

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_HAYMAKER 14-9HZ PAD

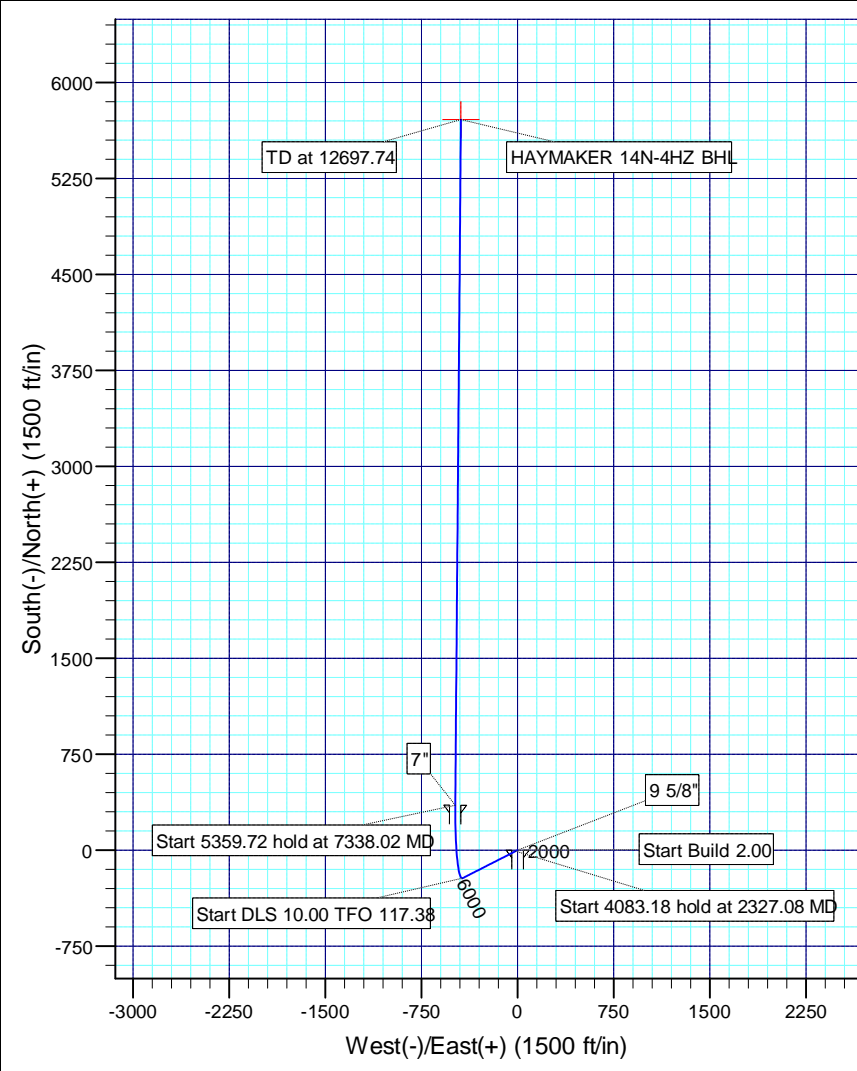
HAYMAKER 14N-4HZ

HAYMAKER 14N-4HZ

Plan: HAYMAKER 14N-4HZ (wp01)

Standard Planning Report

23 February, 2012



PROJECT DETAILS: COLORADO NORTHERN ZONE - 83

Site: WELD_HAYMAKER 14-9HZ PAD
Well: HAYMAKER 14N-4HZ
Wellbore: HAYMAKER 14N-4HZ
Design: HAYMAKER 14N-4HZ (wp01)
Latitude: 40.147207
Longitude: -104.669969
GL: 4881.00
KB: 17' RKB + GL @ 4898.00ft



WELL DETAILS: HAYMAKER 14N-4HZ

Ground Level: 4881.00		Latitude	Longitude
+N/-S	+E/-W	North	East
0.00	0.00	1297556.89	3232030.83
		40.147207	-104.669969

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape Point
HAYMAKER 14N-4HZ BHL	7008.00	5709.76	-442.98	40.162881	-104.671554	

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	2327.08	6.54	242.96	2326.37	-8.48	-16.61	2.00	242.96	-7.17	
4	6410.26	6.54	242.96	6382.96	-219.96	-430.94	0.00	0.00	-185.97	
5	7337.74	89.73	0.47	6983.00	350.00	-487.00	10.00	117.38	386.62	
6	7338.02	89.73	0.47	6983.00	350.28	-487.00	1.00	10.71	386.90	
7	12697.74	89.73	0.47	7008.00	5709.76	-442.98	0.00	0.00	5726.92	HAYMAKER 14N-4HZ BHL

CASING DETAILS

TVD	MD	Name	Size
890.00	890.00	9 5/8"	9-5/8
6983.00	7337.74	7"	7

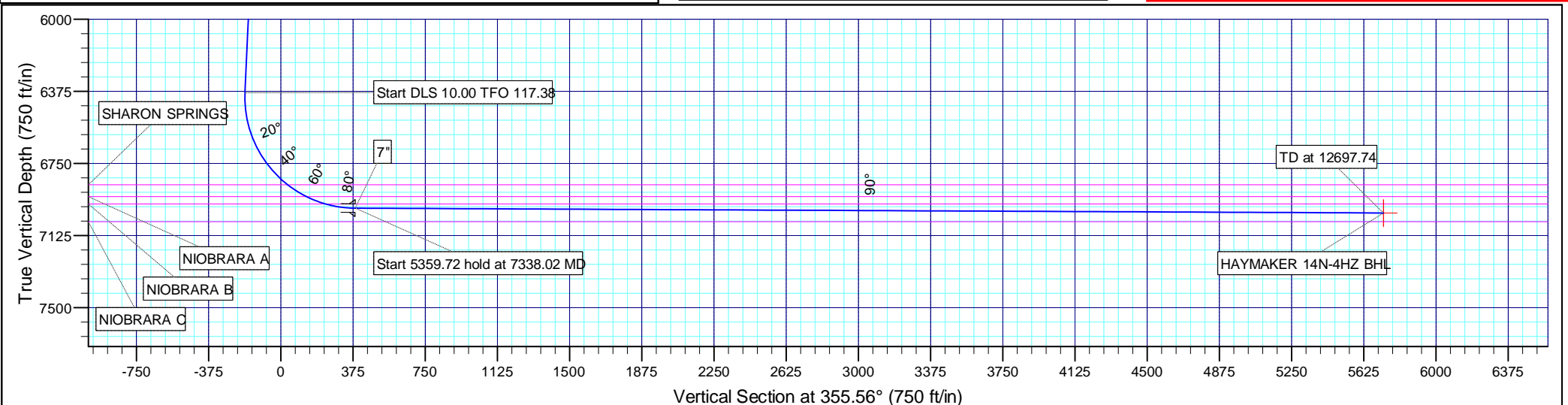
FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3982.00	3993.56	PARKMAN
4324.00	4337.80	SUSSEX
6861.00	6958.55	SHARON SPRINGS
6923.00	7075.19	NIOBRARA A
6961.00	7180.73	NIOBRARA B



Azimuths to True North
Magnetic North: 8.70°

Magnetic Field
Strength: 52935.2snT
Dip Angle: 66.84°
Date: 2/23/2012
Model: IGRF2010



Anadarko Petroleum Corp

Planning Report

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

Project	COLORADO NORTHERN ZONE - 83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	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 14N-4HZ			
Well Position	+N/-S	-23.32 ft	Northing:	1,297,556.89 usft
	+E/-W	-19.01 ft	Easting:	3,232,030.84 usft
Position Uncertainty	0.00 ft	Wellhead Elevation:		Ground Level: 4,881.00 ft

Wellbore	HAYMAKER 14N-4HZ				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/23/2012	8.70	66.84	52,935

Design	HAYMAKER 14N-4HZ (wp01)			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	355.56

Plan Sections										
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	
2,327.08	6.54	242.96	2,326.37	-8.48	-16.61	2.00	2.00	0.00	242.96	
6,410.26	6.54	242.96	6,382.96	-219.96	-430.94	0.00	0.00	0.00	0.00	
7,337.74	89.73	0.47	6,983.00	350.00	-487.00	10.00	8.97	12.67	117.39	
7,338.02	89.73	0.47	6,983.00	350.28	-487.00	1.00	0.98	0.19	10.71	
12,697.74	89.73	0.47	7,008.00	5,709.76	-442.98	0.00	0.00	0.00	0.00	HAYMAKER 14N-4HZ

Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well HAYMAKER 14N-4HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	17' RKB + GL @ 4898.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	17' RKB + GL @ 4898.00ft
Site:	WELD_HAYMAKER 14-9HZ PAD	North Reference:	True
Well:	HAYMAKER 14N-4HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	HAYMAKER 14N-4HZ		
Design:	HAYMAKER 14N-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	242.96	2,099.98	-0.79	-1.55	-0.67	2.00	2.00	0.00
2,200.00	4.00	242.96	2,199.84	-3.17	-6.22	-2.68	2.00	2.00	0.00
2,300.00	6.00	242.96	2,299.45	-7.13	-13.98	-6.03	2.00	2.00	0.00
2,327.08	6.54	242.96	2,326.37	-8.48	-16.61	-7.17	2.00	2.00	0.00
Start 4083.18 hold at 2327.08 MD									
2,400.00	6.54	242.96	2,398.82	-12.26	-24.01	-10.36	0.00	0.00	0.00
2,500.00	6.54	242.96	2,498.16	-17.44	-34.16	-14.74	0.00	0.00	0.00
2,600.00	6.54	242.96	2,597.51	-22.61	-44.31	-19.12	0.00	0.00	0.00
2,700.00	6.54	242.96	2,696.86	-27.79	-54.45	-23.50	0.00	0.00	0.00
2,800.00	6.54	242.96	2,796.21	-32.97	-64.60	-27.88	0.00	0.00	0.00
2,900.00	6.54	242.96	2,895.56	-38.15	-74.75	-32.26	0.00	0.00	0.00
3,000.00	6.54	242.96	2,994.91	-43.33	-84.89	-36.64	0.00	0.00	0.00
3,100.00	6.54	242.96	3,094.26	-48.51	-95.04	-41.01	0.00	0.00	0.00
3,200.00	6.54	242.96	3,193.61	-53.69	-105.19	-45.39	0.00	0.00	0.00
3,300.00	6.54	242.96	3,292.96	-58.87	-115.34	-49.77	0.00	0.00	0.00
3,400.00	6.54	242.96	3,392.30	-64.05	-125.48	-54.15	0.00	0.00	0.00
3,500.00	6.54	242.96	3,491.65	-69.23	-135.63	-58.53	0.00	0.00	0.00
3,600.00	6.54	242.96	3,591.00	-74.41	-145.78	-62.91	0.00	0.00	0.00
3,700.00	6.54	242.96	3,690.35	-79.59	-155.92	-67.29	0.00	0.00	0.00
3,800.00	6.54	242.96	3,789.70	-84.77	-166.07	-71.67	0.00	0.00	0.00
3,900.00	6.54	242.96	3,889.05	-89.95	-176.22	-76.04	0.00	0.00	0.00
3,993.56	6.54	242.96	3,982.00	-94.79	-185.71	-80.14	0.00	0.00	0.00
PARKMAN									
4,000.00	6.54	242.96	3,988.40	-95.12	-186.36	-80.42	0.00	0.00	0.00
4,100.00	6.54	242.96	4,087.75	-100.30	-196.51	-84.80	0.00	0.00	0.00
4,200.00	6.54	242.96	4,187.10	-105.48	-206.66	-89.18	0.00	0.00	0.00
4,300.00	6.54	242.96	4,286.45	-110.66	-216.81	-93.56	0.00	0.00	0.00
4,337.80	6.54	242.96	4,324.00	-112.62	-220.64	-95.22	0.00	0.00	0.00
SUSSEX									
4,400.00	6.54	242.96	4,385.79	-115.84	-226.95	-97.94	0.00	0.00	0.00

Anadarko Petroleum Corp

Planning Report

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Company:	US ROCKIES REGION PLANNING	TVD Reference:	17' RKB + GL @ 4898.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	17' RKB + GL @ 4898.00ft
Site:	WELD_HAYMAKER 14-9HZ PAD	North Reference:	True
Well:	HAYMAKER 14N-4HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	HAYMAKER 14N-4HZ		
Design:	HAYMAKER 14N-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	6.54	242.96	4,485.14	-121.02	-237.10	-102.32	0.00	0.00	0.00
4,600.00	6.54	242.96	4,584.49	-126.20	-247.25	-106.70	0.00	0.00	0.00
4,700.00	6.54	242.96	4,683.84	-131.38	-257.39	-111.08	0.00	0.00	0.00
4,800.00	6.54	242.96	4,783.19	-136.56	-267.54	-115.45	0.00	0.00	0.00
4,900.00	6.54	242.96	4,882.54	-141.74	-277.69	-119.83	0.00	0.00	0.00
5,000.00	6.54	242.96	4,981.89	-146.92	-287.84	-124.21	0.00	0.00	0.00
5,100.00	6.54	242.96	5,081.24	-152.10	-297.98	-128.59	0.00	0.00	0.00
5,200.00	6.54	242.96	5,180.59	-157.28	-308.13	-132.97	0.00	0.00	0.00
5,300.00	6.54	242.96	5,279.93	-162.45	-318.28	-137.35	0.00	0.00	0.00
5,400.00	6.54	242.96	5,379.28	-167.63	-328.42	-141.73	0.00	0.00	0.00
5,500.00	6.54	242.96	5,478.63	-172.81	-338.57	-146.11	0.00	0.00	0.00
5,600.00	6.54	242.96	5,577.98	-177.99	-348.72	-150.49	0.00	0.00	0.00
5,700.00	6.54	242.96	5,677.33	-183.17	-358.86	-154.86	0.00	0.00	0.00
5,800.00	6.54	242.96	5,776.68	-188.35	-369.01	-159.24	0.00	0.00	0.00
5,900.00	6.54	242.96	5,876.03	-193.53	-379.16	-163.62	0.00	0.00	0.00
6,000.00	6.54	242.96	5,975.38	-198.71	-389.31	-168.00	0.00	0.00	0.00
6,100.00	6.54	242.96	6,074.73	-203.89	-399.45	-172.38	0.00	0.00	0.00
6,200.00	6.54	242.96	6,174.08	-209.07	-409.60	-176.76	0.00	0.00	0.00
6,300.00	6.54	242.96	6,273.42	-214.25	-419.75	-181.14	0.00	0.00	0.00
6,400.00	6.54	242.96	6,372.77	-219.43	-429.89	-185.52	0.00	0.00	0.00
6,410.26	6.54	242.96	6,382.96	-219.96	-430.94	-185.97	0.00	0.00	0.00
Start DLS 10.00 TFO 117.38									
6,500.00	8.31	316.38	6,472.13	-217.58	-439.98	-182.90	10.00	1.97	81.81
6,600.00	16.95	341.01	6,569.68	-198.52	-449.73	-163.14	10.00	8.64	24.64
6,700.00	26.55	348.76	6,662.46	-162.72	-458.86	-126.74	10.00	9.60	7.75
6,800.00	36.36	352.56	6,747.67	-111.27	-467.08	-74.81	10.00	9.81	3.80
6,900.00	46.24	354.91	6,822.71	-45.75	-474.14	-8.93	10.00	9.88	2.35
6,958.55	52.04	355.95	6,861.00	-1.63	-477.65	35.32	10.00	9.91	1.77
SHARON SPRINGS									
7,000.00	56.15	356.59	6,885.30	31.87	-479.83	68.89	10.00	9.92	1.54
7,075.19	63.62	357.61	6,923.00	96.78	-483.10	133.86	10.00	9.93	1.36
NIOBRARA A									
7,100.00	66.09	357.91	6,933.54	119.22	-483.97	156.30	10.00	9.94	1.23
7,180.73	74.11	358.84	6,961.00	195.04	-486.11	232.05	10.00	9.94	1.15
NIOBRARA B									
7,200.00	76.03	359.05	6,965.97	213.66	-486.45	250.64	10.00	9.95	1.08
7,300.00	85.98	0.09	6,981.59	312.30	-487.18	349.05	10.00	9.95	1.04
7,337.74	89.73	0.47	6,983.00	350.00	-487.00	386.62	10.00	9.95	1.01
7"									
7,338.02	89.73	0.47	6,983.00	350.28	-487.00	386.90	1.01	0.99	0.19
Start 5359.72 hold at 7338.02 MD									
7,400.00	89.73	0.47	6,983.29	412.26	-486.49	448.66	0.00	0.00	0.00
7,500.00	89.73	0.47	6,983.76	512.26	-485.67	548.29	0.00	0.00	0.00
7,600.00	89.73	0.47	6,984.22	612.25	-484.85	647.92	0.00	0.00	0.00
7,700.00	89.73	0.47	6,984.69	712.25	-484.03	747.55	0.00	0.00	0.00
7,800.00	89.73	0.47	6,985.16	812.24	-483.20	847.19	0.00	0.00	0.00
7,900.00	89.73	0.47	6,985.62	912.24	-482.38	946.82	0.00	0.00	0.00
8,000.00	89.73	0.47	6,986.09	1,012.23	-481.56	1,046.45	0.00	0.00	0.00
8,100.00	89.73	0.47	6,986.56	1,112.23	-480.74	1,146.08	0.00	0.00	0.00
8,200.00	89.73	0.47	6,987.02	1,212.22	-479.92	1,245.71	0.00	0.00	0.00
8,300.00	89.73	0.47	6,987.49	1,312.22	-479.10	1,345.35	0.00	0.00	0.00
8,400.00	89.73	0.47	6,987.95	1,412.22	-478.28	1,444.98	0.00	0.00	0.00
8,500.00	89.73	0.47	6,988.42	1,512.21	-477.46	1,544.61	0.00	0.00	0.00

Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well HAYMAKER 14N-4HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	17' RKB + GL @ 4898.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	17' RKB + GL @ 4898.00ft
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Well:	HAYMAKER 14N-4HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	HAYMAKER 14N-4HZ		
Design:	HAYMAKER 14N-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	89.73	0.47	6,988.89	1,612.21	-476.63	1,644.24	0.00	0.00	0.00	
8,700.00	89.73	0.47	6,989.35	1,712.20	-475.81	1,743.88	0.00	0.00	0.00	
8,800.00	89.73	0.47	6,989.82	1,812.20	-474.99	1,843.51	0.00	0.00	0.00	
8,900.00	89.73	0.47	6,990.29	1,912.19	-474.17	1,943.14	0.00	0.00	0.00	
9,000.00	89.73	0.47	6,990.75	2,012.19	-473.35	2,042.77	0.00	0.00	0.00	
9,100.00	89.73	0.47	6,991.22	2,112.18	-472.53	2,142.41	0.00	0.00	0.00	
9,200.00	89.73	0.47	6,991.69	2,212.18	-471.71	2,242.04	0.00	0.00	0.00	
9,300.00	89.73	0.47	6,992.15	2,312.18	-470.89	2,341.67	0.00	0.00	0.00	
9,400.00	89.73	0.47	6,992.62	2,412.17	-470.06	2,441.30	0.00	0.00	0.00	
9,500.00	89.73	0.47	6,993.09	2,512.17	-469.24	2,540.94	0.00	0.00	0.00	
9,600.00	89.73	0.47	6,993.55	2,612.16	-468.42	2,640.57	0.00	0.00	0.00	
9,700.00	89.73	0.47	6,994.02	2,712.16	-467.60	2,740.20	0.00	0.00	0.00	
9,800.00	89.73	0.47	6,994.48	2,812.15	-466.78	2,839.83	0.00	0.00	0.00	
9,900.00	89.73	0.47	6,994.95	2,912.15	-465.96	2,939.47	0.00	0.00	0.00	
10,000.00	89.73	0.47	6,995.42	3,012.14	-465.14	3,039.10	0.00	0.00	0.00	
10,100.00	89.73	0.47	6,995.88	3,112.14	-464.32	3,138.73	0.00	0.00	0.00	
10,200.00	89.73	0.47	6,996.35	3,212.14	-463.50	3,238.36	0.00	0.00	0.00	
10,300.00	89.73	0.47	6,996.82	3,312.13	-462.67	3,338.00	0.00	0.00	0.00	
10,400.00	89.73	0.47	6,997.28	3,412.13	-461.85	3,437.63	0.00	0.00	0.00	
10,500.00	89.73	0.47	6,997.75	3,512.12	-461.03	3,537.26	0.00	0.00	0.00	
10,600.00	89.73	0.47	6,998.22	3,612.12	-460.21	3,636.89	0.00	0.00	0.00	
10,700.00	89.73	0.47	6,998.68	3,712.11	-459.39	3,736.53	0.00	0.00	0.00	
10,800.00	89.73	0.47	6,999.15	3,812.11	-458.57	3,836.16	0.00	0.00	0.00	
10,900.00	89.73	0.47	6,999.62	3,912.10	-457.75	3,935.79	0.00	0.00	0.00	
11,000.00	89.73	0.47	7,000.08	4,012.10	-456.93	4,035.42	0.00	0.00	0.00	
11,100.00	89.73	0.47	7,000.55	4,112.10	-456.10	4,135.06	0.00	0.00	0.00	
11,200.00	89.73	0.47	7,001.01	4,212.09	-455.28	4,234.69	0.00	0.00	0.00	
11,300.00	89.73	0.47	7,001.48	4,312.09	-454.46	4,334.32	0.00	0.00	0.00	
11,400.00	89.73	0.47	7,001.95	4,412.08	-453.64	4,433.95	0.00	0.00	0.00	
11,500.00	89.73	0.47	7,002.41	4,512.08	-452.82	4,533.58	0.00	0.00	0.00	
11,600.00	89.73	0.47	7,002.88	4,612.07	-452.00	4,633.22	0.00	0.00	0.00	
11,700.00	89.73	0.47	7,003.35	4,712.07	-451.18	4,732.85	0.00	0.00	0.00	
11,800.00	89.73	0.47	7,003.81	4,812.06	-450.36	4,832.48	0.00	0.00	0.00	
11,900.00	89.73	0.47	7,004.28	4,912.06	-449.53	4,932.11	0.00	0.00	0.00	
12,000.00	89.73	0.47	7,004.75	5,012.06	-448.71	5,031.75	0.00	0.00	0.00	
12,100.00	89.73	0.47	7,005.21	5,112.05	-447.89	5,131.38	0.00	0.00	0.00	
12,200.00	89.73	0.47	7,005.68	5,212.05	-447.07	5,231.01	0.00	0.00	0.00	
12,300.00	89.73	0.47	7,006.15	5,312.04	-446.25	5,330.64	0.00	0.00	0.00	
12,400.00	89.73	0.47	7,006.61	5,412.04	-445.43	5,430.28	0.00	0.00	0.00	
12,500.00	89.73	0.47	7,007.08	5,512.03	-444.61	5,529.91	0.00	0.00	0.00	
12,600.00	89.73	0.47	7,007.54	5,612.03	-443.79	5,629.54	0.00	0.00	0.00	
12,697.74	89.73	0.47	7,008.00	5,709.76	-442.98	5,726.92	0.00	0.00	0.00	
TD at 12697.74 - HAYMAKER 14N-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 14N-4HZ B	0.00	0.00	7,008.00	5,709.76	-442.98	1,303,262.24	3,231,534.43	40.162881	-104.671554
- hit/miss target									
- Shape									
- plan hits target center									
- Point									

Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well HAYMAKER 14N-4HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	17' RKB + GL @ 4898.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	17' RKB + GL @ 4898.00ft
Site:	WELD_HAYMAKER 14-9HZ PAD	North Reference:	True
Well:	HAYMAKER 14N-4HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	HAYMAKER 14N-4HZ		
Design:	HAYMAKER 14N-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	
7,337.74	6,983.00	7"	7	8-3/4	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,993.56	3,982.00	PARKMAN		0.00	
4,337.80	4,324.00	SUSSEX		0.00	
6,958.55	6,861.00	SHARON SPRINGS		0.00	
7,075.19	6,923.00	NIOBRARA A		0.00	
7,180.73	6,961.00	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	
2,327.08	2,326.37	-8.48	-16.61	Start 4083.18 hold at 2327.08 MD	
6,410.26	6,382.96	-219.96	-430.94	Start DLS 10.00 TFO 117.38	
7,338.02	6,983.00	350.28	-487.00	Start 5359.72 hold at 7338.02 MD	
12,697.74	7,008.00	5,709.76	-442.98	TD at 12697.74	