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**BAKER
HUGHES**

INTEQ

Anadarko
Petroleum Corporation

123.28061

**ANADARKO PETROLEUM**

Location: COLORADO Slot: Slot #2 Williams 4-29 (710' FNL & 1839' FWL)
 Field: WELD COUNTY (ANADARKO) Well: Williams 4-29
 Facility: SEC.29-T2N-68W Wellbore: Williams 4-29 PWB

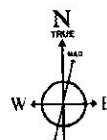
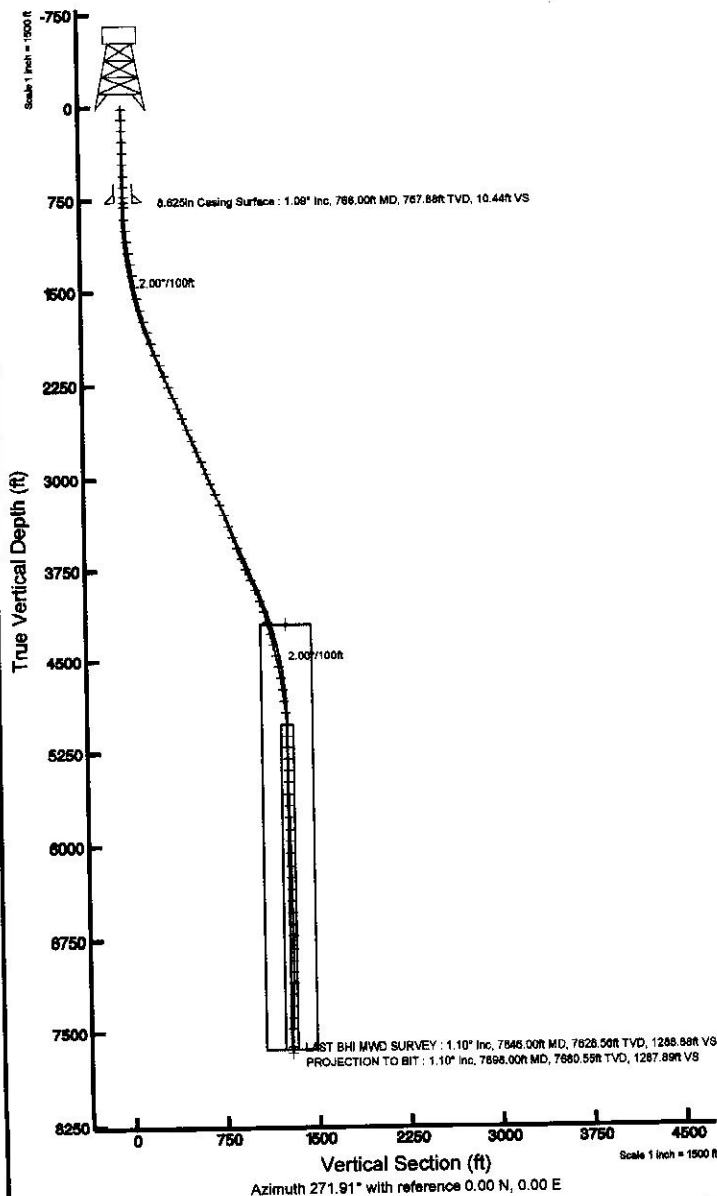
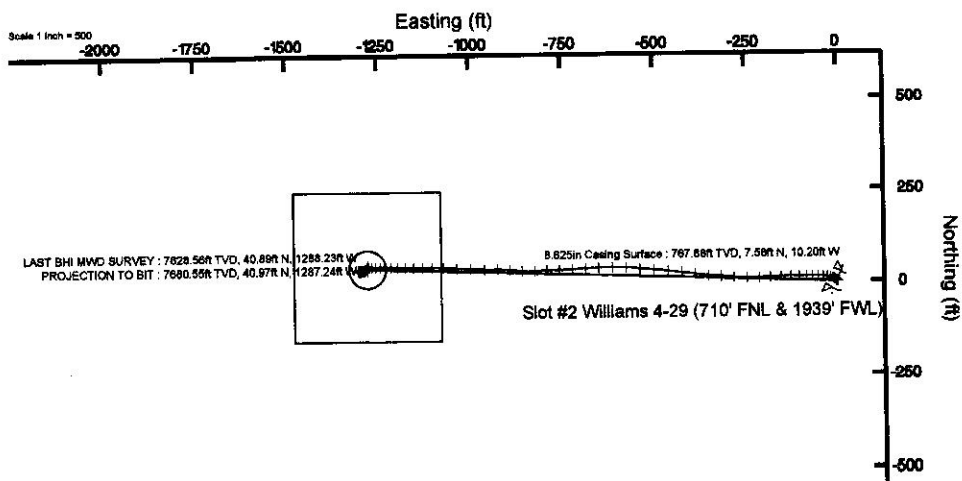
Plot reference wellpath is Williams 4-29 Rev. B.0.	Grid System: NAD83 / Lambert Colorado State Planes, Northern Zone (501), US feet
True vertical depths are referenced to CADE 22 (RT)	North Reference: True north
Measured depths are referenced to CADE 22 (RT)	Scale: True distance
CADE 22 (RT) to Mean Sea Level: 4924 feet	Depths are in feet
Mean Sea Level to Mud line (Facility: SEC.29-T2N-68W): 0 feet	Created by: cooldawn on 4/5/2009
Coordinates are in feet referenced to Slot	

CADE 22

RECEIVED

JUN 05 2009

COGCC



IGOM (1945.0 to 2010.0) Dip: 66.88° Field: 53224.1 nT
 Magnetic North is 9.12 degrees East of True North (at 3/5/2009)

To correct azimuth from Magnetic to True add 9.12 degrees
 For example: If the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 9.12 = 99.12

Actual Wellpath Report

WILLIAMS 4-29 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANADARKO PETROLEUM	Slot	Slot #2 Williams 4-29 (710' FNL & 1939' FWL)
Area	COLORADO	Well	Williams 4-29
Field	WELD COUNTY (ANADARKO)	Wellbore	WILLIAMS 4-29 AWB
Facility	SEC.29-T2N-68W		

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	0.99996	Report Generated	4/6/2009 at 4:33:58 PM
Convergence at slot	0.30° East	Database/Source file	WellArchitect_Denver/WILLIAMS_4-29_AWB.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[USft]	Northing[USft]	Latitude	Longitude
Slot Location	7.29	5.59	3131491.64	1285058.03	40°06'53.712"N	105°01'47.460"W
Facility Reference Pt			3131486.09	1285050.71	40°06'53.640"N	105°01'47.532"W
Field Reference Pt			3197771.84	1268891.29	40°04'09.600"N	104°47'36.000"W

WELLPATH DATUM			
Calculation method	Minimum curvature	CADE 22 (RT) to Facility Vertical Datum	4924.00ft
Horizontal Reference Pt	Slot	CADE 22 (RT) to Mean Sea Level	4924.00ft
Vertical Reference Pt	CADE 22 (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	CADE 22 (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	271.91°

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REFERENCE WELLPATH IDENTIFICATION

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Area	COLORADO	Well	Williams 4-29
Field	WELD COUNTY (ANADARKO)	Wellbore	WILLIAMS 4-29 AWP
Facility	SEC.29-T2N-68W		

WELLPATH DATA (86 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
0.00†	0.000	270.000	0.00	0.00	0.00	0.00	0.00	
15.00	0.000	270.000	15.00	0.00	0.00	0.00	0.00	
97.00	0.700	270.000	97.00	0.50	0.00	-0.50	0.85	
189.00	0.900	288.600	188.99	1.75	0.23	-1.75	0.35	
280.00	1.100	313.900	279.98	3.09	1.06	-3.05	0.53	
370.00	1.100	309.700	369.96	4.41	2.21	-4.34	0.09	
462.00	1.200	316.700	461.94	5.79	3.48	-5.68	0.19	
554.00	1.200	310.800	553.92	7.23	4.81	-7.07	0.13	
645.00	1.100	314.300	644.90	8.61	6.04	-8.42	0.13	
721.00	1.100	311.800	720.89	9.71	7.04	-9.48	0.06	
804.00	1.100	296.400	803.87	11.05	7.92	-10.79	0.36	
898.00	2.600	280.200	897.82	13.98	8.70	-13.70	1.67	
992.00	4.700	285.100	991.63	19.84	10.08	-19.52	2.26	
1087.00	6.200	276.300	1086.20	28.75	11.66	-28.37	1.80	
1181.00	7.700	273.100	1179.50	40.10	12.56	-39.71	1.65	
1275.00	9.000	271.700	1272.50	53.75	13.12	-53.34	1.40	
1370.00	10.000	271.700	1366.20	69.43	13.58	-69.02	1.05	
1464.00	10.900	267.900	1458.64	86.46	13.50	-86.06	1.21	
1558.00	13.100	271.000	1550.58	105.98	13.36	-105.59	2.44	
1652.00	15.400	270.300	1641.68	129.11	13.61	-128.73	2.45	
1747.00	17.400	267.500	1732.82	155.88	13.06	-155.54	2.26	
1841.00	17.800	268.200	1822.42	184.23	11.99	-183.94	0.48	
1936.00	19.400	267.200	1912.45	214.45	10.77	-214.21	1.72	
2030.00	21.300	271.400	2000.58	247.09	10.42	-246.88	2.55	
2125.00	22.700	274.900	2088.67	282.65	12.41	-282.39	2.02	
2219.00	21.600	275.200	2175.73	318.04	15.53	-317.70	1.18	
2314.00	21.700	273.800	2264.03	353.05	18.27	-352.63	0.55	
2409.00	22.400	278.400	2352.09	388.59	22.08	-388.07	1.96	
2503.00	23.400	274.900	2438.68	425.03	26.29	-424.39	1.80	
2598.00	24.500	277.400	2525.50	463.48	30.44	-462.72	1.58	

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANADARKO PETROLEUM	Slot	Slot #2 Williams 4-29 (710' FNL & 1939' FWL)
Area	COLORADO	Well	Williams 4-29
Field	WELD COUNTY (ANADARKO)	Wellbore	WILLIAMS 4-29 AWP
Facility	SEC.29-T2N-68W		

WELLPATH DATA (86 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
2692.00	23.800	273.900	2611.28	501.83	34.24	-500.97	1.70	
2786.00	23.600	275.600	2697.35	539.57	37.37	-538.62	0.76	
2881.00	23.000	273.100	2784.61	577.10	40.23	-576.08	1.22	
2975.00	23.500	270.300	2870.98	614.20	41.32	-613.16	1.29	
3070.00	23.200	267.900	2958.20	651.80	40.73	-650.80	1.05	
3164.00	21.900	267.200	3045.01	687.74	39.20	-686.82	1.41	
3258.00	22.300	266.100	3132.10	722.96	37.13	-722.12	0.61	
3353.00	21.500	269.600	3220.25	758.28	35.78	-757.51	1.61	
3447.00	20.900	267.900	3307.89	792.22	35.05	-791.49	0.91	
3542.00	21.300	267.900	3396.52	826.34	33.79	-825.67	0.42	
3636.00	20.900	274.500	3484.23	860.12	34.48	-859.45	2.56	
3731.00	20.000	274.400	3573.24	893.28	37.06	-892.54	0.95	
3825.00	21.600	270.700	3661.12	926.64	38.50	-925.88	2.20	
3920.00	22.800	270.700	3749.07	962.53	38.94	-961.77	1.26	
4014.00	24.600	273.500	3835.14	1000.30	40.36	-999.51	2.26	
4108.00	23.100	273.100	3921.11	1038.30	42.55	-1037.46	1.60	
4203.00	20.900	272.400	4009.19	1073.88	44.27	-1073.00	2.33	
4297.00	17.000	270.700	4098.08	1104.39	45.14	-1103.50	4.19	
4391.00	15.400	268.900	4188.35	1130.60	45.07	-1129.72	1.78	
4486.00	14.500	271.000	4280.13	1155.09	45.03	-1154.23	1.11	
4580.00	13.000	272.400	4371.43	1177.43	45.68	-1176.56	1.63	
4674.00	12.100	273.800	4463.19	1197.85	46.78	-1196.95	1.01	
4769.00	10.600	271.700	4556.33	1216.54	47.70	-1215.62	1.64	
4863.00	8.900	269.600	4648.97	1232.45	47.90	-1231.54	1.85	
4957.00	7.700	269.300	4741.98	1246.01	47.77	-1245.11	1.28	
5052.00	7.200	269.600	4836.18	1258.31	47.65	-1257.42	0.53	
5146.00	5.800	271.400	4929.57	1268.95	47.73	-1268.06	1.50	
5240.00	3.100	263.000	5023.28	1276.21	47.54	-1275.33	2.95	
5335.00	2.500	252.100	5118.17	1280.70	46.59	-1279.86	0.84	
5429.00	1.800	194.800	5212.11	1282.96	44.53	-1282.18	2.29	

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANADARKO PETROLEUM	Slot	Slot #2 Williams 4-29 (710' FNL & 1939' FWL)
Area	COLORADO	Well	Williams 4-29
Field	WELD COUNTY (ANADARKO)	Wellbore	WILLIAMS 4-29 AWB
Facility	SEC.29-T2N-68W		

WELLPATH DATA (86 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
5524.00	0.900	201.400	5307.08	1283.54	42.39	-1282.84	0.96	
5618.00	1.000	216.200	5401.07	1284.25	41.04	-1283.59	0.28	
5712.00	1.000	224.300	5495.06	1285.26	39.79	-1284.65	0.15	
5807.00	1.000	242.900	5590.04	1286.55	38.82	-1285.97	0.34	
5901.00	1.100	255.600	5684.03	1288.13	38.22	-1287.57	0.27	
5995.00	1.000	260.500	5778.01	1289.80	37.86	-1289.25	0.14	
6089.00	1.100	274.900	5871.99	1291.50	37.81	-1290.96	0.30	
6185.00	1.200	264.700	5967.97	1293.42	37.79	-1292.88	0.24	
6279.00	0.900	232.700	6061.96	1294.97	37.25	-1294.45	0.69	
6374.00	1.000	259.000	6156.95	1296.36	36.64	-1295.85	0.47	
6468.00	1.100	259.800	6250.93	1298.04	36.33	-1297.55	0.11	
6563.00	0.400	259.100	6345.92	1299.25	36.10	-1298.77	0.74	
6657.00	0.800	266.100	6439.92	1300.23	36.00	-1299.75	0.43	
6752.00	1.000	268.200	6534.91	1301.71	35.92	-1301.24	0.21	
6847.00	1.300	273.100	6629.89	1303.62	35.96	-1303.14	0.33	
6941.00	0.700	285.800	6723.87	1305.24	36.17	-1304.76	0.68	
7036.00	0.500	354.400	6818.87	1305.86	36.74	-1305.36	0.73	
7132.00	0.400	354.000	6914.86	1305.96	37.49	-1305.43	0.10	
7226.00	0.500	11.200	7008.86	1305.94	38.22	-1305.39	0.18	
7320.00	1.300	50.600	7102.85	1305.07	39.30	-1304.49	1.03	
7415.00	3.000	82.200	7197.78	1301.81	40.32	-1301.19	2.12	
7509.00	2.400	90.000	7291.68	1297.42	40.65	-1296.78	0.75	
7603.00	1.600	92.800	7385.62	1294.14	40.59	-1293.51	0.86	
7698.00	1.200	84.400	7480.59	1291.83	40.62	-1291.19	0.47	
7846.00	1.100	85.400	7628.56	1288.88	40.89	-1288.23	0.07	LAST BHI MWD SURVEY
7898.00†	1.100	85.400	7680.55	1287.89	40.97	-1287.24	0.00	PROJECTION TO BIT

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANADARKO PETROLEUM	Slot	Slot #2 Williams 4-29 (710' FNL & 1939' FWL)
Area	COLORADO	Well	Williams 4-29
Field	WELD COUNTY (ANADARKO)	Wellbore	WILLIAMS 4-29 AWB
Facility	SEC.29-T2N-68W		

HOLE & CASING SECTIONS Ref Wellbore: WILLIAMS 4-29 AWB Ref Wellpath: WILLIAMS 4-29 AWP

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
8.625in Casing Surface	15.00	768.00	753.00	15.00	767.88	0.00	0.00	7.58	-10.20

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
Williams 4-29 Center of the Hardline Box (200' each direction)		4205.00	50.00	-1279.00	3130212.45	1285101.24	40°06'54.206"N	105°02'03.922"W	square
Williams 4-29 Geo Target 50' radius (660' FNL & 660' FWL)		5031.19	42.59	-1279.29	3130212.20	1285093.84	40°06'54.133"N	105°02'03.926"W	circle

WELLPATH COMPOSITION Ref Wellbore: WILLIAMS 4-29 AWB Ref Wellpath: WILLIAMS 4-29 AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
15.00	992.00	MTC (Collar, post-2000) (Standard)	BHI SURFACE MWD <97-992>	WILLIAMS 4-29 AWB
992.00	7846.00	MTC (Collar, post-2000) (Standard)	BHI PRODUCTION MWD <1087-7846>	WILLIAMS 4-29 AWB
7846.00	7898.00	Blind Drilling (std)	Projection to bit	WILLIAMS 4-29 AWB



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Field	WELD COUNTY (ANADARKO)	Wellbore	WILLIAMS 4-29 AWB
Facility	SEC.29-T2N-68W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
7846.00	1.100	85.400	7628.56	LAST BHI MWD SURVEY
7898.00	1.100	85.400	7680.55	PROJECTION TO BIT