00	
10,500.00	89.79	0.47	6,999.86	3,504.71	184.14	3,509.04	0.00	0.00	0.00	
10,600.00	89.79	0.47	7,000.24	3,604.71	184.96	3,609.00	0.00	0.00	0.00	
10,700.00	89.79	0.47	7,000.61	3,704.70	185.78	3,708.96	0.00	0.00	0.00	
10,800.00	89.79	0.47	7,000.98	3,804.70	186.61	3,808.93	0.00	0.00	0.00	
10,900.00	89.79	0.47	7,001.36	3,904.69	187.43	3,908.89	0.00	0.00	0.00	
11,000.00	89.79	0.47	7,001.73	4,004.69	188.25	4,008.85	0.00	0.00	0.00	
11,100.00	89.79	0.47	7,002.10	4,104.69	189.07	4,108.81	0.00	0.00	0.00	
11,200.00	89.79	0.47	7,002.48	4,204.68	189.90	4,208.77	0.00	0.00	0.00	
11,300.00	89.79	0.47	7,002.85	4,304.68	190.72	4,308.74	0.00	0.00	0.00	
11,400.00	89.79	0.47	7,003.22	4,404.67	191.54	4,408.70	0.00	0.00	0.00	
11,500.00	89.79	0.47	7,003.60	4,504.67	192.36	4,508.66	0.00	0.00	0.00	
11,600.00	89.79	0.47	7,003.97	4,604.66	193.19	4,608.62	0.00	0.00	0.00	
11,700.00	89.79	0.47	7,004.34	4,704.66	194.01	4,708.58	0.00	0.00	0.00	
11,800.00	89.79	0.47	7,004.72	4,804.66	194.83	4,808.55	0.00	0.00	0.00	
11,900.00	89.79	0.47	7,005.09	4,904.65	195.65	4,908.51	0.00	0.00	0.00	
12,000.00	89.79	0.47	7,005.46	5,004.65	196.48	5,008.47	0.00	0.00	0.00	
12,100.00	89.79	0.47	7,005.84	5,104.64	197.30	5,108.43	0.00	0.00	0.00	
12,200.00	89.79	0.47	7,006.21	5,204.64	198.12	5,208.39	0.00	0.00	0.00	
12,300.00	89.79	0.47	7,006.58	5,304.64	198.95	5,308.36	0.00	0.00	0.00	
12,400.00	89.79	0.47	7,006.96	5,404.63	199.77	5,408.32	0.00	0.00	0.00	
12,500.00	89.79	0.47	7,007.33	5,504.63	200.59	5,508.28	0.00	0.00	0.00	
12,600.00	89.79	0.47	7,007.70	5,604.62	201.41	5,608.24	0.00	0.00	0.00	
12,679.63	89.79	0.47	7,008.00	5,684.25	202.07	5,687.84	0.00	0.00	0.00	
TD at 12679.63 - HAYMAKER 36N-4HZ BHL										

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
HAYMAKER 36N-4HZ B	0.00	0.00	7,008.00	5,684.25	202.07	1,303,266.26	3,232,198.48	40.162875	-104.669178
- hit/miss target									
- Shape									
- plan hits target center									
- Point									

# Anadarko Petroleum Corp

## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well HAYMAKER 36N-4HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	17'RKB + GL @ 4898.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	17'RKB + GL @ 4898.00ft
<b>Site:</b>	WELD_HAYMAKER 14-9HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	HAYMAKER 36N-4HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HAYMAKER 36N-4HZ		
<b>Design:</b>	HAYMAKER 36N-4HZ (wp01)		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
890.00	890.00	9 5/8"	9-5/8	13-1/2	
7,322.16	6,988.00	7"	7	8-3/4	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,990.89	3,987.00	PARKMAN		0.00	
4,333.61	4,329.00	SUSSEX		0.00	
6,943.28	6,866.00	SHARON SPRINGS		0.00	
7,059.63	6,928.00	NIOBRARA A		0.00	
7,164.92	6,966.00	NIOBRARA B		0.00	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
2,000.00	2,000.00	0.00	0.00	Start Build 2.00	
2,184.96	2,184.83	-5.22	2.89	Start 4207.08 hold at 2184.96 MD	
6,392.04	6,383.14	-242.78	134.20	Start DLS 10.00 TFO -150.55	
7,322.57	6,988.00	327.41	158.00	Start 5357.06 hold at 7322.57 MD	
12,679.63	7,008.00	5,684.25	202.07	TD at 12679.63	