



Weatherford®



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FINAL SURVEYS

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_CAMP 1-26HZ PAD

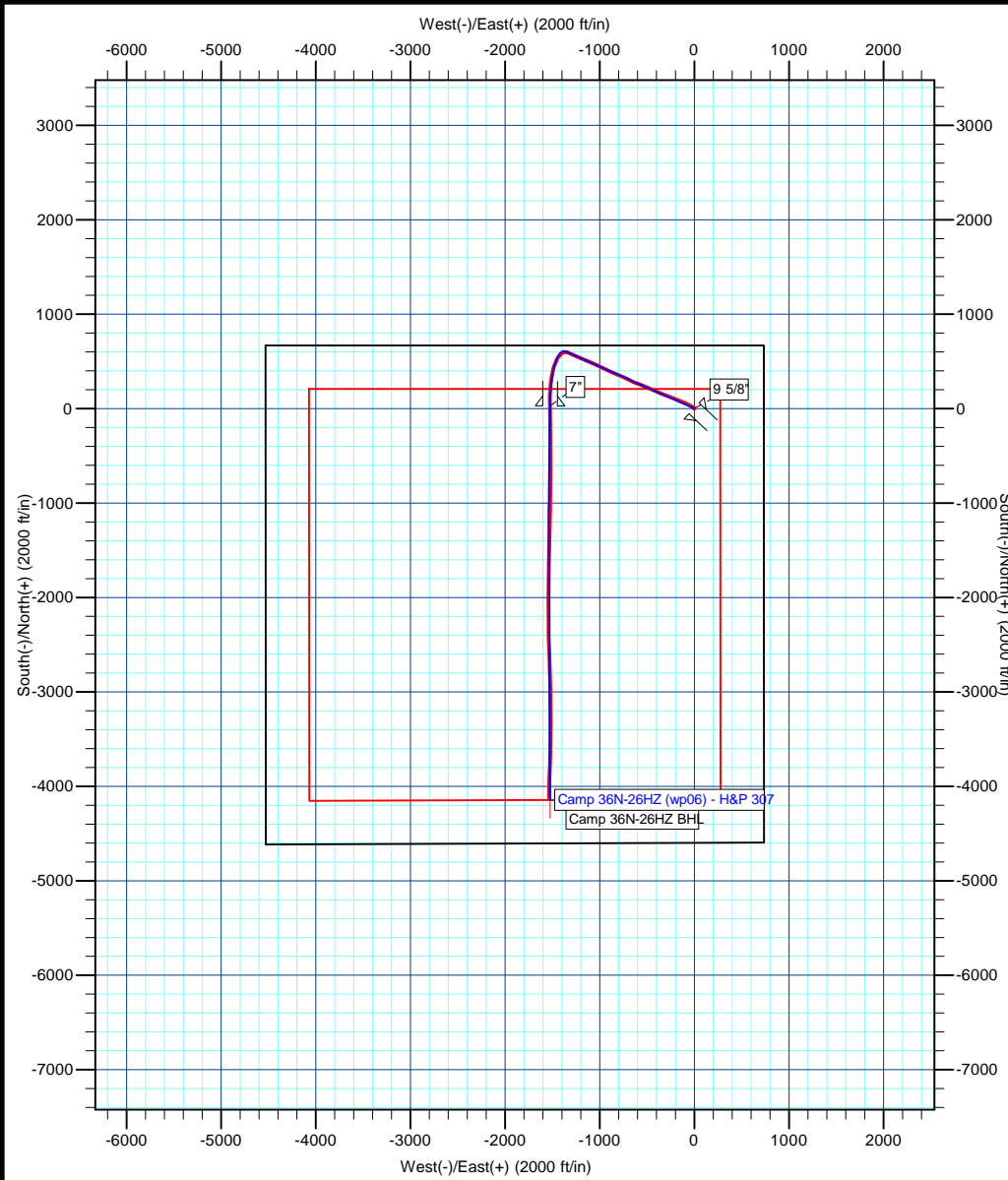
Camp 36N-26HZ

Camp 36N-26HZ

Design: Camp 36N-26HZ

Standard Survey Report

08 May, 2012



Azimuths to True North
Magnetic North: 8.77°
Magnetic Field Strength: 52978.2snT
Dip Angle: 66.88°
Date: 12/6/2011
Model: IGRF2010

Project: COLORADO NORTHERN ZONE - 83
Site: WELD_CAMP 1-26HZ PAD
Well: Camp 36N-26HZ
Wellbore: Camp 36N-26HZ
Section:
SHL:
Design: Camp 36N-26HZ (wp06) - H&P 307
Latitude: 40.201631
Longitude: -104.737555
GL: 5014.00
KB: 25' RKB + 5014' GL @ 5039.00ft



WELL DETAILS: Camp 36N-26HZ

+N/-S	+E/-W	Northing	Ground Level: Easting	5014.00 Latitude	Longitude	Slot
0.00	0.00	1317212.17	3212967.54	40.201631	-104.737555	

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
861.00	0.42	313.28	860.98	1.79	-3.55	0.00	0.00	-0.45
1100.00	0.00	0.00	1099.97	2.39	-4.18	0.18	180.00	-0.80
1909.39	16.19	293.91	1898.64	48.42	-108.02	2.00	293.91	-8.14
6828.44	16.19	293.91	6622.66	604.23	-1361.70	0.00	0.00	-96.79
7793.29	90.00	180.01	7239.00	34.97	-1525.37	10.00	-113.05	493.97
7833.14	90.00	180.81	7239.00	-4.88	-1525.66	2.00	90.00	531.46
8913.21	90.00	180.81	7239.00	-1084.84	-1540.87	0.00	0.00	1550.23
8973.55	90.00	179.60	7239.00	-1145.18	-1541.08	2.00	-90.00	1606.93
8978.55	90.00	179.70	7239.00	-1150.18	-1541.05	2.00	90.16	1611.62
11973.54	90.00	179.70	7239.01	-4145.13	-1525.37	0.00	0.00	4416.88

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

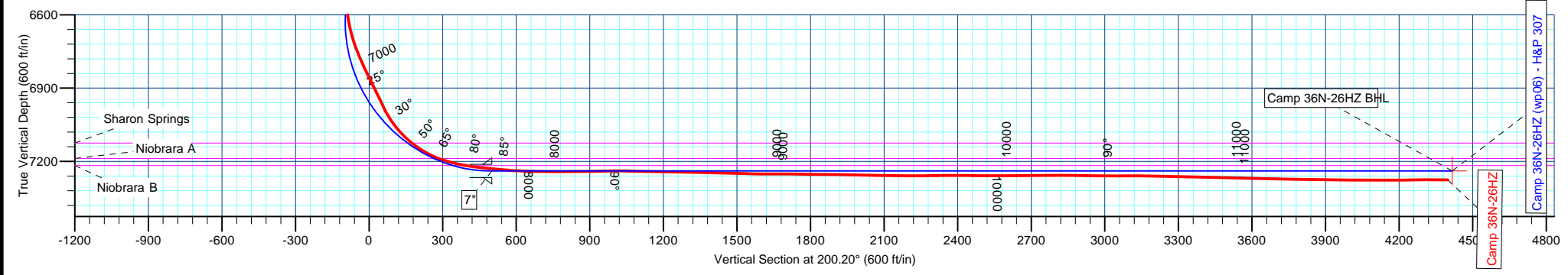
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Camp 36N-26HZ BHL	7239.01	-4145.13	-1525.37	40.190252	-104.743015	Point

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
4077.00	4177.68	Parkman
4585.00	4706.65	Sussex
7125.00	7419.04	Sharon Springs
7188.00	7545.47	Niobrara A
7217.00	7631.25	Niobrara B

CASING DETAILS

TVD	MD	Name	Size
900.00	900.02	9 5/8"	9-5/8
7239.00	7800.30	7"	7



Anadarko Petroleum Corp

Survey Report

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well Camp 36N-26HZ
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	25' RKB + 5014' GL @ 5039.00ft
Site:	WELD_CAMP 1-26HZ PAD	MD Reference:	25' RKB + 5014' GL @ 5039.00ft
Well:	Camp 36N-26HZ	North Reference:	True
Wellbore:	Camp 36N-26HZ	Survey Calculation Method:	Minimum Curvature
Design:	Camp 36N-26HZ	Database:	edmp

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_CAMP 1-26HZ PAD			
Site Position:		Northing:	1,317,212.46 usft
From:	Lat/Long	Easting:	3,213,042.68 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "
		Latitude:	40.201630
		Longitude:	-104.737286
		Grid Convergence:	0.49 °

Well Camp 36N-26HZ			
Well Position		Northing:	1,317,212.17 usft
	+N/-S 0.00 ft	Easting:	3,212,967.55 usft
	+E/-W 0.00 ft	Latitude:	40.201631
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft
		Longitude:	-104.737555
		Ground Level:	5,014.00 ft

Wellbore Camp 36N-26HZ					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/6/2011	8.77	66.88	52,978

Design Camp 36N-26HZ					
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	200.46	

Survey Program		Date 5/8/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
100.00	861.00	Survey #1 (Camp 36N-26HZ)	NS-GYRO-MS	NORTH SENSING GYROCOMPASSING M/S	
956.00	11,920.00	Survey #2 (Camp 36N-26HZ)	MWD	MWD - STANDARD	

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	0.20	246.69	100.00	-0.07	-0.16	0.12	0.20	0.20	0.00	
200.00	0.16	206.47	200.00	-0.26	-0.38	0.38	0.13	-0.04	-40.22	
300.00	0.17	156.00	300.00	-0.52	-0.38	0.63	0.14	0.01	-50.47	
400.00	0.07	16.08	400.00	-0.60	-0.31	0.67	0.23	-0.10	-139.92	
500.00	0.47	297.90	500.00	-0.35	-0.65	0.56	0.46	0.40	-78.18	
600.00	0.52	264.60	599.99	-0.20	-1.47	0.70	0.29	0.05	-33.30	
700.00	0.69	312.59	699.99	0.16	-2.36	0.67	0.52	0.17	47.99	
800.00	0.86	331.45	799.98	1.23	-3.16	-0.05	0.30	0.17	18.86	
861.00	0.42	313.28	860.98	1.79	-3.55	-0.43	0.79	-0.72	-29.79	

Anadarko Petroleum Corp

Survey Report

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well Camp 36N-26HZ
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	25' RKB + 5014' GL @ 5039.00ft
Site:	WELD_CAMP 1-26HZ PAD	MD Reference:	25' RKB + 5014' GL @ 5039.00ft
Well:	Camp 36N-26HZ	North Reference:	True
Wellbore:	Camp 36N-26HZ	Survey Calculation Method:	Minimum Curvature
Design:	Camp 36N-26HZ	Database:	edmp

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)
tie on point to gyros									
956.00	1.07	339.47	955.97	2.86	-4.11	-1.24	0.76	0.68	27.57
1,048.00	1.13	339.08	1,047.95	4.51	-4.74	-2.57	0.07	0.07	-0.42
1,140.00	3.76	304.67	1,139.86	7.07	-7.54	-3.99	3.15	2.86	-37.40
1,232.00	4.28	306.67	1,231.64	10.84	-12.78	-5.69	0.59	0.57	2.17
1,324.00	6.04	307.19	1,323.26	15.81	-19.39	-8.04	1.91	1.91	0.57
1,416.00	8.13	305.39	1,414.55	22.51	-28.55	-11.11	2.28	2.27	-1.96
1,511.00	10.52	298.20	1,508.29	30.50	-41.67	-14.01	2.79	2.52	-7.57
1,606.00	12.12	293.83	1,601.44	38.63	-58.43	-15.76	1.91	1.68	-4.60
1,701.00	14.49	295.22	1,693.89	47.72	-78.31	-17.34	2.52	2.49	1.46
1,795.00	13.83	294.08	1,785.03	57.32	-99.21	-19.02	0.76	-0.70	-1.21
1,890.00	14.84	292.45	1,877.07	66.59	-120.82	-20.16	1.14	1.06	-1.72
1,985.00	16.11	293.66	1,968.63	76.53	-144.14	-21.32	1.38	1.34	1.27
2,080.00	14.96	292.72	2,060.15	86.56	-167.52	-22.54	1.24	-1.21	-0.99
2,175.00	15.89	293.39	2,151.73	96.45	-190.77	-23.69	1.00	0.98	0.71
2,269.00	14.53	292.14	2,242.44	106.01	-213.50	-24.69	1.49	-1.45	-1.33
2,364.00	15.73	291.32	2,334.14	115.18	-236.54	-25.24	1.28	1.26	-0.86
2,459.00	16.71	289.08	2,425.36	124.33	-261.44	-25.10	1.22	1.03	-2.36
2,554.00	15.22	287.68	2,516.69	132.58	-286.23	-24.17	1.62	-1.57	-1.47
2,649.00	16.52	294.06	2,608.08	141.88	-310.45	-24.41	2.29	1.37	6.72
2,744.00	17.15	292.44	2,699.01	152.73	-335.73	-25.75	0.83	0.66	-1.71
2,839.00	15.88	292.88	2,790.09	163.13	-360.65	-26.78	1.34	-1.34	0.46
2,933.00	17.06	294.11	2,880.23	173.76	-385.09	-28.20	1.31	1.26	1.31
3,028.00	16.65	294.32	2,971.15	185.06	-410.21	-30.00	0.44	-0.43	0.22
3,123.00	16.11	293.63	3,062.29	195.95	-434.68	-31.65	0.60	-0.57	-0.73
3,218.00	15.52	292.79	3,153.69	206.15	-458.48	-32.90	0.67	-0.62	-0.88
3,313.00	14.28	292.56	3,245.50	215.57	-481.02	-33.84	1.31	-1.31	-0.24
3,407.00	16.14	293.93	3,336.20	225.32	-503.67	-35.06	2.02	1.98	1.46
3,502.00	15.04	294.25	3,427.71	235.74	-526.97	-36.67	1.16	-1.16	0.34
3,597.00	15.46	292.39	3,519.36	245.62	-549.92	-37.92	0.68	0.44	-1.96
3,692.00	16.33	290.32	3,610.73	255.09	-574.15	-38.31	1.09	0.92	-2.18
3,787.00	14.81	287.75	3,702.24	263.43	-598.24	-37.70	1.76	-1.60	-2.71
3,881.00	16.36	289.26	3,792.78	271.46	-622.18	-36.86	1.70	1.65	1.61
3,976.00	16.55	292.48	3,883.89	281.04	-647.32	-37.06	0.98	0.20	3.39
4,071.00	16.07	299.78	3,975.08	292.75	-671.23	-39.66	2.21	-0.51	7.68
4,166.00	17.35	299.18	4,066.07	306.19	-695.01	-43.94	1.36	1.35	-0.63
4,261.00	17.24	298.13	4,156.77	319.73	-719.80	-47.97	0.35	-0.12	-1.11
4,355.00	16.85	292.57	4,246.65	331.53	-744.66	-50.33	1.78	-0.41	-5.91
4,450.00	15.04	287.58	4,337.99	340.53	-769.13	-50.22	2.39	-1.91	-5.25
4,545.00	15.63	290.88	4,429.61	348.82	-792.84	-49.69	1.11	0.62	3.47
4,639.00	16.65	294.89	4,519.91	359.00	-816.89	-50.83	1.61	1.09	4.27
4,734.00	15.17	296.32	4,611.27	370.24	-840.38	-53.15	1.61	-1.56	1.51
4,829.00	14.13	294.95	4,703.18	380.64	-862.03	-55.32	1.15	-1.09	-1.44

Anadarko Petroleum Corp

Survey Report

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well Camp 36N-26HZ
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	25' RKB + 5014' GL @ 5039.00ft
Site:	WELD_CAMP 1-26HZ PAD	MD Reference:	25' RKB + 5014' GL @ 5039.00ft
Well:	Camp 36N-26HZ	North Reference:	True
Wellbore:	Camp 36N-26HZ	Survey Calculation Method:	Minimum Curvature
Design:	Camp 36N-26HZ	Database:	edmp

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)	
4,924.00	15.49	295.03	4,795.02	390.90	-884.04	-57.24	1.43	1.43	0.08	
5,019.00	17.41	294.55	4,886.13	402.18	-908.47	-59.27	2.03	2.02	-0.51	
5,115.00	15.45	290.83	4,978.20	412.69	-933.48	-60.38	2.32	-2.04	-3.88	
5,210.00	15.94	295.53	5,069.67	422.81	-957.08	-61.61	1.43	0.52	4.95	
5,305.00	16.90	296.58	5,160.79	434.62	-981.20	-64.24	1.06	1.01	1.11	
5,401.00	14.90	295.74	5,253.11	446.22	-1,004.80	-66.86	2.10	-2.08	-0.88	
5,495.00	15.37	295.25	5,343.85	456.78	-1,026.96	-69.01	0.52	0.50	-0.52	
5,590.00	16.52	294.76	5,435.20	467.81	-1,050.61	-71.08	1.22	1.21	-0.52	
5,685.00	17.95	294.98	5,525.93	479.65	-1,076.14	-73.25	1.51	1.51	0.23	
5,781.00	15.72	293.56	5,617.81	491.10	-1,101.48	-75.12	2.36	-2.32	-1.48	
5,876.00	16.18	292.47	5,709.15	501.30	-1,125.51	-76.28	0.58	0.48	-1.15	
5,971.00	16.71	293.97	5,800.26	511.91	-1,150.22	-77.58	0.71	0.56	1.58	
6,067.00	16.63	290.36	5,892.23	522.29	-1,175.71	-78.40	1.08	-0.08	-3.76	
6,162.00	15.97	291.03	5,983.41	531.71	-1,200.65	-78.51	0.72	-0.69	0.71	
6,257.00	16.44	294.52	6,074.64	541.98	-1,225.08	-79.59	1.14	0.49	3.67	
6,353.00	16.23	296.79	6,166.77	553.67	-1,249.42	-82.03	0.70	-0.22	2.36	
6,448.00	16.98	296.01	6,257.80	565.73	-1,273.73	-84.84	0.82	0.79	-0.82	
6,543.00	14.22	292.02	6,349.30	576.19	-1,297.02	-86.50	3.12	-2.91	-4.20	
6,638.00	15.77	291.04	6,441.06	585.20	-1,319.89	-86.94	1.65	1.63	-1.03	
6,669.00	15.08	291.67	6,470.94	588.21	-1,327.57	-87.07	2.29	-2.23	2.03	
6,701.00	15.92	291.42	6,501.78	591.35	-1,335.52	-87.23	2.63	2.63	-0.78	
6,733.00	16.52	285.18	6,532.51	594.14	-1,344.00	-86.89	5.76	1.88	-19.50	
6,764.00	18.22	271.84	6,562.11	595.45	-1,353.10	-84.94	13.93	5.48	-43.03	
6,796.00	19.24	268.37	6,592.41	595.46	-1,363.37	-81.36	4.72	3.19	-10.84	
6,828.00	19.08	262.57	6,622.64	594.63	-1,373.83	-76.93	5.97	-0.50	-18.13	
6,860.00	19.59	253.52	6,652.84	592.44	-1,384.16	-71.25	9.49	1.59	-28.28	
6,892.00	19.95	242.80	6,682.97	588.42	-1,394.17	-63.99	11.37	1.13	-33.50	
6,923.00	20.82	233.93	6,712.03	582.75	-1,403.33	-55.49	10.34	2.81	-28.61	
6,955.00	22.24	225.47	6,741.81	575.16	-1,412.24	-45.25	10.66	4.44	-26.44	
6,986.00	25.20	221.99	6,770.19	566.14	-1,420.84	-33.79	10.56	9.55	-11.23	
7,016.00	26.85	220.57	6,797.14	556.24	-1,429.52	-21.49	5.88	5.50	-4.73	
7,049.00	26.42	215.68	6,826.65	544.62	-1,438.65	-7.40	6.77	-1.30	-14.82	
7,081.00	26.57	208.50	6,855.29	532.54	-1,446.22	6.55	10.02	0.47	-22.44	
7,113.00	26.39	204.73	6,883.94	519.79	-1,452.61	20.73	5.28	-0.56	-11.78	
7,144.00	25.66	203.58	6,911.79	507.38	-1,458.18	34.31	2.86	-2.35	-3.71	
7,176.00	24.70	203.61	6,940.75	494.90	-1,463.63	47.90	3.00	-3.00	0.09	
7,208.00	24.57	204.46	6,969.84	482.72	-1,469.06	61.21	1.18	-0.41	2.66	
7,239.00	29.10	203.67	6,997.49	469.95	-1,474.76	75.18	14.66	14.61	-2.55	
7,271.00	33.11	200.56	7,024.89	454.63	-1,480.96	91.69	13.50	12.53	-9.72	
7,302.00	36.83	198.28	7,050.29	437.87	-1,486.85	109.45	12.72	12.00	-7.35	
7,334.00	41.48	194.91	7,075.10	418.51	-1,492.58	129.60	15.98	14.53	-10.53	
7,365.00	45.80	192.75	7,097.53	397.74	-1,497.68	150.84	14.74	13.94	-6.97	
7,397.00	49.56	190.95	7,119.07	374.59	-1,502.53	174.23	12.46	11.75	-5.63	

Anadarko Petroleum Corp

Survey Report

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Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	25' RKB + 5014' GL @ 5039.00ft
Site:	WELD_CAMP 1-26HZ PAD	MD Reference:	25' RKB + 5014' GL @ 5039.00ft
Well:	Camp 36N-26HZ	North Reference:	True
Wellbore:	Camp 36N-26HZ	Survey Calculation Method:	Minimum Curvature
Design:	Camp 36N-26HZ	Database:	edmp

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)
7,429.00	54.68	189.92	7,138.71	349.76	-1,507.09	199.09	16.20	16.00	-3.22
7,460.00	59.13	188.72	7,155.64	324.13	-1,511.29	224.56	14.72	14.35	-3.87
7,492.00	63.33	187.40	7,171.04	296.37	-1,515.22	251.95	13.61	13.13	-4.13
7,524.00	68.33	185.14	7,184.14	267.36	-1,518.39	280.24	16.90	15.63	-7.06
7,556.00	72.76	184.28	7,194.79	237.29	-1,520.87	309.27	14.07	13.84	-2.69
7,587.00	75.51	183.85	7,203.26	207.55	-1,522.98	337.87	8.97	8.87	-1.39
7,619.00	78.12	183.98	7,210.56	176.47	-1,525.11	367.74	8.17	8.16	0.41
7,650.00	80.45	184.04	7,216.33	146.09	-1,527.24	396.95	7.52	7.52	0.19
7,682.00	82.02	182.29	7,221.20	114.51	-1,528.98	427.14	7.30	4.91	-5.47
7,713.00	83.76	181.37	7,225.04	83.77	-1,529.96	456.29	6.34	5.61	-2.97
7,745.00	84.61	178.49	7,228.28	51.94	-1,529.92	486.10	9.34	2.66	-9.00
7,776.00	85.03	178.30	7,231.08	21.08	-1,529.06	514.71	1.49	1.35	-0.61
7,808.00	85.39	177.91	7,233.75	-10.79	-1,528.00	544.20	1.66	1.13	-1.22
7,842.00	85.73	177.87	7,236.39	-44.67	-1,526.76	575.51	1.01	1.00	-0.12
7,896.26	87.75	178.91	7,239.47	-98.82	-1,525.23	625.71	4.18	3.72	1.91
7"									
7,927.00	88.89	179.49	7,240.37	-129.54	-1,524.80	654.34	4.18	3.72	1.90
8,022.00	89.26	179.12	7,241.91	-224.52	-1,523.65	742.93	0.55	0.39	-0.39
8,116.00	90.49	179.34	7,242.11	-318.51	-1,522.39	830.55	1.33	1.31	0.23
8,211.00	91.54	180.02	7,240.43	-413.49	-1,521.86	919.35	1.32	1.11	0.72
8,305.00	90.12	179.77	7,239.07	-507.48	-1,521.68	1,007.35	1.53	-1.51	-0.27
8,400.00	88.40	179.87	7,240.30	-602.47	-1,521.39	1,096.24	1.81	-1.81	0.11
8,494.00	88.89	180.51	7,242.52	-696.44	-1,521.70	1,184.40	0.86	0.52	0.68
8,589.00	89.51	180.23	7,243.84	-791.43	-1,522.31	1,273.61	0.72	0.65	-0.29
8,685.00	88.27	180.88	7,245.70	-887.40	-1,523.24	1,363.85	1.46	-1.29	0.68
8,779.00	88.95	180.86	7,247.98	-981.36	-1,524.67	1,452.39	0.72	0.72	-0.02
8,874.00	88.21	180.22	7,250.34	-1,076.33	-1,525.56	1,541.67	1.03	-0.78	-0.67
8,969.00	90.00	181.98	7,251.82	-1,171.29	-1,527.39	1,631.29	2.64	1.88	1.85
9,064.00	89.69	181.79	7,252.08	-1,266.24	-1,530.51	1,721.34	0.38	-0.33	-0.20
9,159.00	89.26	181.80	7,252.95	-1,361.19	-1,533.49	1,811.34	0.45	-0.45	0.01
9,254.00	89.14	181.23	7,254.28	-1,456.15	-1,536.00	1,901.18	0.61	-0.13	-0.60
9,349.00	89.20	181.12	7,255.65	-1,551.12	-1,537.95	1,990.84	0.13	0.06	-0.12
9,443.00	88.58	180.28	7,257.47	-1,645.09	-1,539.09	2,079.29	1.11	-0.66	-0.89
9,538.00	89.20	180.24	7,259.31	-1,740.07	-1,539.53	2,168.43	0.65	0.65	-0.04
9,633.00	90.80	181.01	7,259.31	-1,835.06	-1,540.56	2,257.79	1.87	1.68	0.81
9,728.00	90.80	180.12	7,257.99	-1,930.05	-1,541.50	2,347.11	0.94	0.00	-0.94
9,824.00	89.38	179.72	7,257.84	-2,026.04	-1,541.36	2,437.01	1.54	-1.48	-0.42
9,919.00	89.32	180.05	7,258.91	-2,121.04	-1,541.17	2,525.94	0.35	-0.06	0.35
10,014.00	91.23	180.11	7,258.46	-2,216.03	-1,541.31	2,614.99	2.01	2.01	0.06
10,109.00	89.51	179.89	7,257.85	-2,311.03	-1,541.31	2,703.99	1.83	-1.81	-0.23
10,203.00	90.31	179.58	7,257.99	-2,405.02	-1,540.87	2,791.91	0.91	0.85	-0.33
10,298.00	89.45	178.65	7,258.19	-2,500.01	-1,539.40	2,880.39	1.33	-0.91	-0.98
10,393.00	89.57	178.14	7,259.00	-2,594.97	-1,536.74	2,968.43	0.55	0.13	-0.54
10,488.00	89.75	177.65	7,259.57	-2,689.90	-1,533.25	3,056.16	0.55	0.19	-0.52

Anadarko Petroleum Corp

Survey Report

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well Camp 36N-26HZ
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	25' RKB + 5014' GL @ 5039.00ft
Site:	WELD_CAMP 1-26HZ PAD	MD Reference:	25' RKB + 5014' GL @ 5039.00ft
Well:	Camp 36N-26HZ	North Reference:	True
Wellbore:	Camp 36N-26HZ	Survey Calculation Method:	Minimum Curvature
Design:	Camp 36N-26HZ	Database:	edmp

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)	
10,583.00	90.49	177.01	7,259.37	-2,784.80	-1,528.83	3,143.52	1.03	0.78	-0.67	
10,678.00	88.59	177.96	7,260.13	-2,879.70	-1,524.66	3,230.98	2.24	-2.00	1.00	
10,773.00	88.33	177.74	7,262.68	-2,974.60	-1,521.10	3,318.65	0.36	-0.27	-0.23	
10,868.00	88.70	180.17	7,265.15	-3,069.54	-1,519.37	3,407.00	2.59	0.39	2.56	
10,963.00	88.77	179.58	7,267.24	-3,164.52	-1,519.16	3,495.91	0.63	0.07	-0.62	
11,058.00	88.95	180.92	7,269.13	-3,259.50	-1,519.57	3,585.04	1.42	0.19	1.41	
11,153.00	88.89	180.51	7,270.93	-3,354.47	-1,520.76	3,674.44	0.44	-0.06	-0.43	
11,248.00	88.46	179.71	7,273.12	-3,449.45	-1,520.94	3,763.49	0.96	-0.45	-0.84	
11,343.00	88.89	181.11	7,275.32	-3,544.42	-1,521.62	3,852.71	1.54	0.45	1.47	
11,437.00	90.37	181.86	7,275.93	-3,638.38	-1,524.06	3,941.59	1.77	1.57	0.80	
11,532.00	89.75	181.74	7,275.83	-3,733.33	-1,527.04	4,031.60	0.66	-0.65	-0.13	
11,627.00	89.45	181.32	7,276.49	-3,828.30	-1,529.58	4,121.46	0.54	-0.32	-0.44	
11,722.00	90.88	182.19	7,276.22	-3,923.25	-1,532.49	4,211.44	1.76	1.51	0.92	
11,818.00	90.00	181.59	7,275.48	-4,019.19	-1,535.65	4,302.44	1.11	-0.92	-0.63	
11,870.00	89.63	181.01	7,275.65	-4,071.18	-1,536.83	4,351.56	1.32	-0.71	-1.12	
11,920.00	89.27	180.45	7,276.13	-4,121.17	-1,537.47	4,398.62	1.33	-0.72	-1.12	
last mwd survey										

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
7,896.26	7,239.47	7"	7	8-3/4	

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
861.00	860.98	1.79	-3.55	tie on point to gyros	
11,920.00	7,276.13	-4,121.17	-1,537.47	last mwd survey	

Checked By: _____ Approved By: _____ Date: _____

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_CAMP 1-26HZ PAD

Camp 36N-26HZ

Camp 36N-26HZ

Design: Camp 36N-26HZ

Survey Report - Geographic

08 May, 2012

Anadarko Petroleum Corp

Survey Report - Geographic

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well Camp 36N-26HZ
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	25' RKB + 5014' GL @ 5039.00ft
Site:	WELD_CAMP 1-26HZ PAD	MD Reference:	25' RKB + 5014' GL @ 5039.00ft
Well:	Camp 36N-26HZ	North Reference:	True
Wellbore:	Camp 36N-26HZ	Survey Calculation Method:	Minimum Curvature
Design:	Camp 36N-26HZ	Database:	edmp

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_CAMP 1-26HZ PAD				
Site Position:		Northing:	1,317,212.46 usft	Latitude:	40.201630
From:	Lat/Long	Easting:	3,213,042.68 usft	Longitude:	-104.737286
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.49 °

Well	Camp 36N-26HZ					
Well Position	+N/-S	0.00 ft	Northing:	1,317,212.17 usft	Latitude:	40.201631
	+E/-W	0.00 ft	Easting:	3,212,967.55 usft	Longitude:	-104.737555
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,014.00 ft

Wellbore	Camp 36N-26HZ				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/6/2011	8.77	66.88	52,978

Design	Camp 36N-26HZ				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	200.46	

Survey Program	Date	5/8/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
100.00	861.00	Survey #1 (Camp 36N-26HZ)	NS-GYRO-MS	NORTH SENSING GYROCOMPASSING M/S	
956.00	11,920.00	Survey #2 (Camp 36N-26HZ)	MWD	MWD - STANDARD	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
0.00	0.00	0.00	0.00	0.00	0.00	1,317,212.17	3,212,967.55	40.201631	-104.737555	
100.00	0.20	246.69	100.00	-0.07	-0.16	1,317,212.10	3,212,967.39	40.201631	-104.737556	
200.00	0.16	206.47	200.00	-0.26	-0.38	1,317,211.91	3,212,967.17	40.201630	-104.737557	
300.00	0.17	156.00	300.00	-0.52	-0.38	1,317,211.65	3,212,967.17	40.201630	-104.737557	
400.00	0.07	16.08	400.00	-0.60	-0.31	1,317,211.57	3,212,967.24	40.201629	-104.737556	
500.00	0.47	297.90	500.00	-0.35	-0.65	1,317,211.82	3,212,966.90	40.201630	-104.737558	
600.00	0.52	264.60	599.99	-0.20	-1.47	1,317,211.96	3,212,966.08	40.201631	-104.737561	
700.00	0.69	312.59	699.99	0.16	-2.36	1,317,212.32	3,212,965.18	40.201632	-104.737564	
800.00	0.86	331.45	799.98	1.23	-3.16	1,317,213.38	3,212,964.37	40.201634	-104.737567	
861.00	0.42	313.28	860.98	1.79	-3.55	1,317,213.93	3,212,963.98	40.201636	-104.737568	
tie on point to gyros										

Anadarko Petroleum Corp

Survey Report - Geographic

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well Camp 36N-26HZ
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	25' RKB + 5014' GL @ 5039.00ft
Site:	WELD_CAMP 1-26HZ PAD	MD Reference:	25' RKB + 5014' GL @ 5039.00ft
Well:	Camp 36N-26HZ	North Reference:	True
Wellbore:	Camp 36N-26HZ	Survey Calculation Method:	Minimum Curvature
Design:	Camp 36N-26HZ	Database:	edmp

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
956.00	1.07	339.47	955.97	2.86	-4.11	1,317,214.99	3,212,963.41	40.201639	-104.737570	
1,048.00	1.13	339.08	1,047.95	4.51	-4.74	1,317,216.64	3,212,962.77	40.201643	-104.737572	
1,140.00	3.76	304.67	1,139.86	7.07	-7.54	1,317,219.18	3,212,959.94	40.201650	-104.737582	
1,232.00	4.28	306.67	1,231.64	10.84	-12.78	1,317,222.90	3,212,954.68	40.201661	-104.737601	
1,324.00	6.04	307.19	1,323.26	15.81	-19.39	1,317,227.82	3,212,948.03	40.201674	-104.737625	
1,416.00	8.13	305.39	1,414.55	22.51	-28.55	1,317,234.43	3,212,938.81	40.201693	-104.737657	
1,511.00	10.52	298.20	1,508.29	30.50	-41.67	1,317,242.31	3,212,925.62	40.201715	-104.737704	
1,606.00	12.12	293.83	1,601.44	38.63	-58.43	1,317,250.30	3,212,908.78	40.201737	-104.737764	
1,701.00	14.49	295.22	1,693.89	47.72	-78.31	1,317,259.22	3,212,888.83	40.201762	-104.737836	
1,795.00	13.83	294.08	1,785.03	57.32	-99.21	1,317,268.63	3,212,867.85	40.201788	-104.737910	
1,890.00	14.84	292.45	1,877.07	66.59	-120.82	1,317,277.73	3,212,846.16	40.201814	-104.737988	
1,985.00	16.11	293.66	1,968.63	76.53	-144.14	1,317,287.46	3,212,822.76	40.201841	-104.738071	
2,080.00	14.96	292.72	2,060.15	86.56	-167.52	1,317,297.29	3,212,799.29	40.201869	-104.738155	
2,175.00	15.89	293.39	2,151.73	96.45	-190.77	1,317,306.98	3,212,775.96	40.201896	-104.738238	
2,269.00	14.53	292.14	2,242.44	106.01	-213.50	1,317,316.34	3,212,753.14	40.201922	-104.738320	
2,364.00	15.73	291.32	2,334.14	115.18	-236.54	1,317,325.32	3,212,730.03	40.201947	-104.738402	
2,459.00	16.71	289.08	2,425.36	124.33	-261.44	1,317,334.25	3,212,705.05	40.201972	-104.738491	
2,554.00	15.22	287.68	2,516.69	132.58	-286.23	1,317,342.29	3,212,680.19	40.201995	-104.738580	
2,649.00	16.52	294.06	2,608.08	141.88	-310.45	1,317,351.37	3,212,655.89	40.202021	-104.738667	
2,744.00	17.15	292.44	2,699.01	152.73	-335.73	1,317,362.01	3,212,630.52	40.202050	-104.738757	
2,839.00	15.88	292.88	2,790.09	163.13	-360.65	1,317,372.19	3,212,605.51	40.202079	-104.738846	
2,933.00	17.06	294.11	2,880.23	173.76	-385.09	1,317,382.62	3,212,580.98	40.202108	-104.738934	
3,028.00	16.65	294.32	2,971.15	185.06	-410.21	1,317,393.70	3,212,555.76	40.202139	-104.739024	
3,123.00	16.11	293.63	3,062.29	195.95	-434.68	1,317,404.38	3,212,531.19	40.202169	-104.739111	
3,218.00	15.52	292.79	3,153.69	206.15	-458.48	1,317,414.38	3,212,507.31	40.202197	-104.739197	
3,313.00	14.28	292.56	3,245.50	215.57	-481.02	1,317,423.60	3,212,484.70	40.202223	-104.739277	
3,407.00	16.14	293.93	3,336.20	225.32	-503.67	1,317,433.15	3,212,461.96	40.202250	-104.739358	
3,502.00	15.04	294.25	3,427.71	235.74	-526.97	1,317,443.37	3,212,438.57	40.202278	-104.739442	
3,597.00	15.46	292.39	3,519.36	245.62	-549.92	1,317,453.06	3,212,415.54	40.202305	-104.739524	
3,692.00	16.33	290.32	3,610.73	255.09	-574.15	1,317,462.31	3,212,391.22	40.202331	-104.739611	
3,787.00	14.81	287.75	3,702.24	263.43	-598.24	1,317,470.45	3,212,367.06	40.202354	-104.739697	
3,881.00	16.36	289.26	3,792.78	271.46	-622.18	1,317,478.27	3,212,343.05	40.202376	-104.739783	
3,976.00	16.55	292.48	3,883.89	281.04	-647.32	1,317,487.64	3,212,317.84	40.202403	-104.739873	
4,071.00	16.07	299.78	3,975.08	292.75	-671.23	1,317,499.14	3,212,293.82	40.202435	-104.739958	
4,166.00	17.35	299.18	4,066.07	306.19	-695.01	1,317,512.37	3,212,269.93	40.202472	-104.740043	
4,261.00	17.24	298.13	4,156.77	319.73	-719.80	1,317,525.70	3,212,245.03	40.202509	-104.740132	
4,355.00	16.85	292.57	4,246.65	331.53	-744.66	1,317,537.28	3,212,220.06	40.202541	-104.740221	
4,450.00	15.04	287.58	4,337.99	340.53	-769.13	1,317,546.08	3,212,195.52	40.202566	-104.740309	
4,545.00	15.63	290.88	4,429.61	348.82	-792.84	1,317,554.16	3,212,171.74	40.202589	-104.740394	
4,639.00	16.65	294.89	4,519.91	359.00	-816.89	1,317,564.14	3,212,147.60	40.202617	-104.740480	
4,734.00	15.17	296.32	4,611.27	370.24	-840.38	1,317,575.17	3,212,124.02	40.202647	-104.740564	
4,829.00	14.13	294.95	4,703.18	380.64	-862.03	1,317,585.39	3,212,102.27	40.202676	-104.740641	
4,924.00	15.49	295.03	4,795.02	390.90	-884.04	1,317,595.46	3,212,080.18	40.202704	-104.740720	
5,019.00	17.41	294.55	4,886.13	402.18	-908.47	1,317,606.52	3,212,055.66	40.202735	-104.740808	
5,115.00	15.45	290.83	4,978.20	412.69	-933.48	1,317,616.82	3,212,030.55	40.202764	-104.740897	
5,210.00	15.94	295.53	5,069.67	422.81	-957.08	1,317,626.74	3,212,006.87	40.202792	-104.740982	
5,305.00	16.90	296.58	5,160.79	434.62	-981.20	1,317,638.34	3,211,982.64	40.202824	-104.741068	
5,401.00	14.90	295.74	5,253.11	446.22	-1,004.80	1,317,649.74	3,211,958.95	40.202856	-104.741153	
5,495.00	15.37	295.25	5,343.85	456.78	-1,026.96	1,317,660.11	3,211,936.70	40.202885	-104.741232	
5,590.00	16.52	294.76	5,435.20	467.81	-1,050.61	1,317,670.93	3,211,912.96	40.202915	-104.741317	
5,685.00	17.95	294.98	5,525.93	479.65	-1,076.14	1,317,682.55	3,211,887.32	40.202948	-104.741408	
5,781.00	15.72	293.56	5,617.81	491.10	-1,101.48	1,317,693.78	3,211,861.89	40.202979	-104.741499	
5,876.00	16.18	292.47	5,709.15	501.30	-1,125.51	1,317,703.78	3,211,837.77	40.203007	-104.741585	
5,971.00	16.71	293.97	5,800.26	511.91	-1,150.22	1,317,714.17	3,211,812.97	40.203036	-104.741673	
6,067.00	16.63	290.36	5,892.23	522.29	-1,175.71	1,317,724.34	3,211,787.39	40.203065	-104.741764	

Anadarko Petroleum Corp

Survey Report - Geographic

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well Camp 36N-26HZ
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	25' RKB + 5014' GL @ 5039.00ft
Site:	WELD_CAMP 1-26HZ PAD	MD Reference:	25' RKB + 5014' GL @ 5039.00ft
Well:	Camp 36N-26HZ	North Reference:	True
Wellbore:	Camp 36N-26HZ	Survey Calculation Method:	Minimum Curvature
Design:	Camp 36N-26HZ	Database:	edmp

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
6,162.00	15.97	291.03	5,983.41	531.71	-1,200.65	1,317,733.54	3,211,762.37	40.203091	-104.741854	
6,257.00	16.44	294.52	6,074.64	541.98	-1,225.08	1,317,743.60	3,211,737.85	40.203119	-104.741941	
6,353.00	16.23	296.79	6,166.77	553.67	-1,249.42	1,317,755.08	3,211,713.42	40.203151	-104.742028	
6,448.00	16.98	296.01	6,257.80	565.73	-1,273.73	1,317,766.93	3,211,689.00	40.203184	-104.742115	
6,543.00	14.22	292.02	6,349.30	576.19	-1,297.02	1,317,777.19	3,211,665.62	40.203213	-104.742199	
6,638.00	15.77	291.04	6,441.06	585.20	-1,319.89	1,317,786.01	3,211,642.67	40.203237	-104.742281	
6,669.00	15.08	291.67	6,470.94	588.21	-1,327.57	1,317,788.94	3,211,634.97	40.203246	-104.742308	
6,701.00	15.92	291.42	6,501.78	591.35	-1,335.52	1,317,792.01	3,211,626.99	40.203254	-104.742337	
6,733.00	16.52	285.18	6,532.51	594.14	-1,344.00	1,317,794.73	3,211,618.49	40.203262	-104.742367	
6,764.00	18.22	271.84	6,562.11	595.45	-1,353.10	1,317,795.97	3,211,609.38	40.203266	-104.742400	
6,796.00	19.24	268.37	6,592.41	595.46	-1,363.37	1,317,795.89	3,211,599.10	40.203266	-104.742436	
6,828.00	19.08	262.57	6,622.64	594.63	-1,373.83	1,317,794.97	3,211,588.65	40.203263	-104.742474	
6,860.00	19.59	253.52	6,652.84	592.44	-1,384.16	1,317,792.69	3,211,578.34	40.203257	-104.742511	
6,892.00	19.95	242.80	6,682.97	588.42	-1,394.17	1,317,788.58	3,211,568.37	40.203246	-104.742547	
6,923.00	20.82	233.93	6,712.03	582.75	-1,403.33	1,317,782.84	3,211,559.26	40.203231	-104.742579	
6,955.00	22.24	225.47	6,741.81	575.16	-1,412.24	1,317,775.17	3,211,550.41	40.203210	-104.742611	
6,986.00	25.20	221.99	6,770.19	566.14	-1,420.84	1,317,766.07	3,211,541.89	40.203185	-104.742642	
7,016.00	26.85	220.57	6,797.14	556.24	-1,429.52	1,317,756.10	3,211,533.30	40.203158	-104.742673	
7,049.00	26.42	215.68	6,826.65	544.62	-1,438.65	1,317,744.40	3,211,524.27	40.203126	-104.742706	
7,081.00	26.57	208.50	6,855.29	532.54	-1,446.22	1,317,732.26	3,211,516.80	40.203093	-104.742733	
7,113.00	26.39	204.73	6,883.94	519.79	-1,452.61	1,317,719.45	3,211,510.52	40.203058	-104.742756	
7,144.00	25.66	203.58	6,911.79	507.38	-1,458.18	1,317,707.00	3,211,505.06	40.203024	-104.742776	
7,176.00	24.70	203.61	6,940.75	494.90	-1,463.63	1,317,694.47	3,211,499.72	40.202990	-104.742795	
7,208.00	24.57	204.46	6,969.84	482.72	-1,469.06	1,317,682.25	3,211,494.39	40.202956	-104.742815	
7,239.00	29.10	203.67	6,997.49	469.95	-1,474.76	1,317,669.42	3,211,488.80	40.202921	-104.742835	
7,271.00	33.11	200.56	7,024.89	454.63	-1,480.96	1,317,654.05	3,211,482.74	40.202879	-104.742857	
7,302.00	36.83	198.28	7,050.29	437.87	-1,486.85	1,317,637.24	3,211,476.99	40.202833	-104.742878	
7,334.00	41.48	194.91	7,075.10	418.51	-1,492.58	1,317,617.83	3,211,471.42	40.202780	-104.742899	
7,365.00	45.80	192.75	7,097.53	397.74	-1,497.68	1,317,597.02	3,211,466.50	40.202723	-104.742917	
7,397.00	49.56	190.95	7,119.07	374.59	-1,502.53	1,317,573.83	3,211,461.86	40.202659	-104.742934	
7,429.00	54.68	189.92	7,138.71	349.76	-1,507.09	1,317,548.96	3,211,457.50	40.202591	-104.742951	
7,460.00	59.13	188.72	7,155.64	324.13	-1,511.29	1,317,523.30	3,211,453.53	40.202521	-104.742966	
7,492.00	63.33	187.40	7,171.04	296.37	-1,515.22	1,317,495.50	3,211,449.84	40.202445	-104.742980	
7,524.00	68.33	185.14	7,184.14	267.36	-1,518.39	1,317,466.47	3,211,446.91	40.202365	-104.742991	
7,556.00	72.76	184.28	7,194.79	237.29	-1,520.87	1,317,436.38	3,211,444.70	40.202282	-104.743000	
7,587.00	75.51	183.85	7,203.26	207.55	-1,522.98	1,317,406.62	3,211,442.84	40.202201	-104.743008	
7,619.00	78.12	183.98	7,210.56	176.47	-1,525.11	1,317,375.53	3,211,440.98	40.202115	-104.743015	
7,650.00	80.45	184.04	7,216.33	146.09	-1,527.24	1,317,345.13	3,211,439.11	40.202032	-104.743023	
7,682.00	82.02	182.29	7,221.20	114.51	-1,528.98	1,317,313.54	3,211,437.64	40.201945	-104.743029	
7,713.00	83.76	181.37	7,225.04	83.77	-1,529.96	1,317,282.78	3,211,436.92	40.201861	-104.743033	
7,745.00	84.61	178.49	7,228.28	51.94	-1,529.92	1,317,250.95	3,211,437.24	40.201774	-104.743032	
7,776.00	85.03	178.30	7,231.08	21.08	-1,529.06	1,317,220.10	3,211,438.37	40.201689	-104.743029	
7,808.00	85.39	177.91	7,233.75	-10.79	-1,528.00	1,317,188.24	3,211,439.69	40.201601	-104.743026	
7,842.00	85.73	177.87	7,236.39	-44.67	-1,526.76	1,317,154.38	3,211,441.23	40.201508	-104.743021	
7,896.26	87.75	178.91	7,239.47	-98.82	-1,525.23	1,317,100.25	3,211,443.22	40.201360	-104.743016	
7"										
7,927.00	88.89	179.49	7,240.37	-129.54	-1,524.80	1,317,069.53	3,211,443.92	40.201275	-104.743014	
8,022.00	89.26	179.12	7,241.91	-224.52	-1,523.65	1,316,974.56	3,211,445.89	40.201015	-104.743010	
8,116.00	90.49	179.34	7,242.11	-318.51	-1,522.39	1,316,880.59	3,211,447.96	40.200757	-104.743005	
8,211.00	91.54	180.02	7,240.43	-413.49	-1,521.86	1,316,785.61	3,211,449.30	40.200496	-104.743003	
8,305.00	90.12	179.77	7,239.07	-507.48	-1,521.68	1,316,691.63	3,211,450.28	40.200238	-104.743003	
8,400.00	88.40	179.87	7,240.30	-602.47	-1,521.39	1,316,596.65	3,211,451.40	40.199977	-104.743002	
8,494.00	88.89	180.51	7,242.52	-696.44	-1,521.70	1,316,502.68	3,211,451.90	40.199719	-104.743003	
8,589.00	89.51	180.23	7,243.84	-791.43	-1,522.31	1,316,407.69	3,211,452.10	40.199458	-104.743005	
8,685.00	88.27	180.88	7,245.70	-887.40	-1,523.24	1,316,311.71	3,211,451.99	40.199195	-104.743008	

Anadarko Petroleum Corp

Survey Report - Geographic

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well Camp 36N-26HZ
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	25' RKB + 5014' GL @ 5039.00ft
Site:	WELD_CAMP 1-26HZ PAD	MD Reference:	25' RKB + 5014' GL @ 5039.00ft
Well:	Camp 36N-26HZ	North Reference:	True
Wellbore:	Camp 36N-26HZ	Survey Calculation Method:	Minimum Curvature
Design:	Camp 36N-26HZ	Database:	edmp

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
8,779.00	88.95	180.86	7,247.98	-981.36	-1,524.67	1,316,217.74	3,211,451.38	40.198937	-104.743013	
8,874.00	88.21	180.22	7,250.34	-1,076.33	-1,525.56	1,316,122.77	3,211,451.30	40.198676	-104.743017	
8,969.00	90.00	181.98	7,251.82	-1,171.29	-1,527.39	1,316,027.79	3,211,450.29	40.198416	-104.743023	
9,064.00	89.69	181.79	7,252.08	-1,266.24	-1,530.51	1,315,932.82	3,211,447.98	40.198155	-104.743034	
9,159.00	89.26	181.80	7,252.95	-1,361.19	-1,533.49	1,315,837.85	3,211,445.82	40.197894	-104.743045	
9,254.00	89.14	181.23	7,254.28	-1,456.15	-1,536.00	1,315,742.88	3,211,444.13	40.197634	-104.743054	
9,349.00	89.20	181.12	7,255.65	-1,551.12	-1,537.95	1,315,647.89	3,211,443.00	40.197373	-104.743061	
9,443.00	88.58	180.28	7,257.47	-1,645.09	-1,539.09	1,315,553.91	3,211,442.66	40.197115	-104.743065	
9,538.00	89.20	180.24	7,259.31	-1,740.07	-1,539.53	1,315,458.93	3,211,443.04	40.196854	-104.743066	
9,633.00	90.80	181.01	7,259.31	-1,835.06	-1,540.56	1,315,363.94	3,211,442.82	40.196593	-104.743070	
9,728.00	90.80	180.12	7,257.99	-1,930.05	-1,541.50	1,315,268.95	3,211,442.70	40.196333	-104.743073	
9,824.00	89.38	179.72	7,257.84	-2,026.04	-1,541.36	1,315,172.96	3,211,443.66	40.196069	-104.743073	
9,919.00	89.32	180.05	7,258.91	-2,121.04	-1,541.17	1,315,077.97	3,211,444.67	40.195808	-104.743072	
10,014.00	91.23	180.11	7,258.46	-2,216.03	-1,541.31	1,314,982.98	3,211,445.35	40.195548	-104.743073	
10,109.00	89.51	179.89	7,257.85	-2,311.03	-1,541.31	1,314,887.98	3,211,446.17	40.195287	-104.743073	
10,203.00	90.31	179.58	7,257.99	-2,405.02	-1,540.87	1,314,793.99	3,211,447.41	40.195029	-104.743071	
10,298.00	89.45	178.65	7,258.19	-2,500.01	-1,539.40	1,314,699.02	3,211,449.70	40.194768	-104.743066	
10,393.00	89.57	178.14	7,259.00	-2,594.97	-1,536.74	1,314,604.09	3,211,453.17	40.194507	-104.743056	
10,488.00	89.75	177.65	7,259.57	-2,689.90	-1,533.25	1,314,509.19	3,211,457.48	40.194247	-104.743044	
10,583.00	90.49	177.01	7,259.37	-2,784.80	-1,528.83	1,314,414.34	3,211,462.72	40.193986	-104.743028	
10,678.00	88.59	177.96	7,260.13	-2,879.70	-1,524.66	1,314,319.48	3,211,467.71	40.193726	-104.743013	
10,773.00	88.33	177.74	7,262.68	-2,974.60	-1,521.10	1,314,224.61	3,211,472.08	40.193465	-104.743000	
10,868.00	88.70	180.17	7,265.15	-3,069.54	-1,519.37	1,314,129.69	3,211,474.63	40.193205	-104.742994	
10,963.00	88.77	179.58	7,267.24	-3,164.52	-1,519.16	1,314,034.72	3,211,475.66	40.192944	-104.742993	
11,058.00	88.95	180.92	7,269.13	-3,259.50	-1,519.57	1,313,939.74	3,211,476.06	40.192683	-104.742995	
11,153.00	88.89	180.51	7,270.93	-3,354.47	-1,520.76	1,313,844.76	3,211,475.69	40.192423	-104.742999	
11,248.00	88.46	179.71	7,273.12	-3,449.45	-1,520.94	1,313,749.78	3,211,476.32	40.192162	-104.743000	
11,343.00	88.89	181.11	7,275.32	-3,544.42	-1,521.62	1,313,654.81	3,211,476.46	40.191901	-104.743002	
11,437.00	90.37	181.86	7,275.93	-3,638.38	-1,524.06	1,313,560.83	3,211,474.83	40.191643	-104.743011	
11,532.00	89.75	181.74	7,275.83	-3,733.33	-1,527.04	1,313,465.86	3,211,472.66	40.191383	-104.743021	
11,627.00	89.45	181.32	7,276.49	-3,828.30	-1,529.58	1,313,370.88	3,211,470.94	40.191122	-104.743030	
11,722.00	90.88	182.19	7,276.22	-3,923.25	-1,532.49	1,313,275.90	3,211,468.85	40.190861	-104.743041	
11,818.00	90.00	181.59	7,275.48	-4,019.19	-1,535.65	1,313,179.94	3,211,466.51	40.190598	-104.743052	
11,870.00	89.63	181.01	7,275.65	-4,071.18	-1,536.83	1,313,127.94	3,211,465.78	40.190455	-104.743056	
11,920.00	89.27	180.45	7,276.13	-4,121.17	-1,537.47	1,313,077.94	3,211,465.57	40.190318	-104.743059	
last mwd survey										

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
7,896.26	7,239.47	7"	7	8-3/4	

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
861.00	860.98	1.79	-3.55	tie on point to gyros	
11,920.00	7,276.13	-4,121.17	-1,537.47	last mwd survey	

Anadarko Petroleum Corp

Survey Report - Geographic

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well Camp 36N-26HZ
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	25' RKB + 5014' GL @ 5039.00ft
Site:	WELD_CAMP 1-26HZ PAD	MD Reference:	25' RKB + 5014' GL @ 5039.00ft
Well:	Camp 36N-26HZ	North Reference:	True
Wellbore:	Camp 36N-26HZ	Survey Calculation Method:	Minimum Curvature
Design:	Camp 36N-26HZ	Database:	edmp

Checked By: _____	Approved By: _____	Date: _____
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DAILY ACTIVITY



Weatherford

Daily Activity Report

Drilling Services
v4.2.2674

Day 1 - 2012/04/20

FILE #: 4025800 WELL NAME: Camp 36N-26HZ SERVICE CO.: Weatherford Drilling Services
 JOB TYPE: UBD Horizontal COMPANY: Anadarko Petroleum Corporation SURVEY TYPE: HEL MWD
 RIG & NO: Helmerich & Payne 307 SURFACE LOCATION: Weld County FIELD / LOCATION: Wildcat / WY / USA

DIR Supervisor: Josh Monroe, Charles Apodaca
 MWD Supervisor: Jett Hunter, Jon leger
 Company Man: Doug Barone, Doug Blair

GROUND ELEV: 5014 ft START DEPTH: 924.0 ft PROGRESS: 368.0 ft DAILY COST: USD\$18160.00
 KB ELEV: 25 ft END DEPTH: 1292.0 ft AVG. ROP.: 133.8 ft/hr PREVIOUS COST: USD\$0.00
 TOTAL COST: USD\$18160.00

WORK STATUS: Operating (All units are imperial.)

TIME	DAILY ACTIVITY	HRS	DPTH	BHA	TIME	DAILY ACTIVITY	HRS	DPTH	BHA
00:00-15:30	Wait On Orders	15.50	924	n/a	21:05-21:25	Work on Pumps	0.33	1016	1
15:30-18:00	PU Directional Tools	2.50	924	1	21:25-21:55	Rotating With Motor	0.50	1108	1
18:00-19:25	RIH - See Comments - put rotating head on	1.42	924	1	21:55-22:05	Circ & Accumulate Surveys	0.17	1108	1
19:25-19:40	Shallow Test Tools	0.25	924	1	22:05-22:30	Orienting With Motor	0.42	1133	1
19:40-20:10	Drill Out Flt, Shoe & Cmnt	0.50	924	1	22:30-22:55	Rotating With Motor	0.42	1200	1
20:10-21:00	Rotating With Motor	0.83	1016	1	22:55-23:25	Circ & Accumulate Surveys	0.50	1200	1
21:00-21:05	Circ & Accumulate Surveys	0.08	1016	1	23:25-24:00	Rotating With Motor	0.58	1292	1

TIME SUMMARY (hrs):				DRILLING PARAMETERS:			
MOTOR DRILL:	2.75	ORIENTING HRS:	0.42	ROTARY DRILL:	0.00	ROTARY TORQUE:	
TIME DRILL:	0.00	ROTATING HRS:	2.33	MOTOR HRS:	4.00	WOB SLIDING (HI):	0 lbf
MOTOR REAM:	0.00	TRIP:	1.42	WOB SLIDING (LO):	0 lbf	WOB ROTATE (HI):	0 lbf
CIRC:	1.25	OTHER:	18.58	RPM (ROTARY):	25 rpm	WOB ROTATE (LO):	0 lbf
MOTOR HRS:	4.00	DRILL HRS:	2.75	RPM (MOTOR):	161 rpm	DRAG UP:	0 lbf
		TOTAL HRS:	24.00			DRAG DN:	0 lbf

BHA / MOTOR / BIT INFORMATION:

BHA: 1 HOLE SIZE: 8.75 in SECTION TYPE: Main Hole SURVEY TYPE: Positive Pulse MWD
 MANFCT.: Weatherford STABILIZER: No SERIAL#: 675-4110 MODEL: LN7850 LOBE CFG.:7/8
 SETTING: 1.5 ° KICKPAD: No SIZE: 6 3/4" (171mm) MTR HRS THIS DAY: 4 MTR HRS TO DATE:4
 MANFCT: Drilformance BIT TYPE: Drilformance PDC Bit TYPE: 516T NOZZLES: 1.208 in² TFA
 IADC BIT GRADE: 1 / 2 / CT / G / X / I / FC / TD

PUMP PARAMETERS

PRESSURE ON BTM: 0 PRESSURE OFF BTM: 0 TOTAL FLOW RATE: 547.75 gal/min
 PUMP 1: TYPE: PZ-11 EFF.: 95.0% SPM: 75.00 LINER: 6.00 in STROKE VOL.: 3.8438 gal/stk
 PUMP 2: TYPE: PZ-11 EFF.: 95.0% SPM: 75.00 LINER: 6.00 in STROKE VOL.: 3.8438 gal/stk
 PUMP 3: TYPE: EFF.: 100.0% SPM: 0.00 LINER: 0.00 in STROKE VOL.: 0.0000 gal/stk

MUD RECORD

MUD TYPE: Gelchem VISC: 34 sec/qt WTR LOSS: 0 cc/30min PV: 0 cP YP: 0 lb/100 ft² pH: 0
 DENSITY: 8.6 lb/gal GEL 0/10: 0.00 lb/100 ft² SAND: 0 SOLIDS: 0 OIL: 0 TEMP: 125 °F
 LIQUID BASE: Water LIQUID RATE: 0 gal/min GAS TYPE: GAS RATE: 0 cu ft/min

COMMENTS:

Prepared BHA #1 While Rig was moving on to well and Testing B.O.P. Curently waiting on orders for our tools. P/U BHA # 1 RIH drill out Flt, Shoe & Cmt.

CUSTOMER SIGNATURE: _____



Weatherford

Daily Activity Report

Drilling Services

v4.2.2674

Day 2 - 2012/04/21

FILE #: 4025800

WELL NAME: Camp 36N-26HZ

SERVICE CO.: Weatherford Drilling Services

JOB TYPE: UBD Horizontal

COMPANY: Anadarko Petroleum Corporation

SURVEY TYPE: HEL MWD

RIG & NO: Helmerich & Payne 307

SURFACE LOCATION: Weld County

FIELD / LOCATION: Wildcat / WY / USA

DIR Supervisor: Josh Monroe, Charles Apodaca

MWD Supervisor: Jett Hunter, Jon leger

Company Man: Doug Barone, Doug Blair

GROUND ELEV: 5014 ft

START DEPTH: 1292.0 ft

PROGRESS: 2679.0 ft

DAILY COST: USD\$13650.00

KB ELEV: 25 ft

END DEPTH: 3971.0 ft

AVG. ROP.: 171.0 ft/hr

PREVIOUS COST: USD\$18160.00

TOTAL COST: USD\$31810.00

WORK STATUS: Operating

(All units are imperial.)

TIME	DAILY ACTIVITY	HRS	DPTH	BHA	TIME	DAILY ACTIVITY	HRS	DPTH	BHA
00:00-00:05	Circ & Accumulate Surveys	0.08	1292	1	10:10-10:15	Circ & Accumulate Surveys	0.08	2614	1
00:05-00:30	Orienting With Motor	0.42	1312	1	10:15-10:25	Orienting With Motor	0.17	2639	1
00:30-00:50	Rotating With Motor	0.33	1384	1	10:25-10:45	Rotating With Motor	0.33	2709	1
00:50-00:55	Circ & Accumulate Surveys	0.08	1384	1	10:45-11:00	Circ & Accumulate Surveys	0.25	2709	1
00:55-01:10	Orienting With Motor	0.25	1407	1	11:00-11:10	Orienting With Motor	0.17	2724	1
01:10-01:35	Rotating With Motor	0.42	1476	1	11:10-11:35	Rotating With Motor	0.42	2804	1
01:35-01:45	Circ & Accumulate Surveys	0.17	1476	1	11:35-11:40	Circ & Accumulate Surveys	0.08	2804	1
01:45-02:05	Orienting With Motor	0.33	1508	1	11:40-12:00	Rotating With Motor	0.33	2899	1
02:05-02:25	Rotating With Motor	0.33	1571	1	12:00-12:05	Circ & Accumulate Surveys	0.08	2899	1
02:25-02:30	Circ & Accumulate Surveys	0.08	1571	1	12:05-12:30	Orienting With Motor	0.42	2919	1
02:30-02:55	Orienting With Motor	0.42	1586	1	12:30-13:00	Rotating With Motor	0.50	2993	1
02:55-03:15	Rotating With Motor	0.33	1666	1	13:00-13:05	Circ & Accumulate Surveys	0.08	2993	1
03:15-03:20	Circ & Accumulate Surveys	0.08	1666	1	13:05-13:30	Rotating With Motor	0.42	3088	1
03:20-03:30	Orienting With Motor	0.17	1686	1	13:30-13:35	Circ & Accumulate Surveys	0.08	3088	1
03:30-03:55	Rotating With Motor	0.42	1761	1	13:35-13:55	Rotating With Motor	0.33	3183	1
03:55-04:00	Circ & Accumulate Surveys	0.08	1761	1	13:55-14:00	Circ & Accumulate Surveys	0.08	3183	1
04:00-04:20	Rotating With Motor	0.33	1855	1	14:00-14:15	Rotating With Motor	0.25	3278	1
04:20-04:25	Circ & Accumulate Surveys	0.08	1855	1	14:15-14:20	Circ & Accumulate Surveys	0.08	3278	1
04:25-04:45	Orienting With Motor	0.33	1875	1	14:20-14:50	Rotating With Motor	0.50	3373	1
04:45-05:10	Rotating With Motor	0.42	1950	1	14:50-14:55	Circ & Accumulate Surveys	0.08	3373	1
05:10-05:15	Circ & Accumulate Surveys	0.08	1950	1	14:55-15:00	Orienting With Motor	0.08	3398	1
05:15-05:25	Work on Pumps	0.17	1950	1	15:00-15:25	Rotating With Motor	0.42	3467	1
05:25-05:30	Orienting With Motor	0.08	1960	1	15:25-15:30	Circ & Accumulate Surveys	0.08	3467	1
05:30-06:30	Work on Pumps	1.00	1960	1	15:30-15:55	Rotating With Motor	0.42	3562	1
06:30-06:35	Orienting With Motor	0.08	1970	1	15:55-16:15	Orienting With Motor - Bad Slide	0.33	3570	1
06:35-06:55	Rotating With Motor	0.33	2045	1	16:15-19:55	Rig Repair - Electrical Fire	3.67	3570	1
06:55-07:05	Circ & Accumulate Surveys	0.17	2045	1	19:55-20:10	Orienting With Motor	0.25	3590	1
07:05-07:30	Rotating With Motor	0.42	2140	1	20:10-20:30	Rig Repair	0.33	3590	1
07:30-07:35	Circ & Accumulate Surveys	0.08	2140	1	20:30-20:50	Rotating With Motor	0.33	3657	1
07:35-07:45	Orienting With Motor	0.17	2160	1	20:50-20:55	Circ & Accumulate Surveys	0.08	3657	1
07:45-08:00	Rotating With Motor	0.25	2235	1	20:55-21:20	Orienting With Motor	0.42	3682	1
08:00-08:05	Circ & Accumulate Surveys	0.08	2235	1	21:20-21:35	Rotating With Motor	0.25	3752	1
08:05-08:35	Rotating With Motor	0.50	2329	1	21:35-21:40	Circ & Accumulate Surveys	0.08	3752	1
08:35-08:40	Circ & Accumulate Surveys	0.08	2329	1	21:40-22:05	Rotating With Motor	0.42	3847	1
08:40-08:45	Orienting With Motor	0.08	2354	1	22:05-22:10	Circ & Accumulate Surveys	0.08	3847	1
08:45-09:10	Rotating With Motor	0.42	2424	1	22:10-22:15	Circulating - See Comments - WAIT ON PMP	0.08	3847	1
09:10-09:20	Circ & Accumulate Surveys	0.17	2424	1	22:15-23:00	Orienting With Motor	0.75	3888	1
09:20-09:30	Orienting With Motor	0.17	2444	1	23:00-23:20	Rotating With Motor	0.33	3941	1
09:30-09:40	Rotating With Motor	0.17	2519	1	23:20-23:35	Rig Repair	0.25	3941	1
09:40-09:50	Circ & Accumulate Surveys	0.17	2519	1	23:35-23:40	Circ & Accumulate Surveys	0.08	3941	1



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09:50-10:10	Rotating With Motor	0.33	2614	1	23:40-24:00	Orienting With Motor	0.33	3971	1
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TIME SUMMARY (hrs):			DRILLING PARAMETERS:						
MOTOR DRILL:	15.67	ORIENTING HRS:	5.42	ROTARY DRILL:	0.00	ROTARY TORQUE:	3300 ft-lb	STRING WEIGHT:	100000 lbs
TIME DRILL:	0.00	ROTATING HRS:	10.25	MOTOR HRS:	18.58	WOB SLIDING (HI):	15000 lbf	WOB ROTATE (HI):	25000 lbf
MOTOR REAM:	0.00			TRIP:	0.00	WOB SLIDING (LO):	10000 lbf	WOB ROTATE (LO):	15000 lbf
CIRC:	2.92	ROTARY DRILL:	0.00	OTHER:	5.42	RPM (ROTARY):	50 rpm	DRAG UP:	110000 lbf
MOTOR HRS:	18.58	DRILL HRS:	15.67	TOTAL HRS:	24.00	RPM (MOTOR):	167 rpm	DRAG DN:	90000 lbf

— BHA / MOTOR / BIT INFORMATION: —

BHA: 1 **HOLE SIZE:** 8.75 in **SECTION TYPE:** Main Hole **SURVEY TYPE:** Positive Pulse MWD
MANFCT.: Weatherford **STABILIZER:** No **SERIAL#:** 675-4110 **MODEL:** LN7850 **LOBE CFG.:** 7/8
SETTING: 1.5 ° **KICKPAD:** No **SIZE:** 6 3/4" (171mm) **MTR HRS THIS DAY:** 18.583333333333333 **MTR HRS TO DATE:** 22.583333333333333
MANFCT: Drilformance **BIT TYPE:** Drilformance PDC Bit **TYPE:** 516T **NOZZLES:** 1.208 in² TFA
IADC BIT GRADE: 1 / 2 / CT / G / X / I / FC / TD

— PUMP PARAMETERS —

PRESSURE ON BTM: 1000		PRESSURE OFF BTM: 1600		TOTAL FLOW RATE: 569.66 gal/min	
PUMP 1:	TYPE: PZ-11	EFF.: 95.0%	SPM: 78.00	LINER: 6.00 in	STROKE VOL.: 3.8438 gal/stk
PUMP 2:	TYPE: PZ-11	EFF.: 95.0%	SPM: 78.00	LINER: 6.00 in	STROKE VOL.: 3.8438 gal/stk
PUMP 3:	TYPE:	EFF.: 100.0%	SPM: 0.00	LINER: 0.00 in	STROKE VOL.: 0.0000 gal/stk

— MUD RECORD —

MUD TYPE: Water **VISC:** 28 sec/qt **WTR LOSS:** 0 cc/30min **PV:** 0 cP **YP:** 0 lb/100 ft² **pH:** 0
DENSITY: 8.4 lb/gal **GEL 0/10:** 0.00 lb/100 ft² **SAND:** 0 **SOLIDS:** 0 **OIL:** 0 **TEMP:** 123 °F
LIQUID BASE: Water **LIQUID RATE:** 0 gal/min **GAS TYPE:** **GAS RATE:** 0 cu ft/min

— COMMENTS: —

Drill Ahead F/ 924 T/ 3971

CUSTOMER SIGNATURE: _____



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Daily Activity Report

Drilling Services

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Day 3 - 2012/04/22

FILE #: 4025800

WELL NAME: Camp 36N-26HZ

SERVICE CO.: Weatherford Drilling Services

JOB TYPE: UBD Horizontal

COMPANY: Anadarko Petroleum Corporation

SURVEY TYPE: HEL MWD

RIG & NO: Helmerich & Payne 307

SURFACE LOCATION: Weld County

FIELD / LOCATION: Wildcat / WY / USA

DIR Supervisor: Josh Monroe, Charles Apodaca

MWD Supervisor: Jett Hunter, Jon Ieger

Company Man: Doug Barone, Doug Blair

GROUND ELEV: 5014 ft

START DEPTH: 3971.0 ft

PROGRESS: 2757.0 ft

DAILY COST: USD\$13650.00

KB ELEV: 25 ft

END DEPTH: 6728.0 ft

AVG. ROP.: 135.0 ft/hr

PREVIOUS COST: USD\$31810.00

TOTAL COST: USD\$45460.00

WORK STATUS: Operating

(All units are imperial.)

TIME	DAILY ACTIVITY	HRS	DPTH	BHA	TIME	DAILY ACTIVITY	HRS	DPTH	BHA
00:00-00:30	Rotating With Motor	0.50	4036	1	10:05-10:20	Orienting With Motor	0.25	5492	1
00:30-00:35	Circ & Accumulate Surveys	0.08	4036	1	10:20-10:50	Rotating With Motor	0.50	5555	1
00:35-01:00	Orienting With Motor	0.42	4068	1	10:50-10:55	Circ & Accumulate Surveys	0.08	5555	1
01:00-01:15	Rotating With Motor	0.25	4131	1	10:55-11:15	Orienting With Motor	0.33	5595	1
01:15-01:20	Circ & Accumulate Surveys	0.08	4131	1	11:15-11:40	Rotating With Motor	0.42	5650	1
01:20-01:45	Orienting With Motor	0.42	4163	1	11:40-11:45	Circ & Accumulate Surveys	0.08	5650	1
01:45-02:00	Rotating With Motor	0.25	4226	1	11:45-11:55	Orienting With Motor	0.17	5675	1
02:00-02:05	Circ & Accumulate Surveys	0.08	4226	1	11:55-12:25	Rotating With Motor	0.50	5745	1
02:05-02:25	Rotating With Motor	0.33	4321	1	12:25-12:30	Circ & Accumulate Surveys	0.08	5745	1
02:25-02:30	Circ & Accumulate Surveys	0.08	4321	1	12:30-13:10	Rotating With Motor	0.67	5841	1
02:30-02:35	Orienting With Motor	0.08	4331	1	13:10-13:15	Circ & Accumulate Surveys	0.08	5841	1
02:35-02:55	Rotating With Motor	0.33	4415	1	13:15-13:35	Orienting With Motor	0.33	5873	1
02:55-03:00	Circ & Accumulate Surveys	0.08	4415	1	13:35-14:05	Rotating With Motor	0.50	5936	1
03:00-03:20	Rotating With Motor	0.33	4510	1	14:05-14:10	Circ & Accumulate Surveys	0.08	5936	1
03:20-03:25	Circ & Accumulate Surveys	0.08	4510	1	14:10-14:20	Orienting With Motor	0.17	5968	1
03:25-03:45	Orienting With Motor	0.33	4542	1	14:20-15:30	Rotating With Motor	1.17	6031	1
03:45-04:05	Rotating With Motor	0.33	4605	1	15:30-15:35	Circ & Accumulate Surveys	0.08	6031	1
04:05-04:10	Circ & Accumulate Surveys	0.08	4605	1	15:35-15:50	Orienting With Motor	0.25	6046	1
04:10-04:35	Orienting With Motor	0.42	4636	1	15:50-16:15	Rotating With Motor	0.42	6127	1
04:35-04:55	Rotating With Motor	0.33	4699	1	16:15-16:30	Circ & Accumulate Surveys	0.25	6127	1
04:55-05:00	Circ & Accumulate Surveys	0.08	4699	1	16:30-17:00	Orienting With Motor	0.50	6158	1
05:00-05:20	Rotating With Motor	0.33	4794	1	17:00-17:40	Rotating With Motor	0.67	6222	1
05:20-05:25	Circ & Accumulate Surveys	0.08	4794	1	17:40-17:45	Circ & Accumulate Surveys	0.08	6222	1
05:25-05:45	Rotating With Motor	0.33	4889	1	17:45-18:20	Orienting With Motor	0.58	6262	1
05:45-05:50	Circ & Accumulate Surveys	0.08	4889	1	18:20-18:40	Rotating With Motor	0.33	6317	1
05:50-06:10	Orienting With Motor	0.33	4920	1	18:40-18:45	Circ & Accumulate Surveys	0.08	6317	1
06:10-06:20	Rotating With Motor	0.17	4984	1	18:45-19:20	Orienting With Motor	0.58	6342	1
06:20-06:45	Circ & Accumulate Surveys	0.42	4984	1	19:20-19:40	Rotating With Motor	0.33	6413	1
06:45-07:00	Orienting With Motor	0.25	5016	1	19:40-19:45	Circ & Accumulate Surveys	0.08	6413	1
07:00-07:15	Rotating With Motor	0.25	5079	1	19:45-20:25	Orienting With Motor	0.67	6445	1
07:15-07:20	Circ & Accumulate Surveys	0.08	5079	1	20:25-20:45	Rotating With Motor	0.33	6508	1
07:20-07:50	Rotating With Motor	0.50	5175	1	20:45-20:50	Circ & Accumulate Surveys	0.08	6508	1
07:50-07:55	Circ & Accumulate Surveys	0.08	5175	1	20:50-21:10	Rotating With Motor	0.33	6603	1
07:55-08:20	Orienting With Motor	0.42	5207	1	21:10-21:15	Circ & Accumulate Surveys	0.08	6603	1
08:20-08:45	Rotating With Motor	0.42	5270	1	21:15-22:10	Orienting With Motor	0.92	6645	1
08:45-08:50	Circ & Accumulate Surveys	0.08	5270	1	22:10-22:45	Rotating With Motor	0.58	6698	1
08:50-09:10	Orienting With Motor	0.33	5301	1	22:45-22:50	Circ & Accumulate Surveys	0.08	6698	1
09:10-09:25	Rotating With Motor	0.25	5365	1	22:50-23:20	Orienting With Motor	0.50	6728	1
09:25-09:30	Circ & Accumulate Surveys	0.08	5365	1	23:20-23:30	Circ & Accumulate Surveys	0.17	6728	1
09:30-10:00	Rotating With Motor	0.50	5461	1	23:30-24:00	Rig Service	0.50	6728	1



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10:00-10:05	Circ & Accumulate Surveys	0.08	5461	1		0.00		
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TIME SUMMARY (hrs):

MOTOR DRILL: 20.42	ORIENTING HRS: 8.25	ROTARY DRILL: 0.00
TIME DRILL: 0.00	ROTATING HRS: 12.17	MOTOR HRS: 23.50
MOTOR REAM: 0.00	TRIP: 0.00	
CIRC: 3.08	ROTARY DRILL: 0.00	OTHER: 0.50
MOTOR HRS: 23.50	DRILL HRS: 20.42	TOTAL HRS: 24.00

DRILLING PARAMETERS:

ROTARY TORQUE: 3300 ft-lb	STRING WEIGHT: 100000 lbs
WOB SLIDING (HI): 15000 lbf	WOB ROTATE (HI): 35000 lbf
WOB SLIDING (LO): 10000 lbf	WOB ROTATE (LO): 20000 lbf
RPM (ROTARY): 55 rpm	DRAG UP: 110000 lbf
RPM (MOTOR): 167 rpm	DRAG DN: 90000 lbf

BHA / MOTOR / BIT INFORMATION:

BHA: 1 **HOLE SIZE:** 8.75 in **SECTION TYPE:** Main Hole **SURVEY TYPE:** Positive Pulse MWD
MANFCT.: Weatherford **STABILIZER:** No **SERIAL#:** 675-4110 **MODEL:** LN7850 **LOBE CFG.:** 7/8
SETTING: 1.5 ° **KICKPAD:** No **SIZE:** 6 3/4" (171mm) **MTR HRS THIS DAY:** 23.5 **MTR HRS TO DATE:** 46.08333333333333
MANFCT: Drilformance **BIT TYPE:** Drilformance PDC Bit **TYPE:** 516T **NOZZLES:** 1.208 in² TFA
IADC BIT GRADE: 1 / 2 / CT / G / X / I / FC / TD

PUMP PARAMETERS

PRESSURE ON BTM: 2900	PRESSURE OFF BTM: 2100	TOTAL FLOW RATE: 598.87 gal/min
PUMP 1: TYPE: PZ-11	EFF.: 95.0% SPM: 82.00	LINER: 6.00 in STROKE VOL.: 3.8438 gal/stk
PUMP 2: TYPE: PZ-11	EFF.: 95.0% SPM: 82.00	LINER: 6.00 in STROKE VOL.: 3.8438 gal/stk
PUMP 3: TYPE:	EFF.: 100.0% SPM: 0.00	LINER: 0.00 in STROKE VOL.: 0.0000 gal/stk

MUD RECORD

MUD TYPE: Water **VISC:** 28 sec/qt **WTR LOSS:** 0 cc/30min **PV:** 0 cP **YP:** 0 lb/100 ft² **pH:** 0
DENSITY: 8.4 lb/gal **GEL 0/10:** 0.00 lb/100 ft² **SAND:** 0 **SOLIDS:** 0 **OIL:** 0 **TEMP:** 123 °F
LIQUID BASE: Water **LIQUID RATE:** 0 gal/min **GAS TYPE:** **GAS RATE:** 0 cu ft/min

COMMENTS:

Drill F/ 3971 to 6728. TD Build & Hold. POOH to P/U curve assembly.

CUSTOMER SIGNATURE:



Daily Activity Report

Drilling Services
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Day 4 - 2012/04/23

FILE #: 4025800 WELL NAME: Camp 36N-26HZ SERVICE CO.: Weatherford Drilling Services
 JOB TYPE: UBD Horizontal COMPANY: Anadarko Petroleum Corporation SURVEY TYPE: HEL MWD
 RIG & NO: Helmerich & Payne 307 SURFACE LOCATION: Weld County FIELD / LOCATION: Wildcat / WY / USA

DIR Supervisor: Josh Monroe, Charles Apodaca
 MWD Supervisor: Jett Hunter, Jon leger
 Company Man: Doug Barone, Doug Blair

GROUND ELEV: 5014 ft START DEPTH: 6728.0 ft PROGRESS: 318.0 ft DAILY COST: USD\$25220.00
 KB ELEV: 25 ft END DEPTH: 7046.0 ft AVG. ROP.: 46.6 ft/hr PREVIOUS COST: USD\$45460.00
 TOTAL COST: USD\$70680.00

WORK STATUS: Operating (All units are imperial.)

TIME	DAILY ACTIVITY	HRS	DPTH	BHA	TIME	DAILY ACTIVITY	HRS	DPTH	BHA
00:00-01:30	Circ & Condition Hole	1.50	6728	1	18:50-19:15	Orienting With Motor	0.42	6871	2
01:30-06:00	POOH - See Comments - For curve motor, bit	4.50	6728	1	19:15-19:30	Rotating With Motor	0.25	6888	2
06:00-07:30	Change Bit And Motor	1.50	6728	2	19:30-19:40	Circ & Accumulate Surveys	0.17	6888	2
07:30-14:15	RIH	6.75	6728	2	19:40-20:10	Orienting With Motor	0.50	6903	2
14:15-14:50	Orienting With Motor	0.58	6761	2	20:10-20:20	Rotating With Motor	0.17	6920	2
14:50-15:10	Circ & Accumulate Surveys	0.33	6761	2	20:20-20:30	Circ & Accumulate Surveys	0.17	6920	2
15:10-15:20	Orienting With Motor	0.17	6767	2	20:30-20:55	Orienting With Motor	0.42	6935	2
15:20-16:10	Work Stuck Pipe	0.83	6767	2	20:55-21:05	Rotating With Motor	0.17	6952	2
16:10-16:30	Orienting With Motor	0.33	6781	2	21:05-21:15	Circ & Accumulate Surveys	0.17	6952	2
16:30-16:55	Rotating With Motor	0.42	6793	2	21:15-21:45	Orienting With Motor	0.50	6967	2
16:55-17:00	Circ & Accumulate Surveys	0.08	6793	2	21:45-21:55	Rotating With Motor	0.17	6983	2
17:00-17:30	Rotating With Motor	0.50	6824	2	21:55-22:00	Circ & Accumulate Surveys	0.08	6983	2
17:30-17:35	Circ & Accumulate Surveys	0.08	6824	2	22:00-22:40	Rig Service	0.67	6983	2
17:35-18:20	Rotating With Motor	0.75	6839	2	22:40-23:35	Orienting With Motor	0.92	7015	2
18:20-18:40	Rotating With Motor	0.33	6856	2	23:35-23:45	Circ & Accumulate Surveys	0.17	7015	2
18:40-18:50	Circ & Accumulate Surveys	0.17	6856	2	23:45-24:00	Rotating With Motor	0.25	7046	2

TIME SUMMARY (hrs):				DRILLING PARAMETERS:					
MOTOR DRILL:	6.83	ORIENTING HRS:	0.00	ROTARY DRILL:	0.00	ROTARY TORQUE:	3400 ft-lb	STRING WEIGHT:	100000 lbs
TIME DRILL:	0.00	ROTATING HRS:	0.00	MOTOR HRS:	9.75	WOB SLIDING (HI):	25000 lbf	WOB ROTATE (HI):	45000 lbf
MOTOR REAM:	0.00	TRIP:	11.25	WOB SLIDING (LO):	15000 lbf	WOB ROTATE (LO):	20000 lbf	DRAG UP:	110000 lbf
CIRC:	2.92	OTHER:	3.00	RPM (ROTARY):	55 rpm	DRAG DN:	90000 lbf		
MOTOR HRS:	9.75	DRILL HRS:	6.83	TOTAL HRS:	24.00	RPM (MOTOR):	167 rpm		

— BHA / MOTOR / BIT INFORMATION: —

BHA: 1 HOLE SIZE: 8.75 in SECTION TYPE: Main Hole SURVEY TYPE: Positive Pulse MWD
 MANFCT.: Weatherford STABILIZER: No SERIAL#: 675-4110 MODEL: LN7850 LOBE CFG.:7/8
 SETTING: 1.5 ° KICKPAD:No SIZE: 6 3/4" (171mm) MTR HRS THIS DAY: 1.5 MTR HRS TO DATE:47.583333333333
 MANFCT: Drilformance BIT TYPE:Drilformance PDC Bit TYPE: 516T NOZZLES:1.208 in² TFA
 IADC BIT GRADE: 1 / 2 / CT / G / X / I / FC / TD

BHA: 2 HOLE SIZE: 8.75 in SECTION TYPE: Curve SURVEY TYPE: Positive Pulse MWD
 MANFCT.: Weatherford STABILIZER: No SERIAL#: 675-4129 MODEL: LN7850 LOBE CFG.:7/8
 SETTING: 2.25 ° KICKPAD:No SIZE: 6 3/4" (171mm) MTR HRS THIS DAY: 8.249999999999999 MTR HRS TO DATE:8.249999999999999
 MANFCT: Security BIT TYPE:Security TYPE: FXD54 NOZZLES:0.949 in² TFA
 IADC BIT GRADE: 1 / 1 / ? / G / X / I / FC / TD



Day 4 - 2012/04/23

— PUMP PARAMETERS —

PRESSURE ON BTM: 2600	PRESSURE OFF BTM: 1800	TOTAL FLOW RATE: 547.75 gal/min
PUMP 1: TYPE: PZ-11	EFF.: 95.0%	SPM: 75.00
PUMP 2: TYPE: PZ-11	EFF.: 95.0%	SPM: 75.00
PUMP 3: TYPE:	EFF.: 100.0%	SPM: 0.00
	LINER: 6.00 in	STROKE VOL.: 3.8438 gal/stk
	LINER: 6.00 in	STROKE VOL.: 3.8438 gal/stk
	LINER: 0.00 in	STROKE VOL.: 0.0000 gal/stk

— MUD RECORD —

MUD TYPE: Gelchem	VISC: 37 sec/qt	WTR LOSS: 0 cc/30min	PV: 12 cP	YP: 10 lb/100 ft ²	pH: 8
DENSITY: 8.5 lb/gal	GEL 0/10: 1.00 lb/100 ft ²	SAND: 0	SOLIDS: 6.3	OIL: 0	TEMP: 164 °F
LIQUID BASE: Water	LIQUID RATE: 0 gal/min	GAS TYPE:	GAS RATE: 0 cu ft/min		

— COMMENTS: —

POOH to change bit & Motor, P/U curve assembly. RIH to KOP. Drill curve F/ 6728' - 7015

CUSTOMER SIGNATURE: _____



Daily Activity Report

Drilling Services
v4.2.2674

Day 5 - 2012/04/24

FILE #: 4025800 WELL NAME: Camp 36N-26HZ SERVICE CO.: Weatherford Drilling Services
 JOB TYPE: UBD Horizontal COMPANY: Anadarko Petroleum Corporation SURVEY TYPE: HEL MWD
 RIG & NO: Helmerich & Payne 307 SURFACE LOCATION: Weld County FIELD / LOCATION: Wildcat / WY / USA

DIR Supervisor: Josh Monroe, Charles Apodaca
 MWD Supervisor: Jett Hunter, Jon Ieger
 Company Man: Doug Barone, Doug Blair

GROUND ELEV: 5014 ft START DEPTH: 7046.0 ft PROGRESS: 727.0 ft DAILY COST: USD\$12950.00
 KB ELEV: 25 ft END DEPTH: 7773.0 ft AVG. ROP.: 42.8 ft/hr PREVIOUS COST: USD\$70680.00
 TOTAL COST: USD\$83630.00

WORK STATUS: Operating (All units are imperial.)

TIME	DAILY ACTIVITY	HRS	DPTH	BHA	TIME	DAILY ACTIVITY	HRS	DPTH	BHA
00:00-00:10	Circ & Accumulate Surveys	0.17	7046	2	11:30-11:30	Circ & Accumulate Surveys	0.00	7457	2
00:10-00:45	Orienting With Motor	0.58	7066	2	11:30-12:05	Circ & Accumulate Surveys	0.58	7457	2
00:45-01:00	Rotating With Motor	0.25	7078	2	12:05-12:40	Orienting With Motor	0.58	7489	2
01:00-01:10	Circulating - See Comments - SPR	0.17	7078	2	12:40-12:50	Circ & Accumulate Surveys	0.17	7489	2
01:10-01:15	Circ & Accumulate Surveys	0.08	7078	2	12:50-13:30	Orienting With Motor	0.67	7520	2
01:15-02:35	Orienting With Motor	1.33	7093	2	13:30-13:40	Circ & Accumulate Surveys	0.17	7520	2
02:35-02:50	Rotating With Motor	0.25	7109	2	13:40-14:00	Orienting With Motor	0.33	7552	2
02:50-03:00	Circ & Accumulate Surveys	0.17	7109	2	14:00-14:25	Circ & Accumulate Surveys	0.42	7552	2
03:00-03:30	Rotating With Motor	0.50	7141	2	14:25-15:00	Orienting With Motor	0.58	7572	2
03:30-03:35	Circ & Accumulate Surveys	0.08	7141	2	15:00-15:25	Rotating With Motor	0.42	7584	2
03:35-04:05	Rotating With Motor	0.50	7173	2	15:25-15:30	Circ & Accumulate Surveys	0.08	7584	2
04:05-04:10	Circ & Accumulate Surveys	0.08	7173	2	15:30-15:40	Orienting With Motor	0.17	7593	2
04:10-04:40	Rotating With Motor	0.50	7204	2	15:40-16:35	Rotating With Motor	0.92	7616	2
04:40-04:50	Circ & Accumulate Surveys	0.17	7204	2	16:35-16:40	Circ & Accumulate Surveys	0.08	7616	2
04:50-05:00	Orienting With Motor	0.17	7215	2	16:40-17:00	Orienting With Motor	0.33	7629	2
05:00-07:05	Orienting With Motor	2.08	7236	2	17:00-17:30	Rotating With Motor	0.50	7647	2
07:05-07:10	Circ & Accumulate Surveys	0.08	7236	2	17:30-17:35	Circ & Accumulate Surveys	0.08	7647	2
07:10-07:45	Orienting With Motor	0.58	7268	2	17:35-17:45	Orienting With Motor	0.17	7659	2
07:45-08:00	Circ & Accumulate Surveys	0.25	7268	2	17:45-18:05	Rotating With Motor	0.33	7679	2
08:00-08:35	Orienting With Motor	0.58	7299	2	18:05-18:15	Circ & Accumulate Surveys	0.17	7679	2
08:35-08:50	Circ & Accumulate Surveys	0.25	7299	2	18:15-18:50	Orienting With Motor	0.58	7689	2
08:50-09:30	Orienting With Motor	0.67	7331	2	18:50-19:05	Rotating With Motor	0.25	7710	2
09:30-09:40	Circ & Accumulate Surveys	0.17	7331	2	19:05-19:15	Circ & Accumulate Surveys	0.17	7710	2
09:40-10:00	Orienting With Motor	0.33	7362	2	19:15-21:50	Circ & Condition Hole	2.58	7710	2
10:00-10:15	Circ & Accumulate Surveys	0.25	7362	2	21:50-23:00	Orienting With Motor	1.17	7730	2
10:15-10:55	Orienting With Motor	0.67	7394	2	23:00-23:20	Rotating With Motor	0.33	7742	2
10:55-11:00	Circ & Accumulate Surveys	0.08	7394	2	23:20-23:30	Circ & Accumulate Surveys	0.17	7742	2
11:00-11:10	Orienting With Motor	0.17	7425	2	23:30-23:50	Rotating With Motor	0.33	7773	2
11:10-11:20	Circ & Accumulate Surveys	0.17	7425	2	23:50-24:00	Circ & Accumulate Surveys	0.17	7773	2
11:20-11:30	Orienting With Motor	0.17	7457	2			0.00		

TIME SUMMARY (hrs):				DRILLING PARAMETERS:					
MOTOR DRILL:	17.00	ORIENTING HRS:	11.92	ROTARY DRILL:	0.00	ROTARY TORQUE:	8000 ft-lb	STRING WEIGHT:	141000 lbs
TIME DRILL:	0.00	ROTATING HRS:	5.08	MOTOR HRS:	24.00	WOB SLIDING (HI):	20000 lbf	WOB ROTATE (HI):	25000 lbf
MOTOR REAM:	0.00			TRIP:	0.00	WOB SLIDING (LO):	10000 lbf	WOB ROTATE (LO):	12000 lbf
CIRC:	7.00	ROTARY DRILL:	0.00	OTHER:	0.00	RPM (ROTARY):	20 rpm	DRAG UP:	168000 lbf
MOTOR HRS:	24.00	DRILL HRS:	17.00	TOTAL HRS:	24.00	RPM (MOTOR):	167 rpm	DRAG DN:	121000 lbf

BHA / MOTOR / BIT INFORMATION:



Weatherford

Daily Activity Report

Drilling Services

v4.2.2674

Day 5 - 2012/04/24

BHA: 2	HOLE SIZE: 8.75 in	SECTION TYPE: Curve	SURVEY TYPE: Positive Pulse MWD
MANFCT.: Weatherford	STABILIZER: No	SERIAL#: 675-4129	MODEL: LN7850
SETTING: 2.25 °	KICKPAD: No	SIZE: 6 3/4" (171mm)	MTR HRS THIS DAY: 24
MANFCT: Security	BIT TYPE: Security	TYPE: FXD54	NOZZLES: 0.949 in ² TFA
IADC BIT GRADE: 1 / 1 / ? / G / X / I / FC / TD			

— **PUMP PARAMETERS** —

PRESSURE ON BTM: 2500	PRESSURE OFF BTM: 2100	TOTAL FLOW RATE: 569.66 gal/min
PUMP 1: TYPE: PZ-11	EFF.: 95.0% SPM: 78.00	LINER: 6.00 in STROKE VOL.: 3.8438 gal/stk
PUMP 2: TYPE: PZ-11	EFF.: 95.0% SPM: 78.00	LINER: 6.00 in STROKE VOL.: 3.8438 gal/stk
PUMP 3: TYPE:	EFF.: 100.0% SPM: 0.00	LINER: 0.00 in STROKE VOL.: 0.0000 gal/stk

— **MUD RECORD** —

MUD TYPE: Water	VISC: 37 sec/qt	WTR LOSS: 0 cc/30min	PV: 12 cP	YP: 12 lb/100 ft ²	pH: 7
DENSITY: 9.5 lb/gal	GEL 0/10: 1.00 lb/100 ft ²	SAND: 0	SOLIDS: 8.4	OIL: 0	TEMP: 177 °F
LIQUID BASE: Water		LIQUID RATE: 0 gal/min	GAS TYPE:		GAS RATE: 0 cu ft/min

— **COMMENTS:** —

Drill ahead in curve F/ 7015 to 7710
 Then Experienced hole Falling in and had to Sweep and Condition hole.
 Drill F/ 7710 to T.D. 7902'

CUSTOMER SIGNATURE: _____



Weatherford

Daily Activity Report

Drilling Services
v4.2.2674

Day 6 - 2012/04/25

FILE #: 4025800 WELL NAME: Camp 36N-26HZ SERVICE CO.: Weatherford Drilling Services
 JOB TYPE: UBD Horizontal COMPANY: Anadarko Petroleum Corporation SURVEY TYPE: HEL MWD
 RIG & NO: Helmerich & Payne 307 SURFACE LOCATION: Weld County FIELD / LOCATION: Wildcat / WY / USA

DIR Supervisor: Josh Monroe, Charles Apodaca
 MWD Supervisor: Jett Hunter, Jon leger
 Company Man: Doug Barone, Doug Blair, Pat Cain, James Johnson

GROUND ELEV: 5014 ft START DEPTH: 7773.0 ft PROGRESS: 129.0 ft DAILY COST: USD\$17450.00
 KB ELEV: 25 ft END DEPTH: 7902.0 ft AVG. ROP.: 57.3 ft/hr PREVIOUS COST: USD\$83630.00
 TOTAL COST: USD\$101080.00

WORK STATUS: Operating (All units are imperial.)

TIME	DAILY ACTIVITY	HRS	DPTH	BHA	TIME	DAILY ACTIVITY	HRS	DPTH	BHA
00:00-00:25	Rotating With Motor	0.42	7805	2	02:45-02:50	Circ & Accumulate Surveys	0.08	7902	2
00:25-00:35	Circ & Accumulate Surveys	0.17	7805	2	02:50-05:30	Circ & Condition Hole	2.67	7902	2
00:35-01:00	Rotating With Motor	0.42	7836	2	05:30-08:30	Wiper Trip	3.00	7902	2
01:00-01:10	Circ & Accumulate Surveys	0.17	7836	2	08:30-11:30	Circ & Condition Hole	3.00	7902	2
01:10-01:30	Rotating With Motor	0.33	7868	2	11:30-17:00	POOH To Run Casing	5.50	7902	2
01:30-01:40	Circ & Accumulate Surveys	0.17	7868	2	17:00-18:00	Lay Down Directional Tools	1.00	7902	2
01:40-02:30	Orienting With Motor	0.83	7885	2	18:00-24:00	Wait On Orders	6.00	7902	2
02:30-02:45	Rotating With Motor	0.25	7902	2			0.00		

TIME SUMMARY (hrs):				DRILLING PARAMETERS:					
MOTOR DRILL:	2.25	ORIENTING HRS:	0.83	ROTARY DRILL:	0.00	ROTARY TORQUE:	10500 ft-lb	STRING WEIGHT:	141000 lbs
TIME DRILL:	0.00	ROTATING HRS:	1.42	MOTOR HRS:	8.50	WOB SLIDING (HI):	25000 lbf	WOB ROTATE (HI):	25000 lbf
MOTOR REAM:	0.00	TRIP:	8.50	WOB SLIDING (LO):	15000 lbf	WOB ROTATE (LO):	16000 lbf	DRAG UP:	169000 lbf
CIRC:	6.25	OTHER:	7.00	RPM (ROTARY):	20 rpm	DRAG DN:	122000 lbf		
MOTOR HRS:	8.50	DRILL HRS:	2.25	TOTAL HRS:	24.00	RPM (MOTOR):	167 rpm		

— BHA / MOTOR / BIT INFORMATION: —

BHA: 2 HOLE SIZE: 8.75 in SECTION TYPE: Curve SURVEY TYPE: Positive Pulse MWD
 MANFCT.: Weatherford STABILIZER: No SERIAL#: 675-4129 MODEL: LN7850 LOBE CFG.:7/8
 SETTING: 2.25 ° KICKPAD: No SIZE: 6 3/4" (171mm) MTR HRS THIS DAY: 8.5 MTR HRS TO DATE: 40.75
 MANFCT: Security BIT TYPE: Security TYPE: FXD54 NOZZLES: 0.949 in² TFA
 IADC BIT GRADE: 1 / 1 / ? / G / X / I / FC / TD

— PUMP PARAMETERS —

PRESSURE ON BTM: 3600 PRESSURE OFF BTM: 2800 TOTAL FLOW RATE: 547.75 gal/min
 PUMP 1: TYPE: PZ-11 EFF.: 95.0% SPM: 75.00 LINER: 6.00 in STROKE VOL.: 3.8438 gal/stk
 PUMP 2: TYPE: PZ-11 EFF.: 95.0% SPM: 75.00 LINER: 6.00 in STROKE VOL.: 3.8438 gal/stk
 PUMP 3: TYPE: EFF.: 100.0% SPM: 0.00 LINER: 0.00 in STROKE VOL.: 0.0000 gal/stk

— MUD RECORD —

MUD TYPE: Water VISC: 39 sec/qt WTR LOSS: 0 cc/30min PV: 14 cP YP: 12 lb/100 ft² pH: 7
 DENSITY: 9.5 lb/gal GEL 0/10: 1.00 lb/100 ft² SAND: 0 SOLIDS: 8.4 OIL: 0 TEMP: 177 °F
 LIQUID BASE: Water LIQUID RATE: 0 gal/min GAS TYPE: GAS RATE: 0 cu ft/min

— COMMENTS: —

TD well. Circ & Condition hole. POOH to run casing

CUSTOMER SIGNATURE: _____



Daily Activity Report

Drilling Services
v4.2.2674

Day 7 - 2012/04/26

FILE #: 4025800 WELL NAME: Camp 36N-26HZ SERVICE CO.: Weatherford Drilling Services
 JOB TYPE: UBD Horizontal COMPANY: Anadarko Petroleum Corporation SURVEY TYPE: HEL MWD
 RIG & NO: Helmerich & Payne 307 SURFACE LOCATION: Weld County FIELD / LOCATION: Wildcat / WY / USA

DIR Supervisor: Josh Monroe, Jerry Davis, Charles Apodaca
 MWD Supervisor: Jett Hunter, Jon Ieger
 Company Man: Pat Cain, James Johnson

GROUND ELEV: 5014 ft START DEPTH: 7902.0 ft PROGRESS: 0.0 ft DAILY COST: USD\$31440.00
 KB ELEV: 25 ft END DEPTH: 7902.0 ft AVG. ROP.: 0.0 ft/hr PREVIOUS COST: USD\$101080.00
 TOTAL COST: USD\$132520.00

WORK STATUS: Operating (All units are imperial.)

TIME	DAILY ACTIVITY	HRS	DPTH	BHA	TIME	DAILY ACTIVITY	HRS	DPTH	BHA
00:00-24:00	Wait On Orders	24.00	7902	2			0.00		

TIME SUMMARY (hrs):				DRILLING PARAMETERS:					
MOTOR DRILL:	0.00	ORIENTING HRS:	0.00	ROTARY DRILL:	0.00	ROTARY TORQUE:		STRING WEIGHT:	0 lbs
TIME DRILL:	0.00	ROTATING HRS:	0.00	MOTOR HRS:	0.00	WOB SLIDING (HI):	0 lbf	WOB ROTATE (HI):	0 lbf
MOTOR REAM:	0.00	TRIP:	0.00	WOB SLIDING (LO):	0 lbf	WOB ROTATE (LO):	0 lbf	DRAG UP:	0 lbf
CIRC:	0.00	ROTARY DRILL:	0.00	OTHER:	24.00	RPM (ROTARY):		DRAG DN:	0 lbf
MOTOR HRS:	0.00	DRILL HRS:	0.00	TOTAL HRS:	24.00	RPM (MOTOR):			

BHA / MOTOR / BIT INFORMATION:

BHA: 2 HOLE SIZE: 8.75 in SECTION TYPE: Curve SURVEY TYPE: Positive Pulse MWD
 MANFCT.: Weatherford STABILIZER: No SERIAL#: 675-4129 MODEL: LN7850 LOBE CFG.: 7/8
 SETTING: 2.25 ° KICKPAD: No SIZE: 6 3/4" (171mm) MTR HRS THIS DAY: 0 MTR HRS TO DATE: 40.75
 MANFCT: Security BIT TYPE: Security TYPE: FXD54 NOZZLES: 0.949 in² TFA
 IADC BIT GRADE: 1 / 1 / ? / G / X / I / FC / TD

PUMP PARAMETERS

PRESSURE ON BTM: 0 PRESSURE OFF BTM: 0 TOTAL FLOW RATE: 0.00 gal/min

PUMP 1: TYPE: PZ-11	EFF.: 95.0%	SPM: 0.00	LINER: 0.00 in	STROKE VOL.: 0.0000 gal/stk
PUMP 2: TYPE: PZ-11	EFF.: 95.0%	SPM: 0.00	LINER: 0.00 in	STROKE VOL.: 0.0000 gal/stk
PUMP 3: TYPE:	EFF.: 100.0%	SPM: 0.00	LINER: 0.00 in	STROKE VOL.: 0.0000 gal/stk

MUD RECORD

MUD TYPE: VISC: 0 sec/qt WTR LOSS: 0 cc/30min PV: 0 cP YP: 0 lb/100 ft² pH: 0
 DENSITY: 0 lb/gal GEL 0/10: 0.00 lb/100 ft² SAND: 0 SOLIDS: 0 OIL: 0 TEMP: 0 °F
 LIQUID BASE: LIQUID RATE: 0 gal/min GAS TYPE: GAS RATE: 0 cu ft/min

COMMENTS:

Run Casing

CUSTOMER SIGNATURE: _____



Daily Activity Report

Drilling Services
v4.2.2674

Day 8 - 2012/04/27

FILE #: 4025800 WELL NAME: Camp 36N-26HZ SERVICE CO.: Weatherford Drilling Services
 JOB TYPE: UBD Horizontal COMPANY: Anadarko Petroleum Corporation SURVEY TYPE: HEL MWD
 RIG & NO: Helmerich & Payne 307 SURFACE LOCATION: Weld County FIELD / LOCATION: Wildcat / WY / USA

DIR Supervisor: Josh Monroe, Jerry Davis
 MWD Supervisor: Jett Hunter, Jon Ieger
 Company Man: Pat Cain, James Johnson

GROUND ELEV: 5014 ft START DEPTH: 7902.0 ft PROGRESS: 548.0 ft DAILY COST: USD\$27690.00
 KB ELEV: 25 ft END DEPTH: 8450.0 ft AVG. ROP.: 124.0 ft/hr PREVIOUS COST: USD\$132520.00
 TOTAL COST: USD\$160210.00

WORK STATUS: Operating (All units are imperial.)

TIME	DAILY ACTIVITY	HRS	DPTH	BHA	TIME	DAILY ACTIVITY	HRS	DPTH	BHA
00:00-04:45	Wait On Orders	4.75	7902	n/a	18:50-19:30	Rotating With Motor	0.67	8072	3
04:45-05:45	Handle Directional Tools	1.00	7902	3	19:30-19:35	Circ & Accumulate Surveys	0.08	8072	3
05:45-06:45	Circulate/Accumulate Surveys	1.00	7902	3	19:35-20:15	Rotating With Motor	0.67	8166	3
06:45-07:15	Work On MWD - Program LWD	0.50	7902	3	20:15-20:20	Circ & Accumulate Surveys	0.08	8166	3
07:15-07:00	RIH	-0.25	7902	3	20:20-21:05	Rig Repair - Work on pumps	0.75	8166	3
07:00-07:15	Shallow Pulse Check	0.25	7902	3	21:05-21:40	Rotating With Motor	0.58	8261	3
07:15-10:50	RIH	3.58	7902	3	21:40-21:50	Circ & Accumulate Surveys	0.17	8261	3
10:50-12:00	Slip And Cut	1.17	7902	3	21:50-22:15	Orienting With Motor	0.42	8276	3
12:00-13:00	Rig Repair - Change Swivel Packin	1.00	7902	3	22:15-22:45	Rotating With Motor	0.50	8355	3
13:00-13:30	Rig Service	0.50	7902	3	22:45-22:55	Circ & Accumulate Surveys	0.17	8355	3
13:30-16:15	Rig Repair - Swivel Packing	2.75	7902	3	22:55-23:20	Orienting With Motor	0.42	8370	3
16:15-18:00	Drill Out Flt, Shoe & Cmnt	1.75	7902	3	23:20-23:50	Rotating With Motor	0.50	8450	3
18:00-18:40	Rotating With Motor	0.67	7977	3	23:50-24:00	Circ & Accumulate Surveys	0.17	8450	3
18:40-18:50	Circ & Accumulate Surveys	0.17	7977	3			0.00		

TIME SUMMARY (hrs):				DRILLING PARAMETERS:					
MOTOR DRILL:	4.42	ORIENTING HRS:	0.83	ROTARY DRILL:	0.00	ROTARY TORQUE:	9000 ft-lb	STRING WEIGHT:	135000 lbs
TIME DRILL:	0.00	ROTATING HRS:	3.58	MOTOR HRS:	7.25	WOB SLIDING (HI):	12000 lbf	WOB ROTATE (HI):	15000 lbf
MOTOR REAM:	0.00	TRIP:	3.33	WOB SLIDING (LO):	8000 lbf	WOB ROTATE (LO):	12000 lbf		
CIRC:	2.83	ROTARY DRILL:	0.00	OTHER:	13.42	RPM (ROTARY):	50 rpm	DRAG UP:	142000 lbf
MOTOR HRS:	7.25	DRILL HRS:	4.42	TOTAL HRS:	24.00	RPM (MOTOR):	305 rpm	DRAG DN:	128000 lbf

BHA / MOTOR / BIT INFORMATION:

BHA: 3 HOLE SIZE: 6.125 in SECTION TYPE: Lateral 1 SURVEY TYPE: HEL LWD
 MANFCT.: Hunting STABILIZER: No SERIAL#: 170 MODEL: LN4560 LOBE CFG.:4/5
 SETTING: 1.5° KICKPAD: No SIZE: 5" (127mm) MTR HRS THIS DAY: 7.2499999999999999 MTR HRS TO DATE: 7.2499999999999999
 MANFCT: Drilformance BIT TYPE: Drilformance PDC Bi TYPE: 513R NOZZLES: 0.648 in² TFA
 IADC BIT GRADE: ? / ? / ? / ? / ? / ? / ? / ? / ?

PUMP PARAMETERS

PRESSURE ON BTM: 2300 PRESSURE OFF BTM: 2400 TOTAL FLOW RATE: 284.83 gal/min
 PUMP 1: TYPE: PZ-11 EFF.: 95.0% SPM: 78.00 LINER: 6.00 in STROKE VOL.: 3.8438 gal/stk
 PUMP 2: TYPE: PZ-11 EFF.: 95.0% SPM: 0.00 LINER: 0.00 in STROKE VOL.: 0.0000 gal/stk
 PUMP 3: TYPE: EFF.: 100.0% SPM: 0.00 LINER: 0.00 in STROKE VOL.: 0.0000 gal/stk

MUD RECORD

MUD TYPE: Gelchem VISC: 38 sec/qt WTR LOSS: 0 cc/30min PV: 0 cP YP: 0 lb/100 ft² pH: 0
 DENSITY: 9.5 lb/gal GEL 0/10: 0.00 lb/100 ft² SAND: 0 SOLIDS: 0 OIL: 0 TEMP: 0 °F
 LIQUID BASE: Water LIQUID RATE: 0 gal/min GAS TYPE: GAS RATE: 0 cu ft/min

COMMENTS:

Run casing. P/U BHA #3. RIH, Drill out Flt, Shoe & Cmt. Drill ahead in lateral F/ 7902' - 8450'.

CUSTOMER SIGNATURE: _____



Weatherford

Daily Activity Report

Drilling Services

v4.2.2674

Day 9 - 2012/04/28

FILE #: 4025800

WELL NAME: Camp 36N-26HZ

SERVICE CO.: Weatherford Drilling Services

JOB TYPE: UBD Horizontal

COMPANY: Anadarko Petroleum Corporation

SURVEY TYPE: HEL MWD

RIG & NO: Helmerich & Payne 307

SURFACE LOCATION: Weld County

FIELD / LOCATION: Wildcat / WY / USA

DIR Supervisor: Josh Monroe, Jerry Davis

MWD Supervisor: Jett Hunter, Jon leger

Company Man: Pat Cain, James Johnson

GROUND ELEV: 5014 ft

START DEPTH: 8450.0 ft

PROGRESS: 2807.0 ft

DAILY COST: USD\$27690.00

KB ELEV: 25 ft

END DEPTH: 11257.0 ft

AVG. ROP.: 134.8 ft/hr

PREVIOUS COST: USD\$160210.00

TOTAL COST: USD\$187900.00

WORK STATUS: Operating

(All units are imperial.)

TIME	DAILY ACTIVITY	HRS	DPTH	BHA	TIME	DAILY ACTIVITY	HRS	DPTH	BHA
00:00-00:30	Rotating With Motor	0.50	8544	3	11:35-12:20	Rotating With Motor	0.75	9969	3
00:30-00:40	Circ & Accumulate Surveys	0.17	8544	3	12:20-12:25	Circ & Accumulate Surveys	0.08	9969	3
00:40-01:15	Rotating With Motor	0.58	8639	3	12:25-12:40	Orienting With Motor	0.25	9984	3
01:15-01:25	Circ & Accumulate Surveys	0.17	8639	3	12:40-13:25	Rotating With Motor	0.75	10064	3
01:25-01:45	Orienting With Motor	0.33	8654	3	13:25-13:30	Circ & Accumulate Surveys	0.08	10074	3
01:45-02:10	Rotating With Motor	0.42	8735	3	13:30-14:15	Rotating With Motor	0.75	10159	3
02:10-02:20	Circ & Accumulate Surveys	0.17	8735	3	14:15-14:20	Circ & Accumulate Surveys	0.08	10159	3
02:20-02:55	Rotating With Motor	0.58	8829	3	14:20-15:15	Rotating With Motor	0.92	10253	3
02:55-03:05	Circ & Accumulate Surveys	0.17	8829	3	15:15-15:20	Circ & Accumulate Surveys	0.08	10253	3
03:05-03:45	Rotating With Motor	0.67	8924	3	15:20-15:25	Rotating With Motor	0.08	10258	3
03:45-03:55	Circ & Accumulate Surveys	0.17	8924	3	15:25-15:30	Orienting With Motor	0.08	10266	3
03:55-04:25	Orienting With Motor	0.50	8944	3	15:30-15:50	Rotating With Motor	0.33	10348	3
04:25-04:50	Rotating With Motor	0.42	9019	3	15:50-15:55	Circ & Accumulate Surveys	0.08	10348	3
04:50-04:55	Circ & Accumulate Surveys	0.08	9019	3	15:55-16:40	Rotating With Motor	0.75	10443	3
04:55-05:25	Rotating With Motor	0.50	9114	3	16:40-16:50	Circ & Accumulate Surveys	0.17	10443	3
05:25-05:30	Circ & Accumulate Surveys	0.08	9114	3	16:50-17:15	Rotating With Motor	0.42	10538	3
05:30-06:00	Rotating With Motor	0.50	9209	3	17:15-17:20	Circ & Accumulate Surveys	0.08	10538	3
06:00-06:05	Circ & Accumulate Surveys	0.08	9209	3	17:20-17:45	Rotating With Motor	0.42	10633	3
06:05-06:45	Rotating With Motor	0.67	9304	3	17:45-17:55	Circ & Accumulate Surveys	0.17	10538	3
06:45-06:50	Circ & Accumulate Surveys	0.08	9304	3	17:55-18:05	Rotating With Motor	0.17	10638	3
06:50-07:30	Rotating With Motor	0.67	9399	3	18:05-19:00	Orienting With Motor	0.92	10653	3
07:30-07:35	Circ & Accumulate Surveys	0.08	9399	3	19:00-19:20	Rotating With Motor	0.33	10728	3
07:35-08:15	Rotating With Motor	0.67	9493	3	19:20-19:25	Circ & Accumulate Surveys	0.08	10728	3
08:15-08:20	Circ & Accumulate Surveys	0.08	9493	3	19:25-20:00	Rotating With Motor	0.58	10823	3
08:20-08:30	Rotating With Motor	0.17	9498	3	20:00-20:05	Circ & Accumulate Surveys	0.08	10823	3
08:30-08:40	Circ & Accumulate Surveys	0.17	9508	3	20:05-20:10	Rotating With Motor	0.08	10833	3
08:40-09:10	Rotating With Motor	0.50	9588	3	20:10-20:40	Orienting With Motor	0.50	10849	3
09:10-09:15	Circ & Accumulate Surveys	0.08	9588	3	20:40-21:05	Rotating With Motor	0.42	10918	3
09:15-09:25	Rotating With Motor	0.17	9593	3	21:05-21:10	Circ & Accumulate Surveys	0.08	10918	3
09:25-09:30	Orienting With Motor	0.08	9603	3	21:10-21:45	Rotating With Motor	0.58	11013	3
09:30-10:05	Rotating With Motor	0.58	9683	3	21:45-21:50	Circ & Accumulate Surveys	0.08	11013	3
10:05-10:10	Circ & Accumulate Surveys	0.08	9683	3	21:50-21:55	Rotating With Motor	0.08	11023	3
10:10-10:45	Rotating With Motor	0.58	9778	3	21:55-22:20	Orienting With Motor	0.42	11035	3
10:45-10:50	Circ & Accumulate Surveys	0.08	9778	3	22:20-22:50	Rotating With Motor	0.50	11108	3
10:50-10:55	Rotating With Motor	0.08	9783	3	22:50-22:55	Circ & Accumulate Surveys	0.08	11108	3
10:55-11:00	Orienting With Motor	0.08	9791	3	22:55-23:35	Rotating With Motor	0.67	11203	3
11:00-11:30	Rotating With Motor	0.50	9874	3	23:35-23:40	Circ & Accumulate Surveys	0.08	11203	3
11:30-11:35	Circ & Accumulate Surveys	0.08	9874	3	23:40-24:00	Rotating With Motor	0.33	11257	3



Weatherford

Daily Activity Report

Drilling Services

v4.2.2674

Day 9 - 2012/04/28

TIME SUMMARY (hrs):			DRILLING PARAMETERS:						
MOTOR DRILL:	20.83	ORIENTING HRS:	3.17	ROTARY DRILL:	0.00	ROTARY TORQUE:	13000 ft-lb	STRING WEIGHT	138000 lbs
TIME DRILL:	0.00	ROTATING HRS:	17.67	MOTOR HRS:	24.00	WOB SLIDING (HI):	14000 lbf	WOB ROTATE (HI):	16000 lbf
MOTOR REAM:	0.00			TRIP:	0.00	WOB SLIDING (LO):	8000 lbf	WOB ROTATE (LO):	12000 lbf
CIRC:	3.17	ROTARY DRILL:	0.00	OTHER:	0.00	RPM (ROTARY):	50 rpm	DRAG UP:	162000 lbf
MOTOR HRS:	24.00	DRILL HRS:	20.83	TOTAL HRS:	24.00	RPM (MOTOR):	305 rpm	DRAG DN:	122000 lbf

— BHA / MOTOR / BIT INFORMATION: —

BHA: 3	HOLE SIZE: 6.125 in	SECTION TYPE: Lateral 1	SURVEY TYPE: HEL LWD
MANFCT.: Hunting	STABILIZER: No	SERIAL#: 170	MODEL: LN4560
SETTING: 1.5 °	KICKPAD: No	SIZE: 5" (127mm)	MTR HRS THIS DAY: 24
MANFCT: Drilformance	BIT TYPE: Drilformance PDC Bi	TYPE: 513R	NOZZLES: 0.648 in ² TFA
IADC BIT GRADE: ? / ? / ? / ? / ? / ? / ? / ? / ?			

— PUMP PARAMETERS —

PRESSURE ON BTM: 3400	PRESSURE OFF BTM: 2500	TOTAL FLOW RATE: 284.83 gal/min
PUMP 1: TYPE: PZ-11	EFF.: 95.0%	SPM: 78.00
PUMP 2: TYPE: PZ-11	EFF.: 95.0%	SPM: 0.00
PUMP 3: TYPE:	EFF.: 100.0%	SPM: 0.00
	LINER: 6.00 in	STROKE VOL.: 3.8438 gal/stk
	LINER: 0.00 in	STROKE VOL.: 0.0000 gal/stk
	LINER: 0.00 in	STROKE VOL.: 0.0000 gal/stk

— MUD RECORD —

MUD TYPE: Gelchem	VISC: 40 sec/qt	WTR LOSS: 5.6 cc/30min	PV: 20 cP	YP: 19 lb/100 ft ²	pH: 7
DENSITY: 9.9 lb/gal	GEL 0/10: 3.00 lb/100 ft ²	SAND: 0	SOLIDS: 11.2	OIL: 0	TEMP: 228 °F
LIQUID BASE: Water		LIQUID RATE: 0 gal/min	GAS TYPE:		GAS RATE: 0 cu ft/min

— COMMENTS: —

Drill lateral F/8450' - 11257'.

CUSTOMER SIGNATURE: _____



Daily Activity Report

Drilling Services
v4.2.2674

Day 10 - 2012/04/29

FILE #: 4025800 WELL NAME: Camp 36N-26HZ SERVICE CO.: Weatherford Drilling Services
 JOB TYPE: UBD Horizontal COMPANY: Anadarko Petroleum Corporation SURVEY TYPE: HEL MWD
 RIG & NO: Helmerich & Payne 307 SURFACE LOCATION: Weld County FIELD / LOCATION: Wildcat / WY / USA

DIR Supervisor: Josh Monroe, Jerry Davis
 MWD Supervisor: Jett Hunter, Jon leger
 Company Man: Pat Cain, James Johnson

GROUND ELEV: 5014 ft START DEPTH: 11257.0 ft PROGRESS: 663.0 ft DAILY COST: USD\$27690.00
 KB ELEV: 25 ft END DEPTH: 11920.0 ft AVG. ROP.: 116.9 ft/hr PREVIOUS COST: USD\$187900.00
 TOTAL COST: USD\$215590.00

WORK STATUS: Operating (All units are imperial.)

TIME	DAILY ACTIVITY	HRS	DPTH	BHA	TIME	DAILY ACTIVITY	HRS	DPTH	BHA
00:00-00:15	Rotating With Motor	0.25	11298	3	03:25-03:55	Rotating With Motor	0.50	11677	3
00:15-00:20	Circ & Accumulate Surveys	0.08	11298	3	03:55-04:00	Circ & Accumulate Surveys	0.08	11677	3
00:20-00:25	Rotating With Motor	0.08	11308	3	04:00-04:10	Rotating With Motor	0.17	11687	3
00:25-01:00	Orienting With Motor	0.58	11324	3	04:10-04:30	Orienting With Motor	0.33	11695	3
01:00-01:30	Rotating With Motor	0.50	11393	3	04:30-05:00	Rotating With Motor	0.50	11772	3
01:30-01:35	Circ & Accumulate Surveys	0.08	11393	3	05:00-05:05	Circ & Accumulate Surveys	0.08	11772	3
01:35-01:40	Rotating With Motor	0.08	11403	3	05:05-05:35	Rotating With Motor	0.50	11868	3
01:40-02:10	Orienting With Motor	0.50	11413	3	05:35-05:50	Circ & Accumulate Surveys	0.25	11868	3
02:10-02:35	Rotating With Motor	0.42	11487	3	05:50-06:25	Rotating With Motor	0.58	11920	3
02:35-02:40	Circ & Accumulate Surveys	0.08	11487	3	06:25-06:30	Circ & Accumulate Surveys	0.08	11920	3
02:40-03:20	Rotating With Motor	0.67	11582	3	06:30-07:00	Circ & Condition Hole	0.50	11920	3
03:20-03:25	Circ & Accumulate Surveys	0.08	11582	3			0.00		

TIME SUMMARY (hrs):				DRILLING PARAMETERS:					
MOTOR DRILL:	5.67	ORIENTING HRS:	1.42	ROTARY DRILL:	0.00	ROTARY TORQUE:	13000 ft-lb	STRING WEIGHT:	138000 lbs
TIME DRILL:	0.00	ROTATING HRS:	4.25	MOTOR HRS:	7.00	WOB SLIDING (HI):	23000 lbf	WOB ROTATE (HI):	24000 lbf
MOTOR REAM:	0.00	ROTARY DRILL:	0.00	TRIP:	0.00	WOB SLIDING (LO):	12000 lbf	WOB ROTATE (LO):	15000 lbf
CIRC:	1.33	OTHER:	0.00	RPM (ROTARY):	50 rpm	DRAG UP:	162000 lbf		
MOTOR HRS:	7.00	DRILL HRS:	5.67	TOTAL HRS:	7.00	RPM (MOTOR):	305 rpm	DRAG DN:	122000 lbf

BHA / MOTOR / BIT INFORMATION:

BHA: 3 HOLE SIZE: 6.125 in SECTION TYPE: Lateral 1 SURVEY TYPE: HEL LWD
 MANFCT.: Hunting STABILIZER: No SERIAL#: 170 MODEL: LN4560 LOBE CFG.:4/5
 SETTING: 1.5° KICKPAD: No SIZE: 5" (127mm) MTR HRS THIS DAY: 7 MTR HRS TO DATE: 38.25
 MANFCT: Drilformance BIT TYPE: Drilformance PDC Bi TYPE: 513R NOZZLES: 0.648 in² TFA
 IADC BIT GRADE: ? / ? / ? / ? / ? / ? / ? / ?

PUMP PARAMETERS

PRESSURE ON BTM: 3700 PRESSURE OFF BTM: 2800 TOTAL FLOW RATE: 284.83 gal/min
 PUMP 1: TYPE: PZ-11 EFF.: 95.0% SPM: 78.00 LINER: 6.00 in STROKE VOL.: 3.8438 gal/stk
 PUMP 2: TYPE: PZ-11 EFF.: 95.0% SPM: 0.00 LINER: 0.00 in STROKE VOL.: 0.0000 gal/stk
 PUMP 3: TYPE: EFF.: 100.0% SPM: 0.00 LINER: 0.00 in STROKE VOL.: 0.0000 gal/stk

MUD RECORD

MUD TYPE: Gelchem VISC: 41 sec/qt WTR LOSS: 5.6 cc/30min PV: 20 cP YP: 20 lb/100 ft² pH: 7
 DENSITY: 10 lb/gal GEL 0/10: 3.00 lb/100 ft² SAND: 0 SOLIDS: 11.9 OIL: 0 TEMP: 231 °F
 LIQUID BASE: Water LIQUID RATE: 0 gal/min GAS TYPE: GAS RATE: 0 cu ft/min

COMMENTS:

Drill lateral F/1125' - 11920'. TD Well. Circ. & Condition Hole. Short trip, POOH To Lay Down Directional Tools.

CUSTOMER SIGNATURE: _____



BHA REPORTS



BHA 1 - Main Hole Section

FILE #: 4025800 WELL NAME: Camp 36N-26HZ SERVICE CO.: Weatherford Drilling Services
 JOB TYPE: UBD Horizontal COMPANY: Anadarko Petroleum Corporation SURVEY TYPE: HEL MWD
 RIG & NO: Helmerich & Payne 307 SURFACE LOCATION: Weld County FIELD / LOCATION: Wildcat / WY / USA

DIR Supervisor: Josh Monroe, Charles Apodaca
 MWD Supervisor: Jett Hunter, Jon leger
 Company Man: Doug Barone, Doug Blair

BHA SURVEY TYPE: Positive Pulse MWD HOLE SIZE: 8.75 in

QTY	COMPONENT	MANFCT.	SERIAL #	MODEL	O.D.	I.D.	F.N.	BOT. CONN.	TOP CONN.	LEN.	C.LEN.
1	Drilformance PDC Bit	Drilformance	1047	516T	6.125	0	0		4 1/2" REG Pin	1.00 ft	1.00 ft
1	Weatherford Motor	Weatherford	675-4110	LN7850	7.35	0	0	4 1/2" REG Box	4 1/2" IF Box	27.94 ft	28.94 ft
1	Muleshoe	Weatherford	AES675-33446	Mud Pulse	6.75	2.75	0	4 1/2" IF Pin	4 1/2" IF Box	3.64 ft	32.58 ft
1	NMDC	Weatherford	43135	NMDC	6.91	3.25	0	4 1/2" IF Pin	4 1/2" IF Box	30.98 ft	63.56 ft
1	Flex NMDC	Weatherford	DR5117	NMDC	6.72	2.75	0	4 1/2" IF Pin	4 1/2" IF Box	27.83 ft	91.39 ft
1	X/O Sub	Weatherford	625-36322		6.35	2.75	0	4 1/2" IF Pin	XT-39 Box	3.57 ft	94.96 ft
45	4" HWDP	Rig	Rig	15 STDS	4	0	0	XT-39 Pin	XT-39 Box	1381.66	1476.62 ft

(O.D. units are in; I.D. units are in; FNeck units are ft)

— GENERAL INFORMATION

DATES RUN: 2012/04/20 TO 2012/04/23
 DEPTH IN: 924.00 ft ANGLE IN: 1.13 °
 DEPTH OUT: 6728.00 ft ANGLE OUT: 15.77 °
 DRILL HRS: 38.83 BUILD: 14.64 °
 ORIENTING HRS: 14.08 HOLE MADE: 5804.00 ft
 ROTATING HRS: 24.75 AVG R.O.P.: 149.47 ft/hr

— MOTOR INFORMATION

MANFCT: Weatherford SETTING: 1.50 °
 SERIAL #: 675-4110 KICK PAD: No
 MODEL: LN7850 STABILIZER: No
 LOBE CFG: 7/8 MOTOR HRS: 47.58
 BIT TO BEND: 6.23

— PUMP INFORMATION

PUMPS	PUMP 1	PUMP 2	PUMP 3
EFFICIENCY:	95.0%	95.0%	100.0%
S.P.M.:	75	75	0
STROKE VOLUME:	3.8438 gal/stk	3.8438 gal/stk	0.0 gal/stk
TOTAL FLOW RATE:	547.74651 gal/min		
PUMP PRESSURE:	OFF BTM: 1800 psi	ON BTM: 2600 psi	

— MUD INFORMATION

MUD TYPE: Gelchem LIQUID BASE: Water
 DENSITY: 8.5 lb/gal TEMP: 164 °F
 VISCOSITY: 37 sec/qt pH: 8
 WTR LOSS: 0 cc/30min SAND: 0 LIQUID RATE: 0 gal/min
 PLAST VISC: 12 cP SOLIDS: 6.3 GAS TYPE:
 YIELD PT: 10 lb/100 ft² OIL: 0 GAS RATE: 0 cu ft/min

— BIT INFORMATION

MANFCT: Drilformance TYPE: 516T IADC BIT GRADE: 1 / 2 / CT / G / X / I / FC / TD
 NOZZLES: 1.208 in² TFA

— REASON FOR BHA CHANGE

TD build & hold section

— FORMATION CHARACTERISTICS

All formations had a tendency to drop hard in rotation. Slide every stand to maintain 16° of Inclination.

— MWD COMMENTS

MWD tool performed as expected. We ran a 60° orifice with a 6 3/4" pulser. Temp. was 125° and battery consumption was 30% consumed. No problems encountered.

— SIDETRACKING PROCEDURE COMMENTS

NA

RUN SUMMARY

Average build rates experienced were 1°-5° / 100'. Condition of BHA looked good when pulled. No problems encountered.



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BHA Report

BHA 2 - Curve Section

Drilling Services
v4.2.2674

—SIDETRACKING PROCEDURE COMMENTS

NA

—RUN SUMMARY

Average build rates experienced were 14° / 100'. Condition of BHA looked good when pulled. No problems encountered.



BHA 3 - Lateral 1 Section

FILE #: 4025800 WELL NAME: Camp 36N-26HZ SERVICE CO.: Weatherford Drilling Services
 JOB TYPE: UBD Horizontal COMPANY: Anadarko Petroleum Corporation SURVEY TYPE: HEL MWD
 RIG & NO: Helmerich & Payne 307 SURFACE LOCATION: Weld County FIELD / LOCATION: Wildcat / WY / USA

DIR Supervisor: Josh Monroe, Jerry Davis
 MWD Supervisor: Jett Hunter, Jon leger
 Company Man: Pat Cain, James Johnson

BHA SURVEY TYPE: HEL LWD HOLE SIZE: 6.125 in

QTY	COMPONENT	MANFCT.	SERIAL #	MODEL	O.D.	I.D.	F.N.	BOT. CONN.	TOP CONN.	LEN.	C.LEN.
1	Drilformance PDC	Drilformance	101	513R	6.125	0	0		3 1/2" REG Pin	1.00 ft	1.00 ft
1	Hunting Motor	Hunting	170	LN4560	5.1	0	1.37	3 1/2" REG Box	3 1/2" IF Box	24.06 ft	25.06 ft
1	Duradrill Slide Stab	Duradrill	DM93302	Dynomax	4.83	2.25	0	3 1/2" IF Pin	3 1/2" IF Box	6.02 ft	31.08 ft
1	SAGR	Weatherford	NW20534	LWD	4.75	2.5	7.59	3 1/2" IF Pin	3 1/2" IF Box	14.16 ft	45.24 ft
1	Split IDS	Weatherford	NW20308	LWD	4.75	2.5	3029	3 1/2" IF Pin	3 1/2" IF Box	12.31 ft	57.55 ft
1	MFR	Weatherford	NW20302	LWD	4.75	2.75	0	3 1/2" IF Pin	3 1/2" IF Box	29.18 ft	86.73 ft
1	HEL LWD	Weatherford	NW20305	LWD	4.75	2.5	0	3 1/2" IF Pin	3 1/2" IF Box	14.55 ft	101.28 ft
1	NM IBS Stabilizer	Stabadrill	SD 20816	Non Mag	4.8	3.5	2.09	3 1/2" IF Pin	3 1/2" IF Box	5.73 ft	107.01 ft
1	NMDC	Weatherford	43546		4.84	2.75	0	3 1/2" IF Pin	3 1/2" IF Box	30.99 ft	138.00 ft
1	X/O Sub	Weatherford	44887		5.04	2.625	0	3 1/2" IF Pin	XT-39 Box	2.68 ft	140.68 ft
150	4" Drill Pipe	Rig	Rig	6 STDS	4	0	0	XT-39 Pin	XT-39 Box	4745.82	4886.50 ft
45	4" HWDP	Rig	Rig	15 STDS	4	0	0	XT-39 Pin	XT-39 Box	1381.66	6268.16 ft

(O.D. units are in; I.D. units are in; FNeck units are ft)

GENERAL INFORMATION

DATES RUN:	2012/04/27 TO 2012/04/29
DEPTH IN:	7902.00 ft
DEPTH OUT:	11920.00 ft
DRILL HRS:	30.92
ORIENTING HRS:	5.42
ROTATING HRS:	25.50
ANGLE IN:	91.54 °
ANGLE OUT:	89.45 °
BUILD:	-2.09 °
HOLE MADE:	4018.00 ft
AVG R.O.P.:	129.95 ft/hr

MOTOR INFORMATION

MANFCT.	Hunting	SETTING:	1.50 °
SERIAL #:	170	KICK PAD:	No
MODEL:	LN4560	STABILIZER:	No
LOBE CFG:	4/5	MOTOR HRS:	38.25
BIT TO BEND:	3.6		

PUMP INFORMATION

PUMPS	PUMP 1	PUMP 2	PUMP 3
EFFICIENCY:	95.0%	95.0%	100.0%
S.P.M.:	78	0	0
STROKE VOLUME:	3.8438 gal/stk	0.0 gal/stk	0.0 gal/stk
TOTAL FLOW RATE:	284.82819 gal/min		
PUMP PRESSURE:	OFF BTM: 2800 psi	ON BTM: 3700 psi	

MUD INFORMATION

MUD TYPE:	Gelchem	LIQUID BASE:	Water
DENSITY:	10 lb/gal	TEMP:	231 °F
VISCOSITY:	41 sec/qt	pH:	7
WTR LOSS:	5.6 cc/30min	SAND:	0
PLAST VISC:	20 cP	SOLIDS:	11.9
YIELD PT:	20 lb/100 ft ²	OIL:	0
		LIQUID RATE:	0 gal/min
		GAS TYPE:	
		GAS RATE:	0 cu ft/min

BIT INFORMATION

MANFCT:	Drilformance	TYPE:	513R	IADC BIT GRADE:	??/?/?/?/?/?/?/?/?
				NOZZLES:	0.648 in ² TFA

REASON FOR BHA CHANGE

FORMATION CHARACTERISTICS



BHA Report

BHA 3 - Lateral 1 Section

Drilling Services
v4.2.2674

—MWD COMMENTS—

—SIDETRACKING PROCEDURE COMMENTS—

—RUN SUMMARY—



SLIDE REPORT



Slide Sheet Report

Drilling Services
v4.2.2674

BHA 1 - 2012/04/20 TO 2012/04/23

FILE #: 4025800
JOB TYPE: UBD Horizontal
RIG & NO: Helmerich & Payne 307

WELL NAME: Camp 36N-26HZ
COMPANY: Anadarko Petroleum Corporation
SURFACE LOCATION: Weld County

SERVICE CO.: Weatherford Drilling Services
SURVEY TYPE: HEL MWD
FIELD / LOCATION: Wildcat / WY / USA

DIR Supervisor: Josh Monroe, Charles Apodaca
MWD Supervisor: Jett Hunter, Jon Ieger
Company Man: Doug Barone, Doug Blair

BHA NO: 1	DATES RUN: 2012/04/20 TO 2012/04/23	SECTION: Main Hole	TOOLFACE OFFSET: 117.6 °	SURVEY OFFSET: 60 ft
MOTOR SETTING: 1.50 °	KICKPAD: No	STABILIZER: No	MODEL: LN7850	SERIAL NO: 675-4110
			BHA SURVEY TYPE: Positive Pulse MWD	

(Distances are shown in feet.)

BIT DEPTH DRILLED	SURVEY			----- ORIENTING -----			----- ROTATING -----			SLIDE SEEN	BUR /ft	BUR /100ft	COMMENTS		
	DEPTH	INC	AZM	TF	FROM	TO	FEET	FROM	TO					FEET	
1108.00	184.00	1048.00	1.13	339.08	293	1108.00	1133.00	25.00	1133.00	1292.00	159.00	0.00	0.00	0.00	
1292.00	92.00	1232.00	4.28	306.67	293	1292.00	1312.00	20.00	1312.00	1384.00	72.00	25.00	0.13	1.71	
1384.00	92.00	1324.00	6.04	307.19	20 L	1384.00	1407.00	23.00	1407.00	1476.00	69.00	20.00	0.09	1.91	
1476.00	95.00	1416.00	8.13	305.39	50 L	1476.00	1508.00	32.00	1508.00	1571.00	63.00	23.00	0.09	2.27	
1571.00	95.00	1511.00	10.52	298.20	15 L	1571.00	1586.00	15.00	1586.00	1666.00	80.00	32.00	0.07	2.52	
1666.00	189.00	1606.00	12.12	293.83	HS	1666.00	1686.00	20.00	1686.00	1855.00	169.00	15.00	0.11	1.68	
1855.00	95.00	1795.00	13.83	294.08	HS	1855.00	1875.00	20.00	1875.00	1950.00	75.00	20.00	0.09	0.90	
1950.00	190.00	1890.00	14.84	292.45	10L	1950.00	1970.00	20.00	1970.00	2140.00	170.00	20.00	0.05	1.06	
2140.00	189.00	2080.00	14.96	292.72	10L	2140.00	2160.00	20.00	2160.00	2329.00	169.00	20.00	0.01	0.06	
2329.00	95.00	2269.00	14.53	292.14	10L	2329.00	2354.00	25.00	2354.00	2424.00	70.00	20.00	-0.02	-0.23	
2424.00	190.00	2364.00	15.73	291.32	HS	2424.00	2444.00	20.00	2444.00	2614.00	170.00	25.00	0.05	1.26	
2614.00	95.00	2554.00	15.22	287.68	45R	2614.00	2639.00	25.00	2639.00	2709.00	70.00	20.00	-0.03	-0.27	
2709.00	190.00	2649.00	16.52	294.06	HS	2709.00	2724.00	15.00	2724.00	2899.00	175.00	25.00	0.05	1.37	
2899.00	474.00	2839.00	15.88	292.88	10R	2899.00	2919.00	20.00	2919.00	3373.00	454.00	15.00	-0.04	-0.34	
3373.00	189.00	3313.00	14.28	292.56	10 R	3373.00	3398.00	25.00	3398.00	3562.00	164.00	20.00	-0.08	-0.34	
3562.00	95.00	3502.00	15.04	294.25	HS	3562.00	3590.00	28.00	3590.00	3657.00	67.00	25.00	0.03	0.40	Ratty Slide rig problems
3657.00	190.00	3597.00	15.46	292.39	HS	3657.00	3682.00	25.00	3682.00	3847.00	165.00	28.00	0.02	0.44	
3847.00	94.00	3787.00	14.81	287.75	45 R	3847.00	3888.00	41.00	3888.00	3941.00	53.00	25.00	-0.03	-0.34	
3941.00	95.00	3881.00	16.36	289.26	45 R	3941.00	3971.00	30.00	3971.00	4036.00	65.00	34.00	0.05	1.65	
4036.00	95.00	3976.00	16.55	292.48	45 R	4036.00	4068.00	32.00	4068.00	4131.00	63.00	37.00	0.01	0.20	
4131.00	190.00	4071.00	16.07	299.78	HS	4131.00	4163.00	32.00	4163.00	4321.00	158.00	32.00	-0.02	-0.51	
4321.00	189.00	4261.00	17.24	298.13	90 L	4321.00	4331.00	10.00	4331.00	4510.00	179.00	32.00	0.04	0.62	
4510.00	95.00	4450.00	15.04	287.58	45 R	4510.00	4542.00	32.00	4542.00	4605.00	63.00	10.00	-0.22	-1.16	
4605.00	284.00	4545.00	15.63	290.88	45 R	4605.00	4636.00	31.00	4636.00	4889.00	253.00	32.00	0.02	0.62	



Slide Sheet Report

BHA 1 - 2012/04/20 TO 2012/04/23

(Distances are shown in feet.)

BIT		SURVEY				----- ORIENTING -----			----- ROTATING -----			SLIDE	BUR	BUR	COMMENTS
DEPTH	DRILLED	DEPTH	INC	AZM	TF	FROM	TO	FEET	FROM	TO	FEET	SEEN	/ft	/100ft	
4889.00	95.00	4829.00	14.13	294.95	HS	4889.00	4920.00	31.00	4920.00	4984.00	64.00	31.00	-0.05	-0.53	
4984.00	191.00	4924.00	15.49	295.03	HS	4984.00	5016.00	32.00	5016.00	5175.00	159.00	31.00	0.04	1.43	
5175.00	95.00	5115.00	15.45	290.83	45R	5175.00	5207.00	32.00	5207.00	5270.00	63.00	32.00	0.00	-0.02	
5270.00	191.00	5210.00	15.94	295.53	30R	5270.00	5301.00	31.00	5301.00	5461.00	160.00	32.00	0.02	0.52	
5461.00	94.00	5401.00	14.90	295.74	10R	5461.00	5492.00	31.00	5492.00	5555.00	63.00	31.00	-0.03	-0.54	
5555.00	95.00	5495.00	15.37	295.25	10R	5555.00	5595.00	40.00	5595.00	5650.00	55.00	31.00	0.02	0.50	
5650.00	191.00	5590.00	16.52	294.76	20R	5650.00	5675.00	25.00	5675.00	5841.00	166.00	35.00	0.03	1.21	
5841.00	95.00	5781.00	15.72	293.56	20R	5841.00	5873.00	32.00	5873.00	5936.00	63.00	30.00	-0.03	-0.42	
5936.00	95.00	5876.00	16.18	292.47	45R	5936.00	5968.00	32.00	5968.00	6031.00	63.00	32.00	0.01	0.48	
6031.00	96.00	5971.00	16.71	293.97	20R	6031.00	6046.00	15.00	6046.00	6127.00	81.00	32.00	0.02	0.56	
6127.00	95.00	6067.00	15.97	291.03	45 R	6127.00	6167.00	40.00	6167.00	6222.00	55.00	15.00	-0.05	-0.77	
6222.00	96.00	6162.00	16.44	294.52	30 R	6222.00	6247.00	25.00	6247.00	6318.00	71.00	35.00	0.01	0.49	
6318.00	190.00	6258.00	16.23	296.79	HS	6318.00	6350.00	32.00	6350.00	6508.00	158.00	30.00	-0.01	-0.22	
6508.00	95.00	6448.00	14.22	292.02	HS	6508.00	6550.00	42.00	6550.00	6603.00	53.00	32.00	-0.06	-1.06	
6603.00	125.00	6543.00	15.77	291.04	10 R	6603.00	6633.00	30.00	6633.00	6728.00	95.00	35.00	0.04	1.63	

Totals:	1056.00 ft	4564.00 ft
Percentages:	18.8%	81.2%
Time:	14.08 hrs	24.75 hrs
Percentages:	36.3%	63.7%



Slide Sheet Report

BHA 2 - 2012/04/23 TO 2012/04/26

FILE #: 4025800
JOB TYPE: UBD Horizontal
RIG & NO: Helmerich & Payne 307

WELL NAME: Camp 36N-26HZ
COMPANY: Anadarko Petroleum Corporation
SURFACE LOCATION: Weld County

SERVICE CO.: Weatherford Drilling Services
SURVEY TYPE: HEL MWD
FIELD / LOCATION: Wildcat / WY / USA

DIR Supervisor: Josh Monroe, Charles Apodaca
MWD Supervisor: Jett Hunter, Jon Ieger
Company Man: Doug Barone, Doug Blair

BHA NO: 2	DATES RUN: 2012/04/23 TO 2012/04/26	SECTION: Curve	TOOLFACE OFFSET: 19.17 °	SURVEY OFFSET: 60 ft
MOTOR SETTING: 2.25 °	KICKPAD: No	STABILIZER: No	MODEL: LN7850	SERIAL NO: 675-4129
			BHA SURVEY TYPE: Positive Pulse MWD	

(Distances are shown in feet.)

BIT DEPTH DRILLED	SURVEY					ORIENTING			ROTATING			SLIDE SEEN	BUR /ft	BUR /100ft	COMMENTS
	DEPTH	INC	AZM	TF		FROM	TO	FEET	FROM	TO	FEET				
6728.00	33.00	6668.00	15.08	291.67	90L	6728.00	6760.00	32.00	6760.00	6761.00	1.00	0.00	0.00	0.00	
6761.00	63.00	6701.00	15.92	291.42	90L	6761.00	6781.00	20.00	6781.00	6824.00	43.00	0.00	0.00	2.55	
6824.00	32.00	6764.00	18.22	271.84	90L	6824.00	6839.00	15.00	6839.00	6856.00	17.00	35.00	0.07	3.65	
6856.00	32.00	6796.00	19.24	268.37	90 L	6856.00	6871.00	15.00	6871.00	6888.00	17.00	17.00	0.06	3.19	
6888.00	32.00	6828.00	19.08	262.57	90 L	6888.00	6903.00	15.00	6903.00	6920.00	17.00	4.00	-0.04	-0.50	
6920.00	32.00	6860.00	19.59	253.52	90 L	6920.00	6935.00	15.00	6935.00	6952.00	17.00	15.00	0.03	1.59	
6952.00	31.00	6892.00	19.95	242.80	90 L	6952.00	6967.00	15.00	6967.00	6983.00	16.00	15.00	0.02	1.12	
6983.00	63.00	6923.00	20.82	233.93	20 L	6983.00	7015.00	32.00	7015.00	7046.00	31.00	14.00	0.06	2.81	
7046.00	32.00	6986.00	25.20	221.99	90 L	7046.00	7066.00	20.00	7066.00	7078.00	12.00	30.00	0.15	6.95	
7078.00	137.00	7018.00	26.85	220.57	90 L	7078.00	7093.00	15.00	7093.00	7215.00	122.00	29.00	0.06	5.16	
7215.00	21.00	7155.00	0.00	0.00	10L	7215.00	7231.00	16.00	7231.00	7236.00	5.00	35.00	-0.77	-19.60	
7236.00	32.00	7176.00	24.70	203.61	10L	7236.00	7268.00	32.00	7268.00	7268.00	0.00	0.00	0.00	117.62	
7268.00	31.00	7208.00	24.57	204.46	30L	7268.00	7299.00	31.00	7299.00	7299.00	0.00	0.00	0.00	-0.41	
7299.00	32.00	7239.00	29.10	203.67	30L	7299.00	7331.00	32.00	7331.00	7331.00	0.00	19.00	0.24	14.61	
7331.00	31.00	7271.00	33.11	200.56	30L	7331.00	7362.00	31.00	7362.00	7362.00	0.00	32.00	0.13	12.53	
7362.00	32.00	7302.00	36.83	198.28	20L	7362.00	7394.00	32.00	7394.00	7394.00	0.00	31.00	0.12	12.00	
7394.00	32.00	7334.00	41.48	194.91	10L	7394.00	7426.00	32.00	7426.00	7426.00	0.00	32.00	0.15	14.53	
7426.00	32.00	7366.00	45.80	192.95	20L	7426.00	7458.00	32.00	7458.00	7458.00	0.00	32.00	0.14	13.50	
7458.00	32.00	7398.00	49.56	190.95	20L	7458.00	7490.00	32.00	7490.00	7490.00	0.00	32.00	0.12	11.75	
7490.00	31.00	7430.00	54.60	189.92	20L	7490.00	7521.00	31.00	7521.00	7521.00	0.00	32.00	0.16	15.75	
7521.00	32.00	7461.00	59.13	188.72	20L	7521.00	7553.00	32.00	7553.00	7553.00	0.00	31.00	0.15	14.61	
7553.00	31.00	7493.00	63.33	187.40	20L	7553.00	7573.00	20.00	7573.00	7584.00	11.00	32.00	0.13	13.12	
7584.00	32.00	7524.00	68.33	185.14	HS	7584.00	7593.00	9.00	7593.00	7616.00	23.00	31.00	0.16	16.13	
7616.00	31.00	7556.00	72.76	184.28	10L	7616.00	7629.00	13.00	7629.00	7647.00	18.00	32.00	0.14	13.84	



Slide Sheet Report

BHA 2 - 2012/04/23 TO 2012/04/26

(Distances are shown in feet.)

BIT		SURVEY				----- ORIENTING -----			----- ROTATING -----			SLIDE	BUR	BUR	COMMENTS
DEPTH	DRILLED	DEPTH	INC	AZM	TF	FROM	TO	FEET	FROM	TO	FEET	SEEN	/ft	/100ft	
7647.00	32.00	7587.00	75.51	183.85	20L	7647.00	7659.00	12.00	7659.00	7679.00	20.00	20.00	0.14	8.87	
7679.00	31.00	7619.00	78.12	183.98	90L	7679.00	7689.00	10.00	7689.00	7710.00	21.00	9.00	0.29	8.16	
7710.00	158.00	7650.00	80.45	184.04	45 L	7710.00	7730.00	20.00	7730.00	7868.00	138.00	13.00	0.18	7.52	
7868.00	34.00	7808.00	85.39	177.91	HS	7868.00	7885.00	17.00	7885.00	7902.00	17.00	39.00	0.13	3.13	

Totals:	628.00 ft	546.00 ft
Percentages:	53.5%	46.5%
Time:	16.58 hrs	9.50 hrs
Percentages:	63.6%	36.4%



Slide Sheet Report

Drilling Services
v4.2.2674

BHA 3 - 2012/04/27 TO 2012/04/29

FILE #: 4025800
JOB TYPE: UBD Horizontal
RIG & NO: Helmerich & Payne 307

WELL NAME: Camp 36N-26HZ
COMPANY: Anadarko Petroleum Corporation
SURFACE LOCATION: Weld County

SERVICE CO.: Weatherford Drilling Services
SURVEY TYPE: HEL MWD
FIELD / LOCATION: Wildcat / WY / USA

DIR Supervisor: Josh Monroe, Jerry Davis
MWD Supervisor: Jett Hunter, Jon Ieger
Company Man: Pat Cain, James Johnson

BHA NO: 3	DATES RUN: 2012/04/27 TO 2012/04/29	SECTION: Lateral 1	TOOLFACE OFFSET: 292.8 °	SURVEY OFFSET: 50 ft
MOTOR SETTING: 1.50 °	KICKPAD: No	STABILIZER: No	MODEL: LN4560	SERIAL NO: 170
			BHA SURVEY TYPE: HEL LWD	

(Distances are shown in feet.)

BIT DEPTH DRILLED	SURVEY				----- ORIENTING -----			----- ROTATING -----			SLIDE SEEN	BUR /ft	BUR /100ft	COMMENTS	
	DEPTH	INC	AZM	TF	FROM	TO	FEET	FROM	TO	FEET					
8261.00	94.00	8211.00	91.54	180.02	180	8261.00	8276.00	15.00	8276.00	8355.00	79.00	0.00	0.00	0.00	
8355.00	284.00	8305.00	90.12	179.77	165R	8355.00	8370.00	15.00	8370.00	8639.00	269.00	15.00	-0.09	-1.51	
8639.00	285.00	8589.00	89.51	180.23	160R	8639.00	8654.00	15.00	8654.00	8924.00	270.00	15.00	-0.04	-0.21	
8924.00	574.00	8874.00	88.21	180.22	25R	8924.00	8944.00	20.00	8944.00	9498.00	554.00	15.00	-0.09	-0.46	
9498.00	95.00	9448.00	88.58	180.28	HS	9498.00	9508.00	10.00	9508.00	9593.00	85.00	20.00	0.02	0.06	
9593.00	190.00	9543.00	89.20	180.24	HS	9593.00	9603.00	10.00	9603.00	9783.00	180.00	10.00	0.06	0.65	
9783.00	186.00	9733.00	90.80	180.12	LS	9783.00	9791.00	8.00	9791.00	9969.00	178.00	10.00	0.16	0.84	
9969.00	95.00	9919.00	89.32	180.05	HS	9969.00	9984.00	15.00	9984.00	10064.00	80.00	8.00	-0.19	-0.80	
10064.00	189.00	10014.00	91.23	180.11	LS	10064.00	10074.00	10.00	10074.00	10253.00	179.00	15.00	0.13	2.01	
10253.00	380.00	10203.00	90.31	179.58	LS	10253.00	10261.00	8.00	10261.00	10633.00	372.00	10.00	-0.09	-0.49	
10633.00	190.00	10583.00	90.49	177.01	145R	10633.00	10648.00	15.00	10648.00	10823.00	175.00	8.00	0.02	0.05	
10823.00	190.00	10773.00	88.33	177.74	65R	10823.00	10838.00	15.00	10838.00	11013.00	175.00	15.00	-0.14	-1.14	
11013.00	285.00	10963.00	88.77	179.58	60R	11013.00	11025.00	12.00	11025.00	11298.00	273.00	15.00	0.03	0.23	
11298.00	95.00	11248.00	88.46	179.71	40R	11298.00	11314.00	16.00	11314.00	11393.00	79.00	12.00	-0.03	-0.11	
11393.00	284.00	11343.00	88.89	181.11	30R	11393.00	11403.00	10.00	11403.00	11677.00	274.00	16.00	0.03	0.45	
11677.00	243.00	11627.00	89.45	181.32	HS	11677.00	11685.00	8.00	11685.00	11920.00	235.00	10.00	0.06	0.20	

Totals:	202.00 ft	3457.00 ft
Percentages:	5.5%	94.5%
Time:	5.42 hrs	25.50 hrs
Percentages:	17.5%	82.5%



MOTOR REPORTS



BHA 1 - Main Hole Section, Motor #675-4110

FILE #: 4025800 WELL NAME: Camp 36N-26HZ SERVICE CO.: Weatherford Drilling Services
 JOB TYPE: UBD Horizontal COMPANY: Anadarko Petroleum Corporation SURVEY TYPE: HEL MWD
 RIG & NO: Helmerich & Payne 307 SURFACE LOCATION: Weld County FIELD / LOCATION: Wildcat / WY / USA

DIR Supervisor: Josh Monroe, Charles Apodaca
 MWD Supervisor: Jett Hunter, Jon Ieger
 Company Man: Doug Barone, Doug Blair

BHA SURVEY TYPE: Positive Pulse MWD HOLE SIZE: 8.75 in

GENERAL INFORMATION:

BHA #: 1 START DEPTH: 924.00 ft
 DATE IN: 2012/04/20 END DEPTH: 6728.00 ft
 DATE OUT: 2012/04/23 HOLE MADE: 5804.00 ft
 ANGLE IN: 1.13 ° AVG ROP: 149.47 ft/hr
 ANGLE OUT: 15.77 °
 ORIENTING HRS: 14.08 ROTATING HRS: 24.75

MOTOR INFORMATION:

MANFCT: Weatherford
 SERIAL #: 675-4110
 MODEL: LN7850
 LOBE: 7/8 BIT TO BEND: 6.23 ft
 SETTING: 1.50 ° KICKPAD: No
 STABILIZER: No

DRILLING INFORMATION:

BIT TYPE: 516T IADC BIT GRADE: 1 / 2 / CT / G / X / I / FC / TD
 BIT PRESS DROP: 0.00 psi TOTAL FLOW RATE: 547.75 gal/min PUMP PRESS: (OFF) 1800.00 psi
 MTR PRESS DROP: 0.00 psi NOZZLES: 1.208 in² TFA (ON) 2600.00 psi

MUD INFORMATION:

MUD TYPE: Gelchem LIQUID BASE: Water (All units are imperial.)
 DENSITY: 9 lb/gal VISCOSITY: 37 sec/qt
 SAND: 0.000 WATER LOSS: 0.00 cc/30min LIQUID RATE: 0.00 gal/min
 SOLIDS: 6.300 PLASTIC VISC: 12.0 cP GAS TYPE:
 OIL: 0.000 YIELD POINT: 10.0 lb/100 ft² GAS RATE: 0.00 cu ft/min
 TEMP: 164 °F pH: 8.0

TIME INFORMATION:

CIRCULATING HOURS: 8.75
 REAMING HOURS: 0.00
 TIME DRILL HOURS: 0.00
 MOTOR DRILL HOURS: 38.83
 MOTOR HOURS THIS RUN: 47.58
 PREVIOUS HOURS: 0.00
 TOTAL MOTOR HOURS: 47.58
 TOTAL BRT HOURS: 47.58

MOTOR EVALUATION COMMENTS:

Weatherford Hyperline Motor SN (675-4110) 7/8 Lobe 5.0 stage .28 rpg performed as expected. The motor had a total of 47.58 hours on it. Motor looked good when layed down. No problems encountered.

REASON FOR BHA CHANGE:

TD build & hold section

COMMENTS FROM LAST DAY RAN:

POOH to change bit & Motor, P/U curve assembly. RIH to KOP. Drill curve F/ 6728' - 7015



BHA 2 - Curve Section, Motor #675-4129

FILE #: 4025800 WELL NAME: Camp 36N-26HZ SERVICE CO.: Weatherford Drilling Services
 JOB TYPE: UBD Horizontal COMPANY: Anadarko Petroleum Corporation SURVEY TYPE: HEL MWD
 RIG & NO: Helmerich & Payne 307 SURFACE LOCATION: Weld County FIELD / LOCATION: Wildcat / WY / USA

DIR Supervisor: Josh Monroe, Charles Apodaca
 MWD Supervisor: Jett Hunter, Jon Ieger
 Company Man: Doug Barone, Doug Blair

BHA SURVEY TYPE: Positive Pulse MWD HOLE SIZE: 8.75 in

GENERAL INFORMATION:			MOTOR INFORMATION:		
BHA #:	2	START DEPTH:	6728.00 ft	MANFCT:	Weatherford
DATE IN:	2012/04/23	END DEPTH:	7902.00 ft	SERIAL #:	675-4129
DATE OUT:	2012/04/26	HOLE MADE:	1174.00 ft	MODEL:	LN7850
ANGLE IN:	15.08 °	AVG ROP:	45.02 ft/hr	LOBE:	7/8 BIT TO BEND: 6.24 ft
ANGLE OUT:	85.39 °	ROTATING HRS:	9.50	SETTING:	2.25 ° KICKPAD: No
ORIENTING HRS:	16.58				STABILIZER: No

DRILLING INFORMATION:

BIT TYPE:	FXD54	IADC BIT GRADE:	1 / 1 / ? / G / X / I / FC / TD		
BIT PRESS DROP:	0.00 psi	TOTAL FLOW RATE:	0.00 gal/min	PUMP PRESS:	(OFF) 0.00 psi
MTR PRESS DROP:	0.00 psi	NOZZLES:	0.949 in ² TFA		(ON) 0.00 psi

MUD INFORMATION:

MUD TYPE:	Water	LIQUID BASE:	Water	(All units are imperial.)	
DENSITY:	10 lb/gal	VISCOSITY:	39 sec/qt		
SAND:	0.000	WATER LOSS:	0.00 cc/30min	LIQUID RATE:	0.00 gal/min
SOLIDS:	8.400	PLASTIC VISC:	14.0 cP	GAS TYPE:	
OIL:	0.000	YIELD POINT:	12.0 lb/100 ft ²	GAS RATE:	0.00 cu ft/min
TEMP:	177 °F	pH:	7.0		

TIME INFORMATION:

CIRCULATING HOURS:	14.67
REAMING HOURS:	0.00
TIME DRILL HOURS:	0.00
MOTOR DRILL HOURS:	26.08
MOTOR HOURS THIS RUN:	40.75
PREVIOUS HOURS:	0.00
TOTAL MOTOR HOURS:	40.75
TOTAL BRT HOURS:	40.75

MOTOR EVALUATION COMMENTS:
 Weatherford Hyperline Motor SN (675-4129) 7/8 Lobe 5.0 Stage .28 rpg. Total motor hours were 40.75. Motor performed as expected and looked good when layed down.

REASON FOR BHA CHANGE:
 TD Curve

COMMENTS FROM LAST DAY RAN:
 Run Casing



BHA 3 - Lateral 1 Section, Motor #170

FILE #: 4025800 WELL NAME: Camp 36N-26HZ SERVICE CO.: Weatherford Drilling Services
 JOB TYPE: UBD Horizontal COMPANY: Anadarko Petroleum Corporation SURVEY TYPE: HEL MWD
 RIG & NO: Helmerich & Payne 307 SURFACE LOCATION: Weld County FIELD / LOCATION: Wildcat / WY / USA

DIR Supervisor: Josh Monroe, Jerry Davis
 MWD Supervisor: Jett Hunter, Jon Ieger
 Company Man: Pat Cain, James Johnson

BHA SURVEY TYPE: HEL LWD HOLE SIZE: 6.125 in

GENERAL INFORMATION:		MOTOR INFORMATION:	
BHA #:	3	START DEPTH:	7902.00 ft
DATE IN:	2012/04/27	END DEPTH:	11920.00 ft
DATE OUT:	2012/04/29	HOLE MADE:	4018.00 ft
ANGLE IN:	91.54 °	AVG ROP:	129.95 ft/hr
ANGLE OUT:	89.45 °	ROBING:	4/5
ORIENTING HRS:	5.42	ROTATING HRS:	25.50
		MANFCT:	Hunting
		SERIAL #:	170
		MODEL:	LN4560
		LOBE:	4/5
		SETTING:	1.50 °
		BIT TO BEND:	3.6 ft
		KICKPAD:	No
		STABILIZER:	No

DRILLING INFORMATION:

BIT TYPE:	513R	IADC BIT GRADE:	??/?/?/?/?/?/?/?/?
BIT PRESS DROP:	0.00 psi	TOTAL FLOW RATE:	284.83 gal/min
MTR PRESS DROP:	0.00 psi	NOZZLES:	0.648 in ² TFA
		PUMP PRESS:	(OFF) 2800.00 psi (ON) 3700.00 psi

MUD INFORMATION:

MUD TYPE:	Gelchem	LIQUID BASE:	Water	(All units are imperial.)	
DENSITY:	10 lb/gal	VISCOSITY:	41 sec/qt		
SAND:	0.000	WATER LOSS:	5.60 cc/30min	LIQUID RATE:	0.00 gal/min
SOLIDS:	11.900	PLASTIC VISC:	20.0 cP	GAS TYPE:	
OIL:	0.000	YIELD POINT:	20.0 lb/100 ft ²	GAS RATE:	0.00 cu ft/min
TEMP:	231 °F	pH:	7.0		

TIME INFORMATION:

CIRCULATING HOURS:	7.33
REAMING HOURS:	0.00
TIME DRILL HOURS:	0.00
MOTOR DRILL HOURS:	30.92
MOTOR HOURS THIS RUN:	38.25
PREVIOUS HOURS:	0.00
TOTAL MOTOR HOURS:	38.25
TOTAL BRT HOURS:	39.00

MOTOR EVALUATION COMMENTS:
 Hunting Motor SN (170) 4/5 Lobe 6.0 stage 1.02 rpg

REASON FOR BHA CHANGE:

COMMENTS FROM LAST DAY RAN:
 Drill lateral F/1125' - 11920'. TD Well. Circ. & Codition Hole. Short trip, POOH To Lay Down Directional Tools.