



BAKER  
HUGHES

INTEQ

Anadarko  
Petroleum Corporation

# ANADARKO PETROLEUM

Location: COLORADO

Slot: Slot# 10 NYGREN 18-19 (2051' FNL & 797' FWL)

Field: WELD COUNTY (ANADARKO)

Well: NYGREN 18-19

Facility: SEC.19-T4N-R67W

Wellbore: NYGREN 18-19 PWB

RECEIVED

JUN 11 2009

COGCC

Plot reference wellpath is NYGREN 18-19 Rev-8.0

True vertical depths are referenced to Xtreme 8 (RT)

Measured depths are referenced to Xtreme 8 (RT)

Xtreme 8 (RT) to Mean Sea Level: 4977 feet

Mean Sea Level to Mud line (Facility: SEC.19-T4N-R67W): 0 feet

Coordinates are in feet referenced to Slot

Grid System: NAD83 / Lambert Colorado State Planes, North Zone (500), US feet

North Reference: True north

Scale: True distance

Depths are in feet

Created by: cookdamm on 4/14/2009

Scale 1 inch = 300

Easting (ft)

-300

-150

0

150

300

450

600

750

900

Northing (ft)

1050

900

750

600

450

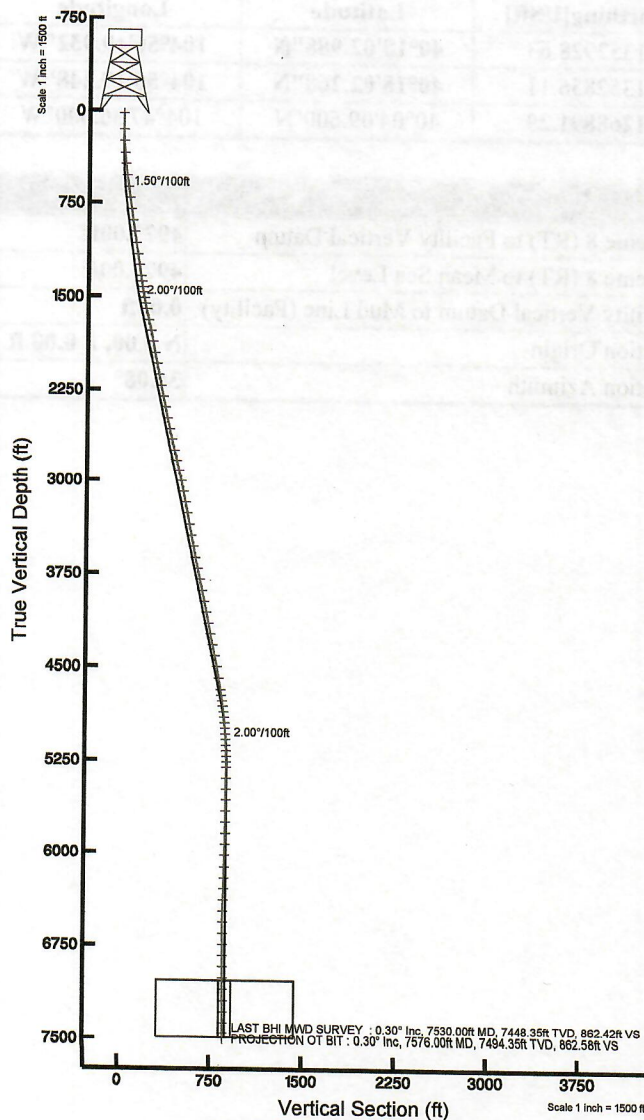
300

150

0

PROJECTION OT BIT : 7494.35ft TVD, 702.28ft N, 500.93ft E  
LAST BHI MWD SURVEY : 7448.35ft TVD, 702.05ft N, 500.96ft E

Slot# 10 NYGREN 18-19 (2051' FNL & 797' FWL)



Azimuth 36.08° with reference 0.00 N, 0.00 E



BGGM (1945.0 to 2010.0) Dip: 67.04° Field: 53327.4 nT  
Magnetic North is 9.21 degrees East of True North (at 3/26/2009)

To correct azimuth from Magnetic to True add 9.21 degrees  
For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 9.21 = 99.21



# Actual Wellpath Report

NYGREN 18-19 AWP

Page 1 of 6

**INTEQ**

## REFERENCE WELLPATH IDENTIFICATION

Operator	ANADARKO PETROLEUM	Slot	Slot# 10 NYGREN 18-19 (2051' FNL & 797' FWL)
Area	COLORADO	Well	NYGREN 18-19
Field	WELD COUNTY (ANADARKO)	Wellbore	NYGREN 18-19 AWB
Facility	SEC.19-T4N-R67W		

## REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado State Planes, Northern Zone (501), US feet	Software System	WellArchitect® 2.0
North Reference	True	User	Cookdanm
Scale	0.999957	Report Generated	4/14/2009 at 9:30:45 AM
Convergence at slot	0.36° East	Database/Source file	WellArchitect_Denver/NYGREN_18-19_AWB.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[USft]	Northing[USft]	Latitude	Longitude
Slot Location	72.86	-53.00	3156508.08	1352928.63	40°18'02.988"N	104°56'19.932"W
Facility Reference Pt			3156561.54	1352856.11	40°18'02.268"N	104°56'19.248"W
Field Reference Pt			3197771.84	1268891.29	40°04'09.600"N	104°47'36.000"W

## WELLPATH DATUM

Calculation method	Minimum curvature	Xtreme 8 (RT) to Facility Vertical Datum	4977.00ft
Horizontal Reference Pt	Slot	Xtreme 8 (RT) to Mean Sea Level	4977.00ft
Vertical Reference Pt	Xtreme 8 (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	Xtreme 8 (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	36.08°



# Actual Wellpath Report

NYGREN 18-19 AWP

Page 2 of 6

**INTEQ**

## REFERENCE WELLPATH IDENTIFICATION

Operator	ANADARKO PETROLEUM	Slot	Slot# 10 NYGREN 18-19 (2051' FNL & 797' FWL)
Area	COLORADO	Well	NYGREN 18-19
Field	WELD COUNTY (ANADARKO)	Wellbore	NYGREN 18-19 AWP
Facility	SEC.19-T4N-R67W		

## WELLPATH DATA (96 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
0.00†	0.000	359.700	0.00	0.00	0.00	0.00	0.00	
20.00	0.000	359.700	20.00	0.00	0.00	0.00	0.00	
152.00	1.200	359.700	151.99	1.11	1.38	-0.01	0.91	
245.00	2.900	11.200	244.93	4.03	4.66	0.44	1.87	
340.00	4.200	23.600	339.74	9.61	10.21	2.30	1.58	
432.00	5.900	34.500	431.39	17.62	17.19	6.33	2.11	
525.00	7.800	38.400	523.72	28.71	26.08	12.96	2.10	
619.00	8.300	36.300	616.79	41.87	36.55	20.94	0.62	
712.00	8.100	35.900	708.84	55.13	47.26	28.75	0.22	
805.00	8.400	37.300	800.88	68.48	57.98	36.71	0.39	
894.00	8.600	37.700	888.90	81.63	68.41	44.72	0.23	
984.00	8.800	35.600	977.87	95.24	79.33	52.84	0.42	
1075.00	9.100	35.200	1067.76	109.39	90.87	61.04	0.34	
1166.00	9.100	34.900	1157.61	123.78	102.66	69.31	0.05	
1252.00	8.700	34.200	1242.58	137.08	113.61	76.86	0.48	
1343.00	8.100	34.900	1332.60	150.37	124.56	84.39	0.67	
1387.00	8.600	33.500	1376.13	156.76	129.85	87.98	1.23	
1432.00	9.100	33.100	1420.60	163.67	135.64	91.78	1.12	
1478.00	9.800	35.600	1465.97	171.22	141.87	96.05	1.76	
1523.00	10.600	37.300	1510.26	179.19	148.27	100.79	1.90	
1568.00	11.500	37.700	1554.43	187.81	155.11	106.04	2.01	
1613.00	11.600	37.000	1598.52	196.82	162.28	111.50	0.38	
1702.00	11.900	36.600	1685.65	214.94	176.79	122.36	0.35	
1791.00	11.500	35.200	1772.80	232.99	191.41	132.94	0.55	
1881.00	11.100	36.300	1861.06	250.62	205.72	143.24	0.50	
1970.00	10.900	38.400	1948.42	267.60	219.22	153.54	0.50	
2059.00	11.300	38.700	2035.76	284.71	232.62	164.22	0.45	
2150.00	11.000	35.900	2125.04	302.30	246.61	174.89	0.68	
2240.00	11.200	39.400	2213.36	319.61	260.32	185.47	0.78	
2329.00	11.900	32.800	2300.56	337.41	274.71	195.93	1.68	



# Actual Wellpath Report

NYGREN 18-19 AWP

Page 3 of 6

**INTEQ**

## REFERENCE WELLPATH IDENTIFICATION

Operator	ANADARKO PETROLEUM	Slot	Slot# 10 NYGREN 18-19 (2051' FNL & 797' FWL)
Area	COLORADO	Well	NYGREN 18-19
Field	WELD COUNTY (ANADARKO)	Wellbore	NYGREN 18-19 AWP
Facility	SEC.19-T4N-R67W		

## WELLPATH DATA (96 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
2418.00	11.300	32.400	2387.74	355.27	289.79	205.57	0.68	
2509.00	11.900	29.600	2476.88	373.49	305.47	214.98	0.90	
2598.00	13.000	30.700	2563.79	392.57	322.06	224.63	1.26	
2687.00	13.300	31.000	2650.45	412.74	339.44	235.01	0.35	
2778.00	13.300	32.800	2739.01	433.61	357.21	246.07	0.46	
2865.00	12.800	35.200	2823.77	453.24	373.50	257.05	0.85	
2954.00	12.700	34.900	2910.57	472.88	389.58	268.33	0.13	
3044.00	12.100	39.000	2998.47	492.19	405.02	279.92	1.18	
3135.00	11.000	39.100	3087.63	510.39	419.17	291.40	1.21	
3225.00	11.400	35.900	3175.92	527.85	433.04	302.03	0.82	
3314.00	10.600	37.000	3263.28	544.84	446.71	312.12	0.93	
3403.00	10.900	35.600	3350.72	561.43	460.09	321.94	0.45	
3494.00	10.700	40.900	3440.11	578.46	473.47	332.48	1.11	
3584.00	11.300	40.900	3528.46	595.57	486.45	343.73	0.67	
3673.00	10.800	40.200	3615.81	612.57	499.41	354.82	0.58	
3764.00	12.500	35.900	3704.93	630.93	513.90	366.10	2.10	
3854.00	12.200	33.500	3792.85	650.17	529.72	377.06	0.66	
3944.00	12.000	36.300	3880.85	669.02	545.19	387.84	0.69	
4035.00	12.100	35.600	3969.84	688.02	560.57	399.00	0.19	
4124.00	11.200	31.000	4057.01	705.96	575.56	408.88	1.45	
4213.00	10.100	36.300	4144.48	722.37	589.26	417.95	1.65	
4302.00	10.700	41.600	4232.02	738.40	601.73	428.06	1.27	
4392.00	12.200	35.200	4320.23	756.23	615.75	439.09	2.18	
4481.00	12.000	34.500	4407.25	774.88	631.06	449.75	0.28	
4572.00	10.500	37.700	4496.50	792.63	645.42	460.18	1.78	
4662.00	10.200	38.400	4585.04	808.78	658.15	470.14	0.36	
4753.00	9.200	43.000	4674.74	824.06	669.78	480.11	1.39	
4798.00	9.100	41.900	4719.16	831.17	675.06	484.94	0.45	
4844.00	8.600	43.000	4764.62	838.20	680.29	489.71	1.15	
4887.00	7.600	46.500	4807.19	844.19	684.60	493.97	2.59	



# Actual Wellpath Report

NYGREN 18-19 AWP

Page 4 of 6

**INTEQ**

## REFERENCE WELLPATH IDENTIFICATION

Operator	ANADARKO PETROLEUM	Slot	Slot# 10 NYGREN 18-19 (2051' FNL & 797' FWL)
Area	COLORADO	Well	NYGREN 18-19
Field	WELD COUNTY (ANADARKO)	Wellbore	NYGREN 18-19 AWB
Facility	SEC.19-T4N-R67W		

## WELLPATH DATA (96 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
4933.00	7.000	45.100	4852.81	849.95	688.67	498.16	1.36	
4978.00	6.500	45.400	4897.50	855.17	692.39	501.92	1.11	
5023.00	5.500	47.200	4942.25	859.80	695.65	505.31	2.26	
5068.00	4.400	47.200	4987.09	863.61	698.28	508.16	2.44	
5114.00	4.200	43.700	5032.96	867.01	700.70	510.62	0.72	
5159.00	3.700	47.500	5077.85	870.07	702.87	512.83	1.25	
5204.00	2.900	54.600	5122.77	872.57	704.51	514.83	1.99	
5250.00	2.500	54.200	5168.72	874.63	705.77	516.59	0.87	
5293.00	2.300	53.200	5211.69	876.35	706.84	518.04	0.48	
5339.00	1.100	62.300	5257.66	877.62	707.60	519.17	2.67	
5384.00	1.900	153.500	5302.65	877.67	707.13	519.89	4.92	
5473.00	0.400	278.000	5391.64	876.84	705.85	520.24	2.42	
5562.00	0.300	254.300	5480.64	876.51	705.83	519.70	0.20	
5653.00	0.700	274.600	5571.63	876.04	705.81	518.92	0.47	
5743.00	0.800	260.200	5661.63	875.30	705.75	517.75	0.24	
5832.00	0.900	250.400	5750.62	874.27	705.41	516.48	0.20	
5922.00	1.000	247.200	5840.60	873.02	704.87	515.09	0.13	
6012.00	1.100	245.800	5930.59	871.60	704.21	513.58	0.11	
6103.00	1.100	238.800	6021.57	870.03	703.40	512.04	0.15	
6194.00	1.100	236.700	6112.55	868.41	702.47	510.56	0.04	
6283.00	1.400	239.100	6201.53	866.61	701.44	508.91	0.34	
6370.00	1.100	247.200	6288.51	864.91	700.57	507.23	0.40	
6460.00	2.600	193.400	6378.47	862.29	698.25	505.96	2.38	
6551.00	1.500	211.400	6469.41	859.20	695.23	504.86	1.39	
6640.00	0.200	232.800	6558.40	857.89	694.14	504.13	1.48	
6730.00	0.400	331.600	6648.40	857.87	694.32	503.86	0.53	
6819.00	0.600	351.300	6737.39	858.34	695.05	503.64	0.29	
6910.00	0.600	344.300	6828.39	858.97	695.98	503.44	0.08	
7000.00	0.800	334.800	6918.38	859.57	697.00	503.04	0.26	
7091.00	0.800	325.600	7009.37	860.08	698.10	502.41	0.14	

698, 502



# Actual Wellpath Report

NYGREN 18-19 AWP

Page 5 of 6

INTEQ

## REFERENCE WELLPATH IDENTIFICATION

Operator	ANADARKO PETROLEUM	Slot	Slot# 10 NYGREN 18-19 (2051' FNL & 797' FWL)
Area	COLORADO	Well	NYGREN 18-19
Field	WELD COUNTY (ANADARKO)	Wellbore	NYGREN 18-19 AWB
Facility	SEC.19-T4N-R67W		

## WELLPATH DATA (96 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
7181.00	0.600	335.100	7099.37	860.52	699.05	501.86	0.26	
7272.00	0.700	341.800	7190.36	861.08	700.01	501.49	0.14	
7362.00	0.500	337.600	7280.36	861.60	700.90	501.17	0.23	
7452.00	0.400	358.300	7370.35	862.06	701.57	501.01	0.21	
7530.00	0.300	350.600	7448.35	862.42	702.05	500.96	0.14	LAST BHI MWD SURVEY
7576.00†	0.300	350.600	7494.35	862.58	702.28	500.93	0.00	PROJECTION OT BIT

## TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
NYGREN 18-19 CENTER of the HARDLINE BOX (400' each direction)		7029.00	712.44	519.24	3157022.78	1353644.31	40°18'10.028"N	104°56'13.230"W	square
NYGREN 18-19 GEO TARGET 50' radius (1320' FNL & 1320' FWL)		7029.00	712.44	519.24	3157022.78	1353644.31	40°18'10.028"N	104°56'13.230"W	circle

## WELLPATH COMPOSITION Ref Wellbore: NYGREN 18-19 AWB Ref Wellpath: NYGREN 18-19 AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
20.00	984.00	MTC (Collar, post-2000) (Standard)	SURFACE BHI MWD <152-984>	NYGREN 18-19 AWB
984.00	7530.00	MTC (Collar, post-2000) (Standard)	PRODUCTION BHI MWD <1075-7530>	NYGREN 18-19 AWB
7530.00	7576.00	Blind Drilling (std)	Projection to bit	NYGREN 18-19 AWB





# Actual Wellpath Report

NYGREN 18-19 AWP

Page 6 of 6



INTEQ

## REFERENCE WELLPATH IDENTIFICATION

Operator	ANADARKO PETROLEUM	Slot	Slot# 10 NYGREN 18-19 (2051' FNL & 797' FWL)
Area	COLORADO	Well	NYGREN 18-19
Field	WELD COUNTY (ANADARKO)	Wellbore	NYGREN 18-19 AWP
Facility	SEC.19-T4N-R67W		

## WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
7530.00	0.300	350.600	7448.35	LAST BHI MWD SURVEY
7576.00	0.300	350.600	7494.35	PROJECTION OT BIT