

# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**WELD\_NORTON 5 PAD**

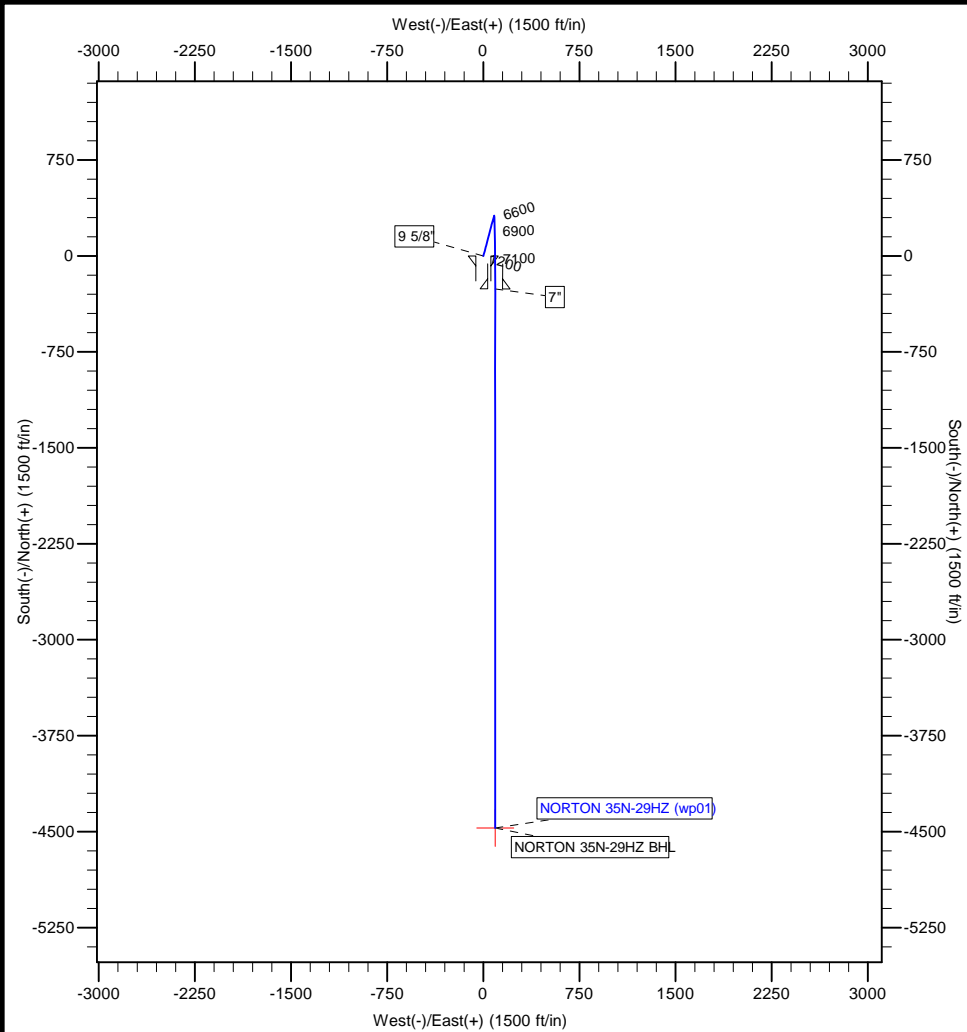
**NORTON 35N-29HZ**

**NORTON 35N-29HZ**

**Plan: NORTON 35N-29HZ (wp01)**

## **Standard Planning Report**

**05 December, 2011**



Project: COLORADO NORTHERN ZONE - 83  
Site: WELD, NORTON 5 PAD  
Well: NORTON 35N-29HZ  
Wellbore: NORTON 35N-29HZ  
Section:  
SHL:  
Design: NORTON 35N-29HZ (wp01)  
Latitude: 40.202007  
Longitude: -104.805955  
GL: 4897.00  
KB: GL + RKB @ 4914.00ft

WELL DETAILS: NORTON 35N-29HZ

+N/-S	+E/-W	Northing	Ground Level: Easting	4897.00 Latitude	40.202007 Longitude	Slot
0.00	0.00	1317192.24	3193861.27			

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
1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	0.00
1170.55	3.41	14.94	1170.44	4.90	1.31	2.00	14.94	-4.87
6547.80	3.41	14.94	6538.17	314.01	83.80	0.00	0.00	-312.20
7480.76	90.00	180.01	7144.00	-258.00	93.00	10.00	165.04	259.88
7521.78	89.59	180.00	7144.15	-299.02	93.00	1.00	-178.00	300.89
11694.44	89.59	180.00	7174.00	-4471.58	93.31	0.00	0.00	4472.55

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

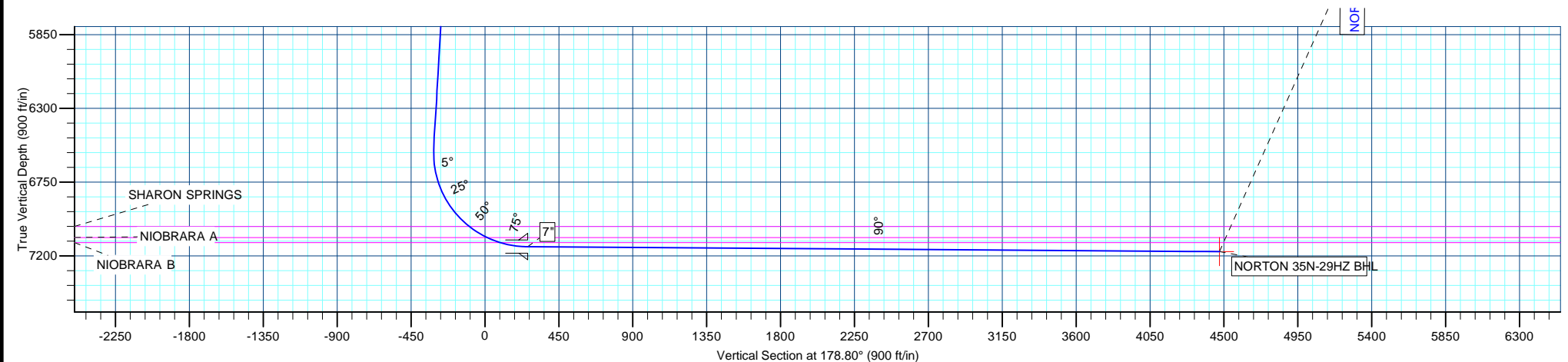
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
NORTON 35N-29HZ BHL	7174.00	-4471.58	93.31	40.189732	-104.805621	Point

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3373.00	3377.01	PARKMAN
4311.00	4316.67	SUSSEX
7021.00	7098.24	SHARON SPRINGS
7088.00	7225.31	NIOBRARA A
7119.00	7310.87	NIOBRARA B

CASING DETAILS

TVD	MD	Name	Size
900.00	900.00	9 5/8"	9-5/8
7144.00	7480.76	7"	7



# Anadarko Petroleum Corp

## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well NORTON 35N-29HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL + RKB @ 4914.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL + RKB @ 4914.00ft
<b>Site:</b>	WELD_NORTON 5 PAD	<b>North Reference:</b>	True
<b>Well:</b>	NORTON 35N-29HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	NORTON 35N-29HZ		
<b>Design:</b>	NORTON 35N-29HZ (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_NORTON 5 PAD			
<b>Site Position:</b>		<b>Northing:</b>	1,317,192.24 usft	<b>Latitude:</b> 40.202007
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,193,861.27 usft	<b>Longitude:</b> -104.805955
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b> 0.45 °

<b>Well</b>	NORTON 35N-29HZ			
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	1,317,192.24 usft
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	3,193,861.27 usft
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	<b>Ground Level:</b> 4,897.00 ft

<b>Wellbore</b>	NORTON 35N-29HZ				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	12/5/2011	8.81	66.87	52,972

<b>Design</b>	NORTON 35N-29HZ (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	178.80

<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	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,170.55	3.41	14.94	1,170.44	4.90	1.31	2.00	2.00	0.00	14.94	
6,547.80	3.41	14.94	6,538.17	314.01	83.80	0.00	0.00	0.00	0.00	
7,480.76	90.00	180.01	7,144.00	-258.00	93.00	10.00	9.28	17.69	165.04	
7,521.78	89.59	180.00	7,144.15	-299.02	93.00	1.00	-1.00	-0.03	-178.00	
11,694.44	89.59	180.00	7,174.00	-4,471.58	93.31	0.00	0.00	0.00	0.00	NORTON 35N-29HZ

# Anadarko Petroleum Corp

## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well NORTON 35N-29HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL + RKB @ 4914.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL + RKB @ 4914.00ft
<b>Site:</b>	WELD_NORTON 5 PAD	<b>North Reference:</b>	True
<b>Well:</b>	NORTON 35N-29HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	NORTON 35N-29HZ		
<b>Design:</b>	NORTON 35N-29HZ (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
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8"									
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	2.00	14.94	1,099.98	1.69	0.45	-1.68	2.00	2.00	0.00
1,170.55	3.41	14.94	1,170.44	4.90	1.31	-4.87	2.00	2.00	0.00
1,200.00	3.41	14.94	1,199.85	6.60	1.76	-6.56	0.00	0.00	0.00
1,300.00	3.41	14.94	1,299.67	12.34	3.29	-12.27	0.00	0.00	0.00
1,400.00	3.41	14.94	1,399.49	18.09	4.83	-17.99	0.00	0.00	0.00
1,500.00	3.41	14.94	1,499.32	23.84	6.36	-23.70	0.00	0.00	0.00
1,600.00	3.41	14.94	1,599.14	29.59	7.90	-29.42	0.00	0.00	0.00
1,700.00	3.41	14.94	1,698.96	35.34	9.43	-35.13	0.00	0.00	0.00
1,800.00	3.41	14.94	1,798.78	41.09	10.96	-40.85	0.00	0.00	0.00
1,900.00	3.41	14.94	1,898.61	46.84	12.50	-46.56	0.00	0.00	0.00
2,000.00	3.41	14.94	1,998.43	52.58	14.03	-52.28	0.00	0.00	0.00
2,100.00	3.41	14.94	2,098.25	58.33	15.57	-58.00	0.00	0.00	0.00
2,200.00	3.41	14.94	2,198.08	64.08	17.10	-63.71	0.00	0.00	0.00
2,300.00	3.41	14.94	2,297.90	69.83	18.63	-69.43	0.00	0.00	0.00
2,400.00	3.41	14.94	2,397.72	75.58	20.17	-75.14	0.00	0.00	0.00
2,500.00	3.41	14.94	2,497.54	81.33	21.70	-80.86	0.00	0.00	0.00
2,600.00	3.41	14.94	2,597.37	87.08	23.24	-86.57	0.00	0.00	0.00
2,700.00	3.41	14.94	2,697.19	92.82	24.77	-92.29	0.00	0.00	0.00
2,800.00	3.41	14.94	2,797.01	98.57	26.30	-98.00	0.00	0.00	0.00
2,900.00	3.41	14.94	2,896.84	104.32	27.84	-103.72	0.00	0.00	0.00
3,000.00	3.41	14.94	2,996.66	110.07	29.37	-109.43	0.00	0.00	0.00
3,100.00	3.41	14.94	3,096.48	115.82	30.91	-115.15	0.00	0.00	0.00
3,200.00	3.41	14.94	3,196.30	121.57	32.44	-120.86	0.00	0.00	0.00
3,300.00	3.41	14.94	3,296.13	127.31	33.97	-126.58	0.00	0.00	0.00
3,377.01	3.41	14.94	3,373.00	131.74	35.16	-130.98	0.00	0.00	0.00
PARKMAN									
3,400.00	3.41	14.94	3,395.95	133.06	35.51	-132.29	0.00	0.00	0.00
3,500.00	3.41	14.94	3,495.77	138.81	37.04	-138.01	0.00	0.00	0.00
3,600.00	3.41	14.94	3,595.60	144.56	38.58	-143.72	0.00	0.00	0.00
3,700.00	3.41	14.94	3,695.42	150.31	40.11	-149.44	0.00	0.00	0.00
3,800.00	3.41	14.94	3,795.24	156.06	41.64	-155.15	0.00	0.00	0.00
3,900.00	3.41	14.94	3,895.06	161.81	43.18	-160.87	0.00	0.00	0.00
4,000.00	3.41	14.94	3,994.89	167.55	44.71	-166.58	0.00	0.00	0.00
4,100.00	3.41	14.94	4,094.71	173.30	46.25	-172.30	0.00	0.00	0.00
4,200.00	3.41	14.94	4,194.53	179.05	47.78	-178.01	0.00	0.00	0.00
4,300.00	3.41	14.94	4,294.36	184.80	49.31	-183.73	0.00	0.00	0.00
4,316.67	3.41	14.94	4,311.00	185.76	49.57	-184.68	0.00	0.00	0.00
SUSSEX									
4,400.00	3.41	14.94	4,394.18	190.55	50.85	-189.45	0.00	0.00	0.00
4,500.00	3.41	14.94	4,494.00	196.30	52.38	-195.16	0.00	0.00	0.00
4,600.00	3.41	14.94	4,593.82	202.04	53.92	-200.88	0.00	0.00	0.00

# Anadarko Petroleum Corp

## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well NORTON 35N-29HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL + RKB @ 4914.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL + RKB @ 4914.00ft
<b>Site:</b>	WELD_NORTON 5 PAD	<b>North Reference:</b>	True
<b>Well:</b>	NORTON 35N-29HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	NORTON 35N-29HZ		
<b>Design:</b>	NORTON 35N-29HZ (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)
4,700.00	3.41	14.94	4,693.65	207.79	55.45	-206.59	0.00	0.00	0.00
4,800.00	3.41	14.94	4,793.47	213.54	56.98	-212.31	0.00	0.00	0.00
4,900.00	3.41	14.94	4,893.29	219.29	58.52	-218.02	0.00	0.00	0.00
5,000.00	3.41	14.94	4,993.12	225.04	60.05	-223.74	0.00	0.00	0.00
5,100.00	3.41	14.94	5,092.94	230.79	61.59	-229.45	0.00	0.00	0.00
5,200.00	3.41	14.94	5,192.76	236.54	63.12	-235.17	0.00	0.00	0.00
5,300.00	3.41	14.94	5,292.58	242.28	64.65	-240.88	0.00	0.00	0.00
5,400.00	3.41	14.94	5,392.41	248.03	66.19	-246.60	0.00	0.00	0.00
5,500.00	3.41	14.94	5,492.23	253.78	67.72	-252.31	0.00	0.00	0.00
5,600.00	3.41	14.94	5,592.05	259.53	69.26	-258.03	0.00	0.00	0.00
5,700.00	3.41	14.94	5,691.88	265.28	70.79	-263.74	0.00	0.00	0.00
5,800.00	3.41	14.94	5,791.70	271.03	72.32	-269.46	0.00	0.00	0.00
5,900.00	3.41	14.94	5,891.52	276.77	73.86	-275.17	0.00	0.00	0.00
6,000.00	3.41	14.94	5,991.34	282.52	75.39	-280.89	0.00	0.00	0.00
6,100.00	3.41	14.94	6,091.17	288.27	76.93	-286.60	0.00	0.00	0.00
6,200.00	3.41	14.94	6,190.99	294.02	78.46	-292.32	0.00	0.00	0.00
6,300.00	3.41	14.94	6,290.81	299.77	79.99	-298.03	0.00	0.00	0.00
6,400.00	3.41	14.94	6,390.64	305.52	81.53	-303.75	0.00	0.00	0.00
6,500.00	3.41	14.94	6,490.46	311.27	83.06	-309.46	0.00	0.00	0.00
6,547.80	3.41	14.94	6,538.17	314.01	83.80	-312.20	0.00	0.00	0.00
6,600.00	2.12	155.45	6,590.35	314.64	84.60	-312.80	10.00	-2.48	269.18
6,700.00	11.96	175.85	6,689.48	302.60	86.12	-300.73	10.00	9.84	20.40
6,800.00	21.94	177.83	6,785.02	273.52	87.58	-271.64	10.00	9.98	1.97
6,900.00	31.94	178.60	6,874.05	228.30	88.94	-226.39	10.00	9.99	0.77
7,000.00	41.93	179.03	6,953.88	168.30	90.15	-166.38	10.00	10.00	0.43
7,098.24	51.75	179.32	7,021.00	96.73	91.17	-94.81	10.00	10.00	0.29
SHARON SPRINGS									
7,100.00	51.93	179.32	7,022.09	95.35	91.19	-93.42	10.00	10.00	0.25
7,200.00	61.93	179.54	7,076.59	11.66	92.01	-9.74	10.00	10.00	0.22
7,225.31	64.46	179.59	7,088.00	-10.93	92.18	12.85	10.00	10.00	0.19
NIOBRARA A									
7,300.00	71.93	179.72	7,115.73	-80.22	92.60	82.14	10.00	10.00	0.18
7,310.87	73.01	179.74	7,119.00	-90.59	92.65	92.50	10.00	10.00	0.17
NIOBRARA B									
7,400.00	81.93	179.89	7,138.32	-177.51	92.93	179.41	10.00	10.00	0.16
7,480.76	90.00	180.01	7,144.00	-258.00	93.00	259.89	10.00	10.00	0.15
7"									
7,500.00	89.81	180.00	7,144.03	-277.24	93.00	279.12	1.00	-1.00	-0.03
7,521.78	89.59	180.00	7,144.15	-299.02	93.00	300.89	1.00	-1.00	-0.03
7,600.00	89.59	180.00	7,144.71	-377.24	93.00	379.10	0.00	0.00	0.00
7,700.00	89.59	180.00	7,145.42	-477.24	93.01	479.07	0.00	0.00	0.00
7,800.00	89.59	180.00	7,146.14	-577.23	93.02	579.05	0.00	0.00	0.00
7,900.00	89.59	180.00	7,146.85	-677.23	93.03	679.02	0.00	0.00	0.00
8,000.00	89.59	180.00	7,147.57	-777.23	93.03	779.00	0.00	0.00	0.00
8,100.00	89.59	180.00	7,148.28	-877.23	93.04	878.98	0.00	0.00	0.00
8,200.00	89.59	180.00	7,149.00	-977.22	93.05	978.95	0.00	0.00	0.00
8,300.00	89.59	180.00	7,149.71	-1,077.22	93.06	1,078.93	0.00	0.00	0.00
8,400.00	89.59	180.00	7,150.43	-1,177.22	93.06	1,178.90	0.00	0.00	0.00
8,500.00	89.59	180.00	7,151.15	-1,277.22	93.07	1,278.88	0.00	0.00	0.00
8,600.00	89.59	180.00	7,151.86	-1,377.21	93.08	1,378.86	0.00	0.00	0.00
8,700.00	89.59	180.00	7,152.58	-1,477.21	93.09	1,478.83	0.00	0.00	0.00
8,800.00	89.59	180.00	7,153.29	-1,577.21	93.09	1,578.81	0.00	0.00	0.00
8,900.00	89.59	180.00	7,154.01	-1,677.21	93.10	1,678.78	0.00	0.00	0.00
9,000.00	89.59	180.00	7,154.72	-1,777.20	93.11	1,778.76	0.00	0.00	0.00

# Anadarko Petroleum Corp

## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well NORTON 35N-29HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL + RKB @ 4914.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL + RKB @ 4914.00ft
<b>Site:</b>	WELD_NORTON 5 PAD	<b>North Reference:</b>	True
<b>Well:</b>	NORTON 35N-29HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	NORTON 35N-29HZ		
<b>Design:</b>	NORTON 35N-29HZ (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)
9,100.00	89.59	180.00	7,155.44	-1,877.20	93.12	1,878.73	0.00	0.00	0.00
9,200.00	89.59	180.00	7,156.15	-1,977.20	93.12	1,978.71	0.00	0.00	0.00
9,300.00	89.59	180.00	7,156.87	-2,077.20	93.13	2,078.69	0.00	0.00	0.00
9,400.00	89.59	180.00	7,157.58	-2,177.19	93.14	2,178.66	0.00	0.00	0.00
9,500.00	89.59	180.00	7,158.30	-2,277.19	93.15	2,278.64	0.00	0.00	0.00
9,600.00	89.59	180.00	7,159.02	-2,377.19	93.15	2,378.61	0.00	0.00	0.00
9,700.00	89.59	180.00	7,159.73	-2,477.19	93.16	2,478.59	0.00	0.00	0.00
9,800.00	89.59	180.00	7,160.45	-2,577.18	93.17	2,578.57	0.00	0.00	0.00
9,900.00	89.59	180.00	7,161.16	-2,677.18	93.18	2,678.54	0.00	0.00	0.00
10,000.00	89.59	180.00	7,161.88	-2,777.18	93.18	2,778.52	0.00	0.00	0.00
10,100.00	89.59	180.00	7,162.59	-2,877.17	93.19	2,878.49	0.00	0.00	0.00
10,200.00	89.59	180.00	7,163.31	-2,977.17	93.20	2,978.47	0.00	0.00	0.00
10,300.00	89.59	180.00	7,164.02	-3,077.17	93.21	3,078.44	0.00	0.00	0.00
10,400.00	89.59	180.00	7,164.74	-3,177.17	93.21	3,178.42	0.00	0.00	0.00
10,500.00	89.59	180.00	7,165.45	-3,277.16	93.22	3,278.40	0.00	0.00	0.00
10,600.00	89.59	180.00	7,166.17	-3,377.16	93.23	3,378.37	0.00	0.00	0.00
10,700.00	89.59	180.00	7,166.89	-3,477.16	93.24	3,478.35	0.00	0.00	0.00
10,800.00	89.59	180.00	7,167.60	-3,577.16	93.24	3,578.32	0.00	0.00	0.00
10,900.00	89.59	180.00	7,168.32	-3,677.15	93.25	3,678.30	0.00	0.00	0.00
11,000.00	89.59	180.00	7,169.03	-3,777.15	93.26	3,778.28	0.00	0.00	0.00
11,100.00	89.59	180.00	7,169.75	-3,877.15	93.27	3,878.25	0.00	0.00	0.00
11,200.00	89.59	180.00	7,170.46	-3,977.15	93.27	3,978.23	0.00	0.00	0.00
11,300.00	89.59	180.00	7,171.18	-4,077.14	93.28	4,078.20	0.00	0.00	0.00
11,400.00	89.59	180.00	7,171.89	-4,177.14	93.29	4,178.18	0.00	0.00	0.00
11,500.00	89.59	180.00	7,172.61	-4,277.14	93.30	4,278.15	0.00	0.00	0.00
11,600.00	89.59	180.00	7,173.32	-4,377.14	93.30	4,378.13	0.00	0.00	0.00
11,694.44	89.59	180.00	7,174.00	-4,471.58	93.31	4,472.55	0.00	0.00	0.00
NORTON 35N-29HZ 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									
NORTON 35N-29HZ BH	0.00	0.00	7,174.00	-4,471.58	93.31	1,312,721.54	3,193,989.57	40.189732	-104.805621
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
900.00	900.00	9 5/8"	9-5/8	12-1/4	
7,480.76	7,144.00	7"	7	8-3/4	

# Anadarko Petroleum Corp

## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well NORTON 35N-29HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL + RKB @ 4914.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL + RKB @ 4914.00ft
<b>Site:</b>	WELD_NORTON 5 PAD	<b>North Reference:</b>	True
<b>Well:</b>	NORTON 35N-29HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	NORTON 35N-29HZ		
<b>Design:</b>	NORTON 35N-29HZ (wp01)		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,377.01	3,373.00	PARKMAN		0.00		
4,316.67	4,311.00	SUSSEX		0.00		
7,098.24	7,021.00	SHARON SPRINGS		0.00		
7,225.31	7,088.00	NIOBRARA A		0.00		
7,310.87	7,119.00	NIOBRARA B		0.00		