

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_Niles 13-28HZ pad

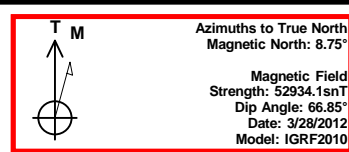
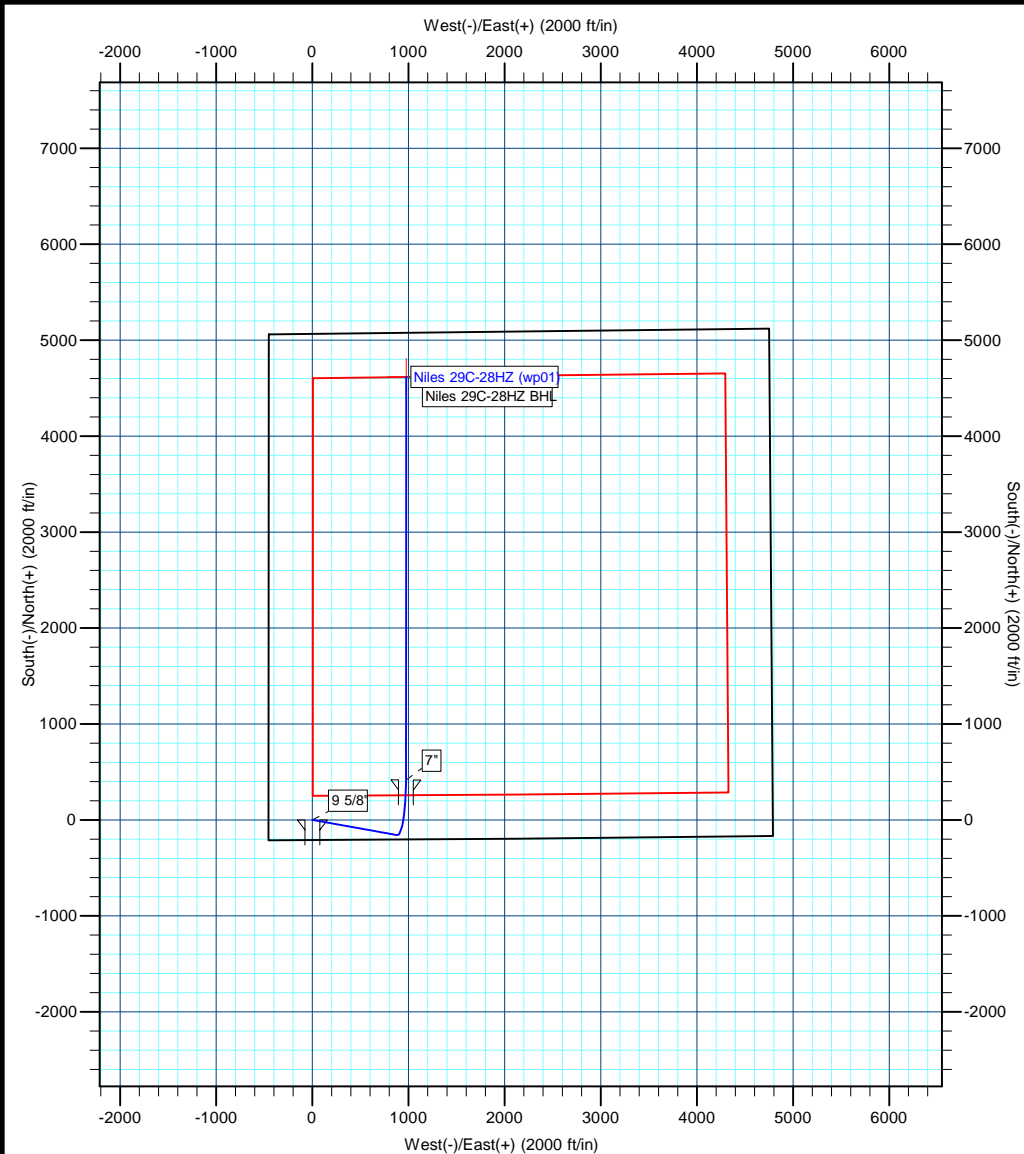
Niles 29C-28HZ

Niles 29C-28HZ

Plan: Niles 29C-28HZ (wp01)

Standard Planning Report

28 March, 2012



Project: COLORADO NORTHERN ZONE - 83
Site: WELD Niles 13-28HZ pad
Well: Niles 29C-28HZ
Wellbore: Niles 29C-28HZ
Section:
SHL:
Design: Niles 29C-28HZ (wp01)
Latitude: 40.189255
Longitude: -104.789968
GL: 4934.00
KB: GL + RKB @ 4959.00ft

WELL DETAILS: Niles 29C-28HZ

+N/-S	+E/-W	Northing	Ground Level: Easting	4934.00 Latitude	Longitude	Slot
0.00	0.00	1312582.40	3198363.87	40.189255	-104.789968	

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
1454.23	9.08	100.21	1452.33	-6.37	35.37	2.00	100.21	1.09
6895.41	9.08	100.21	6825.25	-158.65	880.88	0.00	0.00	27.09
7812.37	90.10	0.04	7407.00	415.00	973.00	10.00	-100.03	607.39
7813.42	90.11	0.04	7407.00	416.06	973.00	1.00	22.05	608.43
12012.15	90.11	0.04	7399.00	4614.77	976.24	0.00	0.00	4716.90

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

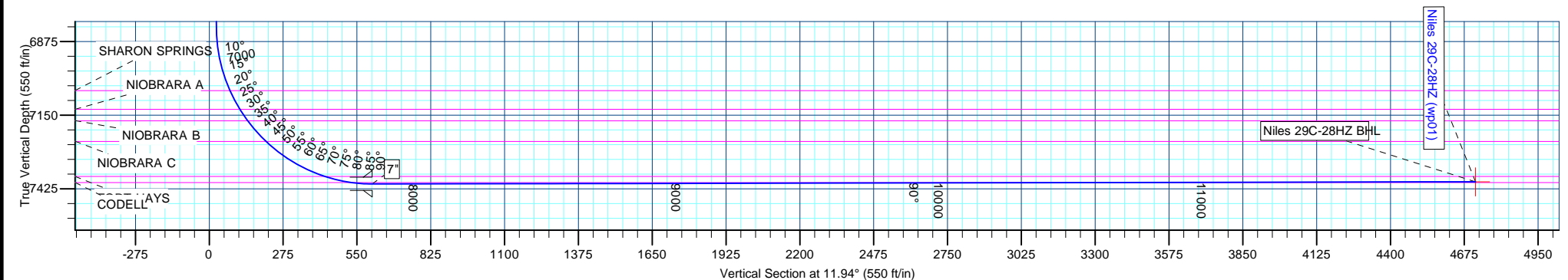
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Niles 29C-28HZ BHL	7399.00	4614.77	976.24	40.201923	-104.786473	Point

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3952.00	3985.65	PARKMAN
4376.00	4415.04	SUSSEX
7058.00	7136.79	SHARON SPRINGS
7128.00	7216.04	NIOBRARA A
7171.00	7268.00	NIOBRARA B
7248.00	7371.14	NIOBRARA C
7379.00	7630.38	FORT HAYS
7402.00	7735.14	CODELL

CASING DETAILS

TVD	MD	Name	Size
900.00	900.00	9 5/8"	9-5/8
7407.00	7812.37	7"	7



Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well Niles 29C-28HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL + RKB @ 4959.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL + RKB @ 4959.00ft
Site:	WELD_Niles 13-28HZ pad	North Reference:	True
Well:	Niles 29C-28HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Niles 29C-28HZ		
Design:	Niles 29C-28HZ (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_Niles 13-28HZ pad			
Site Position:		Northing:	1,312,582.29 usft	Latitude:	40.189256
From:	Lat/Long	Easting:	3,198,304.09 usft	Longitude:	-104.790182
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.46 °

Well	Niles 29C-28HZ					
Well Position	+N/-S	-0.37 ft	Northing:	1,312,582.40 usft	Latitude:	40.189255
	+E/-W	59.79 ft	Easting:	3,198,363.87 usft	Longitude:	-104.789968
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,934.00 ft

Wellbore	Niles 29C-28HZ				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/28/2012	8.75	66.85	52,934

Design	Niles 29C-28HZ (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	11.94

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	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,454.23	9.08	100.21	1,452.33	-6.37	35.37	2.00	2.00	0.00	100.21	
6,895.41	9.08	100.21	6,825.25	-158.65	880.88	0.00	0.00	0.00	0.00	
7,812.37	90.10	0.04	7,407.00	415.00	973.00	10.00	8.84	-10.92	-100.03	
7,813.42	90.11	0.04	7,407.00	416.06	973.00	1.00	0.93	0.38	22.05	
12,012.15	90.11	0.04	7,399.00	4,614.77	976.24	0.00	0.00	0.00	0.00	Niles 29C-28HZ BHL

Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well Niles 29C-28HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL + RKB @ 4959.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL + RKB @ 4959.00ft
Site:	WELD_Niles 13-28HZ pad	North Reference:	True
Well:	Niles 29C-28HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Niles 29C-28HZ		
Design:	Niles 29C-28HZ (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
Start Build 2.00									
1,100.00	2.00	100.21	1,099.98	-0.31	1.72	0.05	2.00	2.00	0.00
1,200.00	4.00	100.21	1,199.84	-1.24	6.87	0.21	2.00	2.00	0.00
1,300.00	6.00	100.21	1,299.45	-2.78	15.45	0.48	2.00	2.00	0.00
1,400.00	8.00	100.21	1,398.70	-4.94	27.44	0.84	2.00	2.00	0.00
1,454.23	9.08	100.21	1,452.33	-6.37	35.37	1.09	2.00	2.00	0.00
Start 5441.18 hold at 1454.23 MD									
1,500.00	9.08	100.21	1,497.53	-7.65	42.48	1.31	0.00	0.00	0.00
1,600.00	9.08	100.21	1,596.27	-10.45	58.02	1.78	0.00	0.00	0.00
1,700.00	9.08	100.21	1,695.02	-13.25	73.56	2.26	0.00	0.00	0.00
1,800.00	9.08	100.21	1,793.76	-16.05	89.10	2.74	0.00	0.00	0.00
1,900.00	9.08	100.21	1,892.51	-18.85	104.63	3.22	0.00	0.00	0.00
2,000.00	9.08	100.21	1,991.25	-21.64	120.17	3.70	0.00	0.00	0.00
2,100.00	9.08	100.21	2,090.00	-24.44	135.71	4.17	0.00	0.00	0.00
2,200.00	9.08	100.21	2,188.74	-27.24	151.25	4.65	0.00	0.00	0.00
2,300.00	9.08	100.21	2,287.49	-30.04	166.79	5.13	0.00	0.00	0.00
2,400.00	9.08	100.21	2,386.24	-32.84	182.33	5.61	0.00	0.00	0.00
2,500.00	9.08	100.21	2,484.98	-35.64	197.87	6.09	0.00	0.00	0.00
2,600.00	9.08	100.21	2,583.73	-38.44	213.41	6.56	0.00	0.00	0.00
2,700.00	9.08	100.21	2,682.47	-41.24	228.95	7.04	0.00	0.00	0.00
2,800.00	9.08	100.21	2,781.22	-44.03	244.49	7.52	0.00	0.00	0.00
2,900.00	9.08	100.21	2,879.96	-46.83	260.03	8.00	0.00	0.00	0.00
3,000.00	9.08	100.21	2,978.71	-49.63	275.57	8.48	0.00	0.00	0.00
3,100.00	9.08	100.21	3,077.46	-52.43	291.10	8.95	0.00	0.00	0.00
3,200.00	9.08	100.21	3,176.20	-55.23	306.64	9.43	0.00	0.00	0.00
3,300.00	9.08	100.21	3,274.95	-58.03	322.18	9.91	0.00	0.00	0.00
3,400.00	9.08	100.21	3,373.69	-60.83	337.72	10.39	0.00	0.00	0.00
3,500.00	9.08	100.21	3,472.44	-63.63	353.26	10.87	0.00	0.00	0.00
3,600.00	9.08	100.21	3,571.18	-66.42	368.80	11.34	0.00	0.00	0.00
3,700.00	9.08	100.21	3,669.93	-69.22	384.34	11.82	0.00	0.00	0.00
3,800.00	9.08	100.21	3,768.67	-72.02	399.88	12.30	0.00	0.00	0.00
3,900.00	9.08	100.21	3,867.42	-74.82	415.42	12.78	0.00	0.00	0.00
3,985.65	9.08	100.21	3,952.00	-77.22	428.73	13.19	0.00	0.00	0.00
PARKMAN									
4,000.00	9.08	100.21	3,966.17	-77.62	430.96	13.26	0.00	0.00	0.00
4,100.00	9.08	100.21	4,064.91	-80.42	446.50	13.73	0.00	0.00	0.00
4,200.00	9.08	100.21	4,163.66	-83.22	462.04	14.21	0.00	0.00	0.00
4,300.00	9.08	100.21	4,262.40	-86.01	477.57	14.69	0.00	0.00	0.00
4,400.00	9.08	100.21	4,361.15	-88.81	493.11	15.17	0.00	0.00	0.00
4,415.04	9.08	100.21	4,376.00	-89.23	495.45	15.24	0.00	0.00	0.00
SUSSEX									
4,500.00	9.08	100.21	4,459.89	-91.61	508.65	15.65	0.00	0.00	0.00

Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well Niles 29C-28HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL + RKB @ 4959.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL + RKB @ 4959.00ft
Site:	WELD_Niles 13-28HZ pad	North Reference:	True
Well:	Niles 29C-28HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Niles 29C-28HZ		
Design:	Niles 29C-28HZ (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)
4,600.00	9.08	100.21	4,558.64	-94.41	524.19	16.12	0.00	0.00	0.00
4,700.00	9.08	100.21	4,657.39	-97.21	539.73	16.60	0.00	0.00	0.00
4,800.00	9.08	100.21	4,756.13	-100.01	555.27	17.08	0.00	0.00	0.00
4,900.00	9.08	100.21	4,854.88	-102.81	570.81	17.56	0.00	0.00	0.00
5,000.00	9.08	100.21	4,953.62	-105.61	586.35	18.04	0.00	0.00	0.00
5,100.00	9.08	100.21	5,052.37	-108.40	601.89	18.51	0.00	0.00	0.00
5,200.00	9.08	100.21	5,151.11	-111.20	617.43	18.99	0.00	0.00	0.00
5,300.00	9.08	100.21	5,249.86	-114.00	632.97	19.47	0.00	0.00	0.00
5,400.00	9.08	100.21	5,348.61	-116.80	648.50	19.95	0.00	0.00	0.00
5,500.00	9.08	100.21	5,447.35	-119.60	664.04	20.42	0.00	0.00	0.00
5,600.00	9.08	100.21	5,546.10	-122.40	679.58	20.90	0.00	0.00	0.00
5,700.00	9.08	100.21	5,644.84	-125.20	695.12	21.38	0.00	0.00	0.00
5,800.00	9.08	100.21	5,743.59	-128.00	710.66	21.86	0.00	0.00	0.00
5,900.00	9.08	100.21	5,842.33	-130.79	726.20	22.34	0.00	0.00	0.00
6,000.00	9.08	100.21	5,941.08	-133.59	741.74	22.81	0.00	0.00	0.00
6,100.00	9.08	100.21	6,039.82	-136.39	757.28	23.29	0.00	0.00	0.00
6,200.00	9.08	100.21	6,138.57	-139.19	772.82	23.77	0.00	0.00	0.00
6,300.00	9.08	100.21	6,237.32	-141.99	788.36	24.25	0.00	0.00	0.00
6,400.00	9.08	100.21	6,336.06	-144.79	803.90	24.73	0.00	0.00	0.00
6,500.00	9.08	100.21	6,434.81	-147.59	819.44	25.20	0.00	0.00	0.00
6,600.00	9.08	100.21	6,533.55	-150.39	834.97	25.68	0.00	0.00	0.00
6,700.00	9.08	100.21	6,632.30	-153.18	850.51	26.16	0.00	0.00	0.00
6,800.00	9.08	100.21	6,731.04	-155.98	866.05	26.64	0.00	0.00	0.00
6,895.41	9.08	100.21	6,825.25	-158.65	880.88	27.09	0.00	0.00	0.00
Start DLS 10.00 TFO -100.03									
6,900.00	9.02	97.32	6,829.79	-158.76	881.59	27.13	10.00	-1.50	-62.86
7,000.00	12.57	44.97	6,928.22	-152.05	897.09	36.91	10.00	3.55	-52.35
7,100.00	20.81	24.52	7,024.01	-128.13	912.19	63.44	10.00	8.24	-20.44
7,136.79	24.17	20.59	7,058.00	-115.13	917.55	77.26	10.00	9.13	-10.69
SHARON SPRINGS									
7,200.00	30.10	15.81	7,114.23	-87.74	926.43	105.90	10.00	9.39	-7.57
7,216.04	31.63	14.86	7,128.00	-79.80	928.61	114.12	10.00	9.53	-5.91
NIORARA A									
7,268.00	36.62	12.28	7,171.00	-51.47	935.40	143.24	10.00	9.61	-4.96
NIORARA B									
7,300.00	39.72	10.98	7,196.16	-32.10	939.38	163.02	10.00	9.68	-4.08
7,371.14	46.65	8.60	7,248.00	15.85	947.59	211.63	10.00	9.74	-3.34
NIORARA C									
7,400.00	49.47	7.79	7,267.29	37.10	950.64	233.04	10.00	9.78	-2.81
7,453.57	54.72	6.45	7,300.18	79.02	955.86	275.14	10.00	9.80	-2.50
Niles 29C-28HZ heel									
7,500.00	59.28	5.42	7,325.47	117.75	959.88	313.86	10.00	9.83	-2.21
7,600.00	69.13	3.50	7,368.93	207.40	966.80	403.01	10.00	9.85	-1.93
7,630.38	72.13	2.96	7,379.00	236.02	968.42	431.33	10.00	9.86	-1.75
FORT HAYS									
7,700.00	79.00	1.81	7,396.34	303.34	971.21	497.78	10.00	9.87	-1.66
7,735.14	82.47	1.25	7,402.00	338.00	972.14	531.88	10.00	9.88	-1.60
CODELL									
7,800.00	88.88	0.23	7,406.89	402.64	972.97	595.29	10.00	9.88	-1.57
7,812.37	90.10	0.04	7,407.00	415.00	973.00	607.40	10.00	9.87	-1.55
Start DLS 1.00 TFO 22.05 - 7"									
7,813.42	90.11	0.04	7,407.00	416.06	973.00	608.43	1.00	0.93	0.38

Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well Niles 29C-28HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL + RKB @ 4959.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL + RKB @ 4959.00ft
Site:	WELD_Niles 13-28HZ pad	North Reference:	True
Well:	Niles 29C-28HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Niles 29C-28HZ		
Design:	Niles 29C-28HZ (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 4198.72 hold at 7813.42 MD									
7,900.00	90.11	0.04	7,406.83	502.63	973.07	693.14	0.00	0.00	0.00
8,000.00	90.11	0.04	7,406.64	602.63	973.14	790.99	0.00	0.00	0.00
8,100.00	90.11	0.04	7,406.45	702.63	973.22	888.84	0.00	0.00	0.00
8,200.00	90.11	0.04	7,406.26	802.63	973.30	986.70	0.00	0.00	0.00
8,300.00	90.11	0.04	7,406.07	902.63	973.38	1,084.55	0.00	0.00	0.00
8,400.00	90.11	0.04	7,405.88	1,002.63	973.45	1,182.40	0.00	0.00	0.00
8,500.00	90.11	0.04	7,405.69	1,102.63	973.53	1,280.25	0.00	0.00	0.00
8,600.00	90.11	0.04	7,405.50	1,202.63	973.61	1,378.10	0.00	0.00	0.00
8,700.00	90.11	0.04	7,405.31	1,302.63	973.68	1,475.95	0.00	0.00	0.00
8,800.00	90.11	0.04	7,405.12	1,402.63	973.76	1,573.80	0.00	0.00	0.00
8,900.00	90.11	0.04	7,404.93	1,502.63	973.84	1,671.65	0.00	0.00	0.00
9,000.00	90.11	0.04	7,404.74	1,602.63	973.92	1,769.50	0.00	0.00	0.00
9,100.00	90.11	0.04	7,404.55	1,702.63	973.99	1,867.35	0.00	0.00	0.00
9,200.00	90.11	0.04	7,404.36	1,802.63	974.07	1,965.20	0.00	0.00	0.00
9,300.00	90.11	0.04	7,404.17	1,902.63	974.15	2,063.05	0.00	0.00	0.00
9,400.00	90.11	0.04	7,403.98	2,002.63	974.22	2,160.90	0.00	0.00	0.00
9,500.00	90.11	0.04	7,403.79	2,102.63	974.30	2,258.75	0.00	0.00	0.00
9,600.00	90.11	0.04	7,403.60	2,202.63	974.38	2,356.60	0.00	0.00	0.00
9,700.00	90.11	0.04	7,403.40	2,302.63	974.46	2,454.45	0.00	0.00	0.00
9,800.00	90.11	0.04	7,403.21	2,402.63	974.53	2,552.30	0.00	0.00	0.00
9,900.00	90.11	0.04	7,403.02	2,502.63	974.61	2,650.15	0.00	0.00	0.00
10,000.00	90.11	0.04	7,402.83	2,602.63	974.69	2,748.01	0.00	0.00	0.00
10,100.00	90.11	0.04	7,402.64	2,702.63	974.76	2,845.86	0.00	0.00	0.00
10,200.00	90.11	0.04	7,402.45	2,802.63	974.84	2,943.71	0.00	0.00	0.00
10,300.00	90.11	0.04	7,402.26	2,902.63	974.92	3,041.56	0.00	0.00	0.00
10,400.00	90.11	0.04	7,402.07	3,002.63	975.00	3,139.41	0.00	0.00	0.00
10,500.00	90.11	0.04	7,401.88	3,102.63	975.07	3,237.26	0.00	0.00	0.00
10,600.00	90.11	0.04	7,401.69	3,202.63	975.15	3,335.11	0.00	0.00	0.00
10,700.00	90.11	0.04	7,401.50	3,302.63	975.23	3,432.96	0.00	0.00	0.00
10,800.00	90.11	0.04	7,401.31	3,402.63	975.30	3,530.81	0.00	0.00	0.00
10,900.00	90.11	0.04	7,401.12	3,502.63	975.38	3,628.66	0.00	0.00	0.00
11,000.00	90.11	0.04	7,400.93	3,602.63	975.46	3,726.51	0.00	0.00	0.00
11,100.00	90.11	0.04	7,400.74	3,702.63	975.54	3,824.36	0.00	0.00	0.00
11,200.00	90.11	0.04	7,400.55	3,802.63	975.61	3,922.21	0.00	0.00	0.00
11,300.00	90.11	0.04	7,400.36	3,902.63	975.69	4,020.06	0.00	0.00	0.00
11,400.00	90.11	0.04	7,400.17	4,002.63	975.77	4,117.91	0.00	0.00	0.00
11,500.00	90.11	0.04	7,399.98	4,102.63	975.84	4,215.76	0.00	0.00	0.00
11,600.00	90.11	0.04	7,399.79	4,202.63	975.92	4,313.61	0.00	0.00	0.00
11,700.00	90.11	0.04	7,399.59	4,302.63	976.00	4,411.47	0.00	0.00	0.00
11,800.00	90.11	0.04	7,399.40	4,402.63	976.08	4,509.32	0.00	0.00	0.00
11,900.00	90.11	0.04	7,399.21	4,502.63	976.15	4,607.17	0.00	0.00	0.00
12,000.00	90.11	0.04	7,399.02	4,602.63	976.23	4,705.02	0.00	0.00	0.00
12,012.15	90.11	0.04	7,399.00	4,614.77	976.24	4,716.90	0.00	0.00	0.00
TD at 12012.15 - Niles 29C-28HZ BHL									

Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well Niles 29C-28HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL + RKB @ 4959.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL + RKB @ 4959.00ft
Site:	WELD_Niles 13-28HZ pad	North Reference:	True
Well:	Niles 29C-28HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Niles 29C-28HZ		
Design:	Niles 29C-28HZ (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									
Niles 29C-28HZ BHL	0.00	0.00	7,399.00	4,614.77	976.24	1,317,204.83	3,199,303.13	40.201923	-104.786473
- plan hits target center									
- Point									
Niles 29C-28HZ heel	0.00	0.00	7,407.00	0.00	973.00	1,312,590.19	3,199,336.84	40.189255	-104.786486
- plan misses target center by 133.97ft at 7453.57ft MD (7300.18 TVD, 79.02 N, 955.86 E)									
- Point									

Casing Points					
Measured Depth	Vertical Depth	Name		Casing Diameter	Hole Diameter
(ft)	(ft)			(")	(")
900.00	900.00	9 5/8"		9-5/8	12-1/4
7,812.37	7,407.00	7"		7	8-3/4

Formations					
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(ft)	(ft)			(°)	(°)
3,985.65	3,952.00	PARKMAN		0.00	
4,415.04	4,376.00	SUSSEX		0.00	
7,136.79	7,058.00	SHARON SPRINGS		0.00	
7,216.04	7,128.00	NIOBRARA A		0.00	
7,268.00	7,171.00	NIOBRARA B		0.00	
7,371.14	7,248.00	NIOBRARA C		0.00	
7,630.38	7,379.00	FORT HAYS		0.00	
7,735.14	7,402.00	CODELL		0.00	

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S	+E/-W	Comment	
(ft)	(ft)	(ft)	(ft)		
1,000.00	1,000.00	0.00	0.00	Start Build 2.00	
1,454.23	1,452.33	-6.37	35.37	Start 5441.18 hold at 1454.23 MD	
6,895.41	6,825.25	-158.65	880.88	Start DLS 10.00 TFO -100.03	
7,812.37	7,407.00	415.00	973.00	Start DLS 1.00 TFO 22.05	
7,813.42	7,407.00	416.06	973.00	Start 4198.72 hold at 7813.42 MD	
12,012.15	7,399.00	4,614.77	976.24	TD at 12012.15	