



Weatherford®

Weatherford
2000 Oil Drive
Casper, WY 82604

Survey Certification

Operating Company:	Anadarko Petroleum Corp.
Well Name:	DECHANT STATE 37N-W36HZ
State:	Colorado
County:	Weld
API Number:	05-123-36417
Datum:	NAD 83
Survey Calculation Method:	Minimum Curvature
North Reference:	True North

I, John R. Morgan, hereby certify the attached
directional survey run from the measure depth of 772.00 feet
to the measured depth of 11,490.00 feet as accurate and true
to the best of my knowledge.

Signature

25-Feb-13

Date

John Morgan
Directional Planning
Weatherford - Rockies District



Weatherford®



END OF WELL REPORT

FINAL SURVEYS

SECTION 1

DAILY ACTIVITIES

SECTION 2

BHA REPORTS

SECTION 3

MOTOR REPORTS

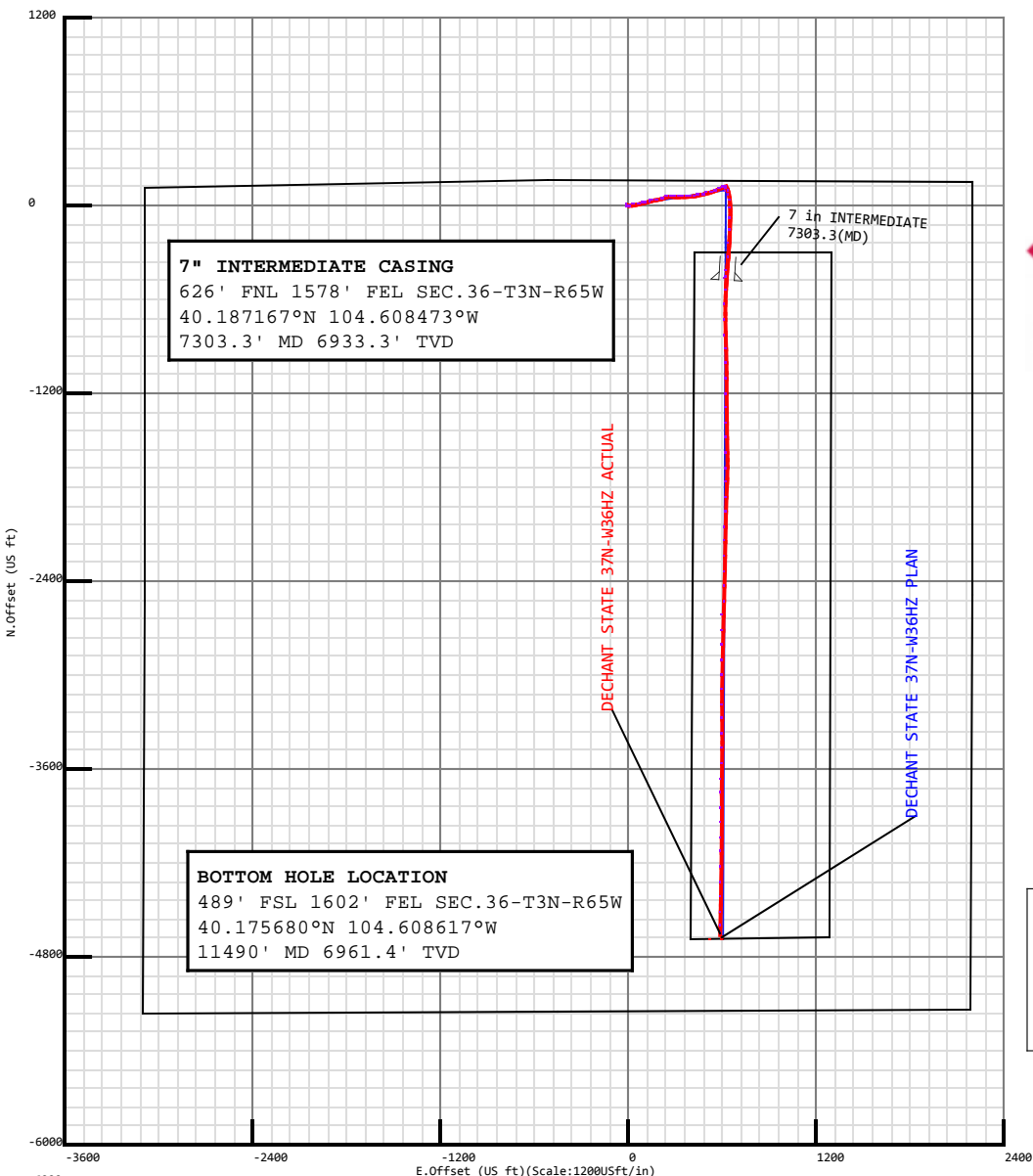
SECTION 4

SLIDE SHEET REPORTS

SECTION 5

ADDITIONAL REPORTS

SECTION 6



Survey Data for DECHANT STATE 37N-W36HZ

Field: Wattenberg
Map Unit: USFt Vertical Reference Datum (VRD): Mean Sea Level
Projected Coordinate System: NAD83 / Colorado North (ftUS)

Site: Dechant 28-36HZ Pad
Unit: USFeet TVD Reference: 25' RKB (H&P 307)
Company Name: Andarko Petroleum
Position: Northing: 1312719.83USft Latitude: 40.188394°
Easting: 3248388.95USft Longitude: -104.610912°
North Reference: True Grid Convergence: 0.57°
Elevation Above VRD: 4808.00USft

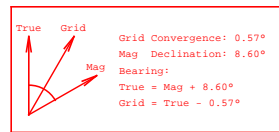
Slot: Dechant State 37N-W36HZ
Position:
Offset is from Site centre
+N/-S: 29.87USft Northing: 1312750.22USft Latitude: 40.188476°
+E/-W: 51.96USft Easting: 3248440.61USft Longitude: -104.610726°
Elevation Above VRD: 4808.00USft

Target Set Information:

Name: Dechant State 37N-W36HZ

Position offsets from Slot centre

Name	TVD (USft)	+N/-S (USft)	+E/-W (USft)	Lat (°)	Long (°)	Shape
Dechant State 37N-W36HZ PBHL 6938.00	-4690.50	531.77	40.175600	-104.608823	Cuboid	
Dechant State 37N-W36HZ Rev. PBHL 6938.00	-4687.00	607.69	40.175610	-104.608551	Cuboid	



Casing Point Information:

Name	MD (USft)	TVD (USft)
7 in INTERMEDIATE	7303.30	6933.29

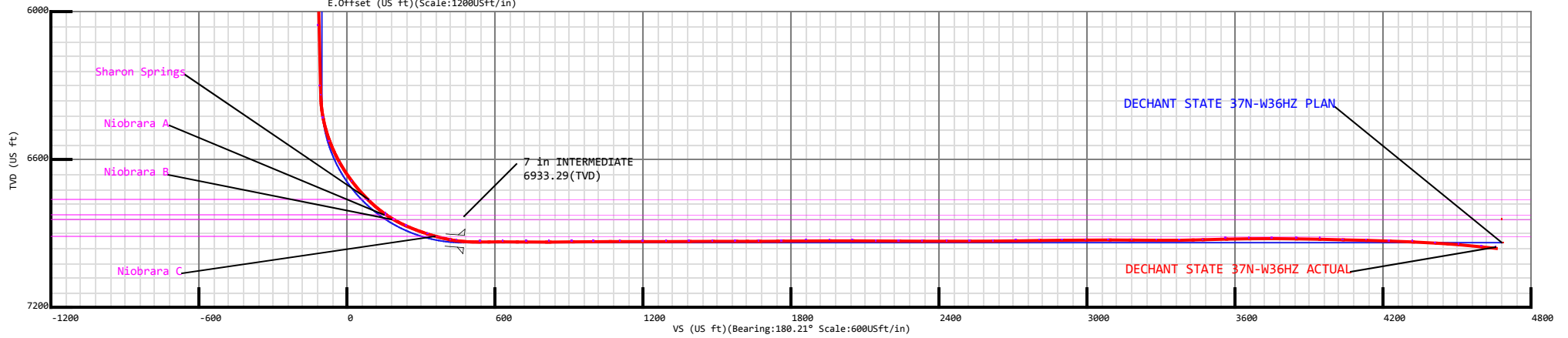
Formation Point Information:

Name	TVD (USft)	Elevation (USft)	MD (USft)
Parkman	3805.00	1028.00	3845.12
Sussex	4375.00	458.00	4423.75
Sharon Springs	6768.00	-1935.00	6876.41
Niobrara A	6826.00	-1993.00	6968.07
Niobrara B	6845.00	-2012.00	7003.69
Niobrara C	6913.00	-2080.00	7188.76

Survey Point Information:

DogLeg Severity Unit: °/100.00ft Position offsets from Slot centre

MD (USft)	Inc (°)	Az (°)	TVD (USft)	+N/-S (USft)	+E/-W (USft)	VSec (USft)	DLS (DLSU)	Toolface (°)	Annotation
638.00	0.09	253.09	638.00	0.46	-1.81	-0.45	0.86	162.8R	TIE ON TO SURFACE GYRO
772.00	0.38	144.45	772.00	0.07	-1.66	-0.06	0.31	120.4L	FIRST WFT MWD+IFR SURVEY
11436.00	84.13	180.96	6955.89	-4607.48	590.31	4605.29	0.98	150.2L	LAST WFT MWD+IFR SURVEY
11490.00	84.13	180.96	6961.41	-4661.19	589.41	4659.00	0.00	0.0R	PROJECTION TO TD





FINAL SURVEYS

5D Survey Report**Andarko Petroleum**

Field Name: *Wattenberg*
Site Name: *Dechant 28-36HZ Pad*
Well Name: *DECHANT STATE 37N-W36HZ*
Survey: *Definitive Survey*





Surveys for the DECHANT STATE 37N-W36HZ

Site Name Dechant 28-36HZ Pad	Units : US ft	North Reference : True	Convergence Angle : 0.57
	Position	Northing : 1312719.83 US ft	Latitude : 40.188394
		Easting : 3248388.95 US ft	Longitude : -104.610912
	Site TVD Reference : 25' RKB (H&P 307) Elevation above: 4808.00 US ft Comment :		
Slot Name Dechant State 37N-W36HZ	Position (Offsets relative to Site Centre)		
	+N / -S : 29.87 US ft	Northing : 1312750.22 US ft	Latitude : 40.188476
	+E / -W : 51.96 US ft	Easting : 3248440.61 US ft	Longitude : -104.610726
	Elevation above : 4808.00 US ft Comment :		
Well Name DECHANT STATE 37N-W36HZ	Type : Main well	UWI :	
	Rig Height <i>Drill Floor</i> : 25.00 US ft	Comment :	
	Relative to : 4833.00 US ft		
	Closure Distance : 4698.31 US ft	Closure Azimuth : 172.793°	
	Vertical Section (Position of Origin Relative to Slot)		
	+N / -S : 0.00 US ft	+E / -W : 0.00 US ft	Az : 180.21°

5D Survey Report

Target Set				
Name : Dechant State 37N-W36HZ		Number of Targets : 3		
Comment :				
TargetName: Dechant State 37N-W36HZ PBHL Shape: Cuboid	Position (Relative to centre)			
	+N / -S : -4690.50US ft +E / -W : 531.77 US ft		Northing : 1308065.29 US ft Easting : 3249019.38US ft	Latitude : 40°10'32.159959" Longitude : -104°36'31.762800"
	TVD (Drill Floor) : 6938.00 US ft			
	Orientation Dimensions	Azimuth : 0.00° Length : 1.00 US ft	Inclination : 0.00° Breadth : 1.00 US ft	Height : 1.00 US ft
TargetName: Dechant State 37N-W36HZ Rev. PBHL Shape: Cuboid	Position (Relative to centre)			
	+N / -S : -4687.00US ft +E / -W : 607.69 US ft		Northing : 1308069.55 US ft Easting : 3249095.26US ft	Latitude : 40°10'32.194492" Longitude : -104°36'30.784747"
	TVD (Drill Floor) : 6938.00 US ft			
	Orientation Dimensions	Azimuth : 0.00° Length : 1.00 US ft	Inclination : 0.00° Breadth : 1.00 US ft	Height : 1.00 US ft
TargetName: Dechant State 37N-W36HZ Rev. PBHL 2 Shape: Cuboid	Position (Relative to centre)			
	+N / -S : -4687.00US ft +E / -W : 607.69 US ft		Northing : 1308069.55 US ft Easting : 3249095.26US ft	Latitude : 40°10'32.194460" Longitude : -104°36'30.784752"
	TVD (Drill Floor) : 6848.00 US ft			
	Orientation Dimensions	Azimuth : 0.00° Length : 1.00 US ft	Inclination : 0.00° Breadth : 1.00 US ft	Height : 1.00 US ft
Survey Name :Definitive Survey				
Date : 25/Jan/2013		Survey Tool :	Comment :	Company :
Magnetic Model				
Model Name: BGGM		Date: 25/Jan/2013	Field Strength: 52816.3 nT	Declination: 8.60°
				Dip: 66.83°

5D Survey Report

Survey Tool Ranges			
Name	Start MD (us ft)	End MD (us ft)	Source Survey
NSG Static GMS	0.00	638.00	Surface Gyro
MWD + IFR	638.00	11490.00	MWD+IFR

Casing Points (Relative to centre, TVD relative to Drill Floor)						
Name	MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)
INTERMEDIATE 7 in	7303.30	85.56	183.75	6933.29	-476.80	629.53

Well path created using minimum curvature

Survey Points (Relative to centre, TVD relative to Drill Floor)															
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	Latitude (°)	Longitude (°)	DLS (°/100 US ft)	CL (US ft)	VS (US ft)	High to Plan (US ft)	Right to Plan (US ft)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	1312750.22	3248440.61	40.188476	-104.610726	0.00	0.00	-0.00	0.00	0.00	
25.00	0.00	0.00	25.00	0.00	0.00	1312750.22	3248440.61	40.188476	-104.610726	0.00	25.00	-0.00	0.00	0.00	
125.00	0.42	306.52	125.00	0.22	-0.29	1312750.44	3248440.31	40.188477	-104.610727	0.42	100.00	-0.22	0.00	0.00	
225.00	0.18	301.25	225.00	0.52	-0.72	1312750.73	3248439.88	40.188477	-104.610729	0.24	100.00	-0.52	-0.00	0.00	
325.00	0.18	263.63	325.00	0.58	-1.01	1312750.79	3248439.59	40.188478	-104.610730	0.12	100.00	-0.58	-0.00	0.00	
425.00	0.19	282.86	425.00	0.60	-1.33	1312750.81	3248439.27	40.188478	-104.610731	0.06	100.00	-0.60	-0.00	0.00	
525.00	0.10	249.87	525.00	0.61	-1.58	1312750.81	3248439.03	40.188478	-104.610732	0.12	100.00	-0.60	-0.00	0.00	
625.00	0.19	231.61	625.00	0.48	-1.79	1312750.68	3248438.82	40.188477	-104.610732	0.10	100.00	-0.47	-0.00	0.00	
638.00	0.09	253.09	638.00	0.46	-1.81	1312750.66	3248438.79	40.188477	-104.610733	0.00	0.00	-0.45	-0.00	0.00	TIE ON TO SURFACE GYRO
772.00	0.38	144.45	772.00	0.07	-1.66	1312750.27	3248438.95	40.188476	-104.610732	0.00	0.00	-0.06	-0.48	0.10	FIRST WFT MWD+IFR SURVEY
864.00	0.22	49.15	863.99	-0.07	-1.35	1312750.14	3248439.27	40.188476	-104.610731	0.50	92.00	0.07	-0.34	-0.85	
956.00	0.63	132.18	955.99	-0.29	-0.84	1312749.92	3248439.78	40.188475	-104.610729	0.70	92.00	0.29	-1.48	0.53	
1048.00	2.61	104.18	1047.95	-1.14	1.57	1312749.09	3248442.19	40.188473	-104.610720	2.26	92.00	1.14	-3.85	-0.55	
1140.00	5.49	90.00	1139.71	-1.66	8.00	1312748.64	3248448.63	40.188471	-104.610697	3.29	92.00	1.63	-7.19	-2.42	
1231.00	8.09	86.45	1230.07	-1.26	18.75	1312749.15	3248459.37	40.188473	-104.610659	2.89	91.00	1.19	-12.05	-3.66	
1323.00	10.13	83.79	1320.90	0.02	33.25	1312750.57	3248473.86	40.188476	-104.610607	2.26	92.00	-0.14	-17.71	-4.93	
1415.00	10.59	76.93	1411.41	2.80	49.53	1312753.52	3248490.11	40.188484	-104.610549	1.43	92.00	-2.99	-21.90	-7.11	
1506.00	10.29	76.56	1500.90	6.58	65.58	1312757.46	3248506.12	40.188494	-104.610491	0.34	91.00	-6.82	-23.97	-6.16	
1596.00	9.93	77.00	1589.50	10.20	80.96	1312761.23	3248521.47	40.188504	-104.610436	0.41	90.00	-10.49	-24.22	-4.81	
1688.00	9.59	77.76	1680.17	13.61	96.18	1312764.79	3248536.65	40.188513	-104.610382	0.40	92.00	-13.96	-23.92	-3.47	
1778.00	9.09	75.63	1768.98	16.96	110.39	1312768.29	3248550.83	40.188523	-104.610331	0.68	90.00	-17.37	-22.79	-3.15	
1870.00	9.09	74.38	1859.82	20.72	124.43	1312772.19	3248564.83	40.188533	-104.610281	0.21	92.00	-21.18	-21.36	-1.94	
1961.00	8.40	73.46	1949.76	24.55	137.73	1312776.15	3248578.09	40.188543	-104.610233	0.77	91.00	-25.05	-19.46	-0.30	
2052.00	7.38	74.50	2039.90	28.00	149.73	1312779.72	3248590.05	40.188553	-104.610190	1.13	91.00	-28.55	-16.19	1.97	
2144.00	8.91	78.55	2130.97	31.00	162.41	1312782.84	3248602.70	40.188561	-104.610145	1.78	92.00	-31.59	-13.05	4.21	
2236.00	11.22	81.94	2221.55	33.67	178.26	1312785.67	3248618.52	40.188568	-104.610088	2.59	92.00	-34.32	-12.87	5.14	

5D Survey Report

Survey Points (Relative to centre, TVD relative to Drill Floor)															
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	Latitude (°)	Longitude (°)	DLS (°/100 US ft)	CL (US ft)	VS (US ft)	High to Plan (US ft)	Right to Plan (US ft)	Comment
2330.00	11.21	79.10	2313.76	36.68	196.28	1312788.86	3248636.52	40.188577	-104.610023	0.59	94.00	-37.40	-15.09	4.61	
2425.00	10.08	73.58	2407.12	40.77	213.33	1312793.13	3248653.52	40.188588	-104.609962	1.60	95.00	-41.55	-16.62	4.41	
2519.00	9.31	70.06	2499.78	45.69	228.37	1312798.20	3248668.51	40.188601	-104.609909	1.03	94.00	-46.53	-16.63	6.01	
2614.00	9.52	72.93	2593.50	50.62	243.10	1312803.27	3248683.19	40.188615	-104.609856	0.54	95.00	-51.51	-15.49	9.54	
2708.00	10.28	79.33	2686.10	54.45	258.77	1312807.26	3248698.83	40.188625	-104.609800	1.42	94.00	-55.40	-14.13	12.54	
2803.00	10.50	95.00	2779.56	55.27	275.73	1312808.25	3248715.77	40.188628	-104.609739	2.97	95.00	-56.28	-11.10	14.15	
2898.00	10.05	93.51	2873.04	54.01	292.63	1312807.16	3248732.68	40.188624	-104.609679	0.55	95.00	-55.08	-12.28	10.09	
2992.00	9.38	92.18	2965.69	53.21	308.47	1312806.52	3248748.53	40.188622	-104.609622	0.75	94.00	-54.34	-12.33	6.46	
3087.00	10.97	89.10	3059.20	53.06	325.24	1312806.54	3248765.31	40.188622	-104.609562	1.77	95.00	-54.25	-13.09	3.08	
3182.00	10.38	87.92	3152.55	53.51	342.84	1312807.17	3248782.89	40.188623	-104.609499	0.66	95.00	-54.77	-14.38	0.66	
3276.00	9.71	86.97	3245.11	54.24	359.21	1312808.06	3248799.26	40.188625	-104.609440	0.73	94.00	-55.56	-14.54	-1.40	
3370.00	11.41	87.55	3337.51	55.06	376.42	1312809.05	3248816.46	40.188627	-104.609379	1.81	94.00	-56.43	-15.56	-3.02	
3465.00	10.52	85.22	3430.78	56.18	394.45	1312810.35	3248834.48	40.188630	-104.609314	1.05	95.00	-57.63	-17.06	-5.22	
3560.00	9.66	85.96	3524.31	57.46	411.05	1312811.80	3248851.06	40.188634	-104.609255	0.92	95.00	-58.97	-17.33	-6.31	
3654.00	10.63	79.81	3616.84	59.55	427.45	1312814.06	3248867.44	40.188639	-104.609196	1.55	94.00	-61.12	-16.76	-8.59	
3749.00	9.48	78.46	3710.38	62.67	443.74	1312817.34	3248883.70	40.188648	-104.609138	1.24	95.00	-64.30	-16.65	-8.43	
3844.00	10.78	77.79	3803.90	66.11	460.09	1312820.94	3248900.01	40.188657	-104.609079	1.37	95.00	-67.80	-16.79	-7.78	
3938.00	10.57	78.46	3896.27	69.70	477.12	1312824.70	3248917.01	40.188667	-104.609018	0.26	94.00	-71.45	-18.00	-6.74	
4033.00	10.48	76.59	3989.67	73.44	494.07	1312828.61	3248933.91	40.188678	-104.608958	0.37	95.00	-75.25	-18.68	-6.32	
4127.00	10.07	73.80	4082.17	77.72	510.27	1312833.05	3248950.08	40.188689	-104.608900	0.69	94.00	-79.59	-18.92	-5.56	
4222.00	9.70	71.93	4175.76	82.52	525.86	1312838.01	3248965.61	40.188703	-104.608844	0.52	95.00	-84.45	-18.73	-3.82	
4317.00	9.27	72.74	4269.46	87.27	540.77	1312842.91	3248980.48	40.188716	-104.608790	0.47	95.00	-89.25	-18.09	-1.06	
4411.00	8.10	69.72	4362.38	91.81	554.22	1312847.59	3248993.88	40.188728	-104.608742	1.34	94.00	-93.84	-16.15	0.82	
4506.00	7.50	67.91	4456.50	96.47	566.24	1312852.36	3249005.85	40.188741	-104.608699	0.68	95.00	-98.54	-12.94	3.85	
4601.00	7.29	67.07	4550.71	101.15	577.54	1312857.15	3249017.10	40.188754	-104.608659	0.25	95.00	-103.26	-9.16	7.55	
4695.00	6.67	66.04	4644.01	105.69	588.02	1312861.80	3249027.54	40.188766	-104.608621	0.67	94.00	-107.84	-5.11	11.45	
4790.00	5.87	66.64	4738.44	109.85	597.52	1312866.06	3249037.00	40.188778	-104.608587	0.84	95.00	-112.04	-1.99	14.99	
4885.00	5.24	66.00	4833.00	113.54	605.94	1312869.83	3249045.38	40.188788	-104.608557	0.67	95.00	-115.76	-1.05	17.68	
4979.00	4.77	65.07	4926.64	116.94	613.41	1312873.30	3249052.81	40.188797	-104.608530	0.51	94.00	-119.18	-2.36	19.65	
5074.00	4.49	64.21	5021.33	120.22	620.34	1312876.65	3249059.71	40.188806	-104.608506	0.30	95.00	-122.49	-6.11	20.83	
5168.00	2.34	76.44	5115.16	122.27	625.52	1312878.76	3249064.87	40.188812	-104.608487	2.40	94.00	-124.56	-5.81	22.54	
5263.00	1.03	85.06	5210.11	122.80	628.25	1312879.31	3249067.60	40.188813	-104.608477	1.40	95.00	-125.10	-5.14	23.44	
5357.00	0.43	306.15	5304.11	123.08	628.81	1312879.60	3249068.15	40.188814	-104.608475	1.47	94.00	-125.38	-11.25	-21.60	
5736.00	1.47	162.67	5683.07	119.28	629.11	1312875.80	3249068.49	40.188803	-104.608474	0.48	379.00	-121.58	18.17	9.82	
6114.00	1.54	151.02	6060.94	110.21	633.01	1312866.77	3249072.49	40.188779	-104.608460	0.08	378.00	-112.53	5.99	12.31	
6358.00	1.44	160.79	6304.86	104.44	635.61	1312861.03	3249075.14	40.188763	-104.608451	0.11	244.00	-106.77	1.70	11.67	
6396.00	1.31	163.78	6342.85	103.57	635.89	1312860.16	3249075.43	40.188760	-104.608450	0.39	38.00	-105.90	1.39	11.59	
6490.00	11.97	162.80	6436.09	93.20	639.08	1312849.82	3249078.72	40.188732	-104.608439	11.34	94.00	-95.54	-5.34	12.92	
6585.00	21.07	168.32	6527.07	67.01	645.47	1312823.70	3249085.37	40.188660	-104.608416	9.71	95.00	-69.38	-11.92	18.38	
6680.00	29.60	174.99	6612.87	26.83	650.98	1312783.58	3249091.29	40.188550	-104.608396	9.46	95.00	-29.22	-16.11	24.84	
6774.00	37.26	178.41	6691.27	-24.82	653.80	1312731.96	3249094.63	40.188408	-104.608386	8.39	94.00	22.42	-18.48	28.64	

5D Survey Report

Survey Points (Relative to centre, TVD relative to Drill Floor)															
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	Latitude (°)	Longitude (°)	DLS (°/100 US ft)	CL (US ft)	VS (US ft)	High to Plan (US ft)	Right to Plan (US ft)	Comment
6869.00	44.98	182.62	6762.80	-87.21	653.07	1312669.56	3249094.52	40.188237	-104.608388	8.63	95.00	84.82	-17.25	29.10	
6963.00	55.06	181.46	6823.12	-159.10	650.56	1312597.65	3249092.73	40.188039	-104.608397	10.76	94.00	156.72	-16.73	26.56	
7058.00	66.27	183.37	6869.59	-241.71	647.00	1312515.01	3249090.00	40.187812	-104.608410	11.93	95.00	239.34	-16.98	23.46	
7153.00	72.54	184.68	6902.99	-330.37	640.74	1312426.29	3249084.63	40.187569	-104.608433	6.72	95.00	328.02	-15.75	17.43	
7247.00	78.88	184.47	6926.18	-421.12	633.48	1312335.47	3249078.28	40.187320	-104.608459	6.75	94.00	418.80	-9.15	10.26	
7277.00	83.48	183.99	6930.78	-450.68	631.29	1312305.89	3249076.39	40.187239	-104.608466	15.41	30.00	448.36	-6.67	8.15	
7369.00	90.74	183.16	6935.42	-542.32	625.57	1312214.20	3249071.59	40.186987	-104.608487	7.94	92.00	540.03	-2.59	2.76	
7463.00	89.88	180.74	6934.91	-636.26	622.37	1312120.23	3249069.33	40.186729	-104.608498	2.73	94.00	633.97	-3.10	-0.09	
7557.00	89.44	179.14	6935.46	-730.25	622.47	1312026.24	3249070.37	40.186471	-104.608498	1.77	94.00	727.97	-2.54	0.35	
7652.00	90.49	178.65	6935.52	-825.24	624.30	1311931.29	3249073.16	40.186211	-104.608491	1.22	95.00	822.94	-2.48	2.52	
7747.00	90.33	178.60	6934.84	-920.21	626.58	1311836.34	3249076.39	40.185950	-104.608483	0.18	95.00	917.90	-3.16	5.15	
7835.00	90.44	178.42	6934.25	-1008.17	628.87	1311748.40	3249079.56	40.185708	-104.608475	0.24	88.00	1005.86	-3.75	7.76	
7936.00	90.19	180.02	6933.70	-1109.16	630.25	1311647.43	3249081.94	40.185431	-104.608470	1.60	101.00	1106.84	-4.31	9.50	
8031.00	89.74	180.01	6933.75	-1204.16	630.22	1311552.44	3249082.87	40.185170	-104.608470	0.47	95.00	1201.84	-4.25	9.82	
8125.00	90.43	179.27	6933.61	-1298.16	630.81	1311458.45	3249084.41	40.184912	-104.608468	1.08	94.00	1295.84	-4.39	10.76	
8220.00	90.19	179.19	6933.10	-1393.15	632.09	1311363.48	3249086.63	40.184652	-104.608464	0.27	95.00	1390.82	-4.90	12.38	
8314.00	90.06	179.15	6932.90	-1487.14	633.45	1311269.51	3249088.94	40.184394	-104.608459	0.14	94.00	1484.80	-5.11	14.08	
8409.00	89.94	178.76	6932.90	-1582.12	635.18	1311174.55	3249091.62	40.184133	-104.608453	0.43	95.00	1579.78	-5.11	16.16	
8504.00	90.37	180.89	6932.64	-1677.11	635.47	1311079.56	3249092.87	40.183872	-104.608452	2.29	95.00	1674.77	-5.37	16.80	
8598.00	90.74	182.15	6931.73	-1771.07	632.98	1310985.58	3249091.31	40.183614	-104.608461	1.40	94.00	1768.74	-6.28	14.64	
8693.00	90.06	182.15	6931.07	-1866.00	629.42	1310890.62	3249088.70	40.183354	-104.608473	0.72	95.00	1863.68	-6.94	11.43	
8788.00	90.12	181.41	6930.92	-1960.96	626.46	1310795.64	3249086.70	40.183093	-104.608484	0.78	95.00	1958.65	-7.09	8.83	
8882.00	89.81	181.18	6930.97	-2054.93	624.34	1310701.65	3249085.52	40.182835	-104.608491	0.41	94.00	2052.63	-7.03	7.05	
8977.00	89.81	181.41	6931.29	-2149.91	622.19	1310606.66	3249084.33	40.182574	-104.608499	0.24	95.00	2147.61	-6.72	5.25	
9071.00	89.63	180.87	6931.75	-2243.89	620.32	1310512.66	3249083.40	40.182316	-104.608506	0.61	94.00	2241.60	-6.26	3.72	
9166.00	89.75	181.08	6932.26	-2338.87	618.71	1310417.67	3249082.74	40.182055	-104.608512	0.25	95.00	2336.59	-5.74	2.45	
9261.00	90.19	181.62	6932.31	-2433.85	616.47	1310322.68	3249081.45	40.181795	-104.608520	0.73	95.00	2431.57	-5.69	0.56	
9355.00	90.18	181.68	6932.01	-2527.81	613.76	1310228.69	3249079.69	40.181537	-104.608529	0.06	94.00	2525.54	-6.00	-1.80	
9450.00	90.31	181.44	6931.60	-2622.77	611.18	1310133.71	3249078.05	40.181276	-104.608539	0.29	95.00	2620.51	-6.40	-4.04	
9544.00	90.68	181.25	6930.79	-2716.74	608.97	1310039.72	3249076.79	40.181018	-104.608547	0.44	94.00	2714.49	-7.21	-5.91	
9639.00	91.17	181.30	6929.26	-2811.71	606.86	1309944.74	3249075.63	40.180758	-104.608554	0.52	95.00	2809.46	-8.74	-7.67	
9734.00	90.31	181.47	6928.03	-2906.67	604.56	1309849.76	3249074.28	40.180497	-104.608562	0.92	95.00	2904.43	-9.97	-9.62	
9828.00	90.18	180.89	6927.63	-3000.65	602.62	1309755.77	3249073.29	40.180239	-104.608569	0.63	94.00	2998.42	-10.38	-11.22	
9923.00	90.12	180.57	6927.38	-3095.64	601.41	1309660.77	3249073.03	40.179978	-104.608574	0.34	95.00	3093.41	-10.62	-12.08	
10017.00	89.38	179.70	6927.79	-3189.64	601.19	1309566.77	3249073.75	40.179720	-104.608574	1.22	94.00	3187.41	-10.21	-11.96	
10112.00	89.82	179.66	6928.45	-3284.63	601.72	1309471.79	3249075.23	40.179459	-104.608573	0.47	95.00	3282.40	-9.55	-11.08	
10207.00	90.68	179.43	6928.04	-3379.63	602.48	1309376.80	3249076.94	40.179198	-104.608570	0.94	95.00	3377.40	-9.97	-9.98	
10301.00	91.48	181.03	6926.27	-3473.61	602.10	1309282.83	3249077.51	40.178941	-104.608571	1.90	94.00	3471.38	-11.73	-10.02	
10396.00	91.42	180.57	6923.86	-3568.57	600.77	1309187.86	3249077.13	40.178680	-104.608576	0.49	95.00	3566.34	-14.13	-11.00	
10490.00	90.56	180.50	6922.24	-3662.55	599.90	1309093.87	3249077.20	40.178422	-104.608579	0.92	94.00	3660.32	-15.76	-11.53	
10585.00	89.75	180.00	6921.98	-3757.54	599.48	1308998.87	3249077.74	40.178161	-104.608581	1.00	95.00	3755.32	-16.02	-11.60	

5D Survey Report

Survey Points (Relative to centre, TVD relative to Drill Floor)															
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	Latitude (°)	Longitude (°)	DLS (°/100 US ft)	CL (US ft)	VS (US ft)	High to Plan (US ft)	Right to Plan (US ft)	Comment
10680.00	89.26	179.97	6922.80	-3852.54	599.51	1308903.88	3249078.71	40.177900	-104.608581	0.52	95.00	3850.32	-15.20	-11.23	
10774.00	88.77	180.01	6924.42	-3946.53	599.52	1308809.90	3249079.67	40.177642	-104.608580	0.52	94.00	3944.30	-13.58	-10.87	
10869.00	88.71	180.43	6926.51	-4041.50	599.16	1308714.93	3249080.26	40.177382	-104.608582	0.45	95.00	4039.28	-11.49	-10.89	
10964.00	88.58	180.65	6928.75	-4136.47	598.26	1308619.95	3249080.32	40.177121	-104.608585	0.27	95.00	4134.25	-9.25	-11.43	
11058.00	88.03	180.91	6931.53	-4230.42	596.98	1308526.00	3249079.98	40.176863	-104.608590	0.65	94.00	4228.21	-6.47	-12.37	
11153.00	87.35	180.89	6935.36	-4325.33	595.49	1308431.08	3249079.44	40.176602	-104.608595	0.72	95.00	4323.12	-2.64	-13.51	
11247.00	86.85	180.81	6940.12	-4419.20	594.10	1308337.20	3249078.99	40.176345	-104.608600	0.54	94.00	4416.99	2.11	-14.57	
11342.00	84.93	181.42	6946.93	-4513.93	592.26	1308242.45	3249078.10	40.176085	-104.608607	2.12	95.00	4511.73	8.86	-16.06	
11436.00	84.13	180.96	6955.89	-4607.48	590.31	1308148.89	3249077.09	40.175828	-104.608613	0.98	94.00	4605.29	17.77	-17.66	LAST WFT MWD+IFR SURVEY
11490.00	84.13	180.96	6961.41	-4661.19	589.41	1308095.17	3249076.73	40.175680	-104.608617	0.00	54.00	4659.00	23.26	-18.37	PROJECTION TO TD

Formation Points (Relative to centre, TVD relative to Drill Floor)			
Name	MD (US ft)	TVD (US ft)	E.Offset (US ft)
Parkman	3845.12	3805.00	460.29
Sussex	4423.75	4375.00	555.89
Sharon Springs	6876.41	6768.00	652.83
Niobrara A	6968.07	6826.00	650.45
Niobrara B	7003.69	6845.00	649.42
Niobrara C	7188.76	6913.00	637.96



DAILY ACTIVITIES

**Weatherford®**

Daily Activity Report

Drilling Services
v4.2.3981

Day 1 - 2013/02/14

FILE #: 4028455

WELL NAME: Dechant State 37N-W36HZ

SERVICE CO.: Weatherford

JOB TYPE: Horizontal

COMPANY: Anadarko Petroleum Corporation

SURVEY TYPE: Positive Pulse MWD

RIG & NO: Helmerich & Payne 307

SURFACE LOCATION: Weld County

FIELD / LOCATION: Wattenburg Field / CO / USA

DIR Supervisor: Josh Monroe, Charles Apodaca, Eric Hughes

MWD Supervisor: Scott Coulter, Rusty Korms

Company Man: Doug Barone, Doug Blair

GROUND ELEV: 4808 ft

START DEPTH: 638.0 ft

PROGRESS: 1274.0 ft

DAILY COST: USD\$0.00

KB ELEV: 4833 ft

END DEPTH: 1912.0 ft

AVG. ROP.: 424.7 ft/hr

PREVIOUS COST: USD\$0.00

TOTAL COST: USD\$0.00

WORK STATUS: Operating

(All units are imperial.)

TIME	DAILY ACTIVITY	HRS	DPTH	BHA	TIME	DAILY ACTIVITY	HRS	DPTH	BHA
00:00-07:00	Wait On Orders	7.00	638	n/a	21:10-21:15	Rotating With Motor	0.08	1291	1
07:00-16:00	Pressure Test	9.00	638	n/a	21:15-21:25	Circ & Accumulate Surveys - CONN	0.17	1291	1
16:00-17:00	PU Directional Tools	1.00	638	1	21:25-21:45	Orienting With Motor	0.33	1311	1
17:00-18:00	RIH	1.00	698	1	21:45-21:50	Rotating With Motor	0.08	1383	1
18:00-18:30	Drill Out Flt, Shoe & Cmnt	0.50	744	1	21:50-22:00	Circ & Accumulate Surveys	0.17	1383	1
18:30-18:40	Rotating With Motor	0.17	832	1	22:00-22:10	Orienting With Motor	0.17	1388	1
18:40-18:45	Circ & Accumulate Surveys - conn	0.08	832	1	22:10-22:15	Rotating With Motor	0.08	1475	1
18:45-19:00	Rotating With Motor	0.25	924	1	22:15-22:25	Circulating - See Comments - SPR	0.17	1475	1
19:00-19:10	Circulating - See Comments - SPR	0.17	924	1	22:25-22:30	Circ & Accumulate Surveys	0.08	1475	1
19:10-19:15	Circ & Accumulate Surveys	0.08	924	1	22:30-22:40	Rotating With Motor	0.17	1566	1
19:15-19:25	Rotating With Motor	0.17	1016	1	22:40-22:50	Circ & Accumulate Surveys - CONN	0.17	1566	1
19:25-19:35	Circ & Accumulate Surveys - CONN	0.17	1016	1	22:50-22:55	Rotating With Motor	0.08	1656	1
19:35-19:45	Work On MWD - RFD	0.17	1016	1	22:55-23:05	Circ & Accumulate Surveys - CONN	0.17	1656	1
19:45-20:00	Orienting With Motor	0.25	1041	1	23:05-23:10	Rotating With Motor	0.08	1748	1
20:00-20:10	Rotating With Motor	0.17	1108	1	23:10-23:20	Circ & Accumulate Surveys	0.17	1748	1
20:10-20:20	Circ & Accumulate Surveys - CONN	0.17	1108	1	23:20-23:30	Rotating With Motor	0.17	1838	1
20:20-20:35	Orienting With Motor	0.25	1133	1	23:30-23:45	Rig Service	0.25	1838	1
20:35-20:40	Rotating With Motor	0.08	1200	1	23:45-23:55	Circ & Accumulate Surveys	0.17	1838	1
20:40-20:50	Circ & Accumulate Surveys	0.17	1200	1	23:55-24:00	Rotating With Motor	0.08	1912	1
20:50-21:10	Orienting With Motor	0.33	1220	1			0.00		

TIME SUMMARY (hrs):

MOTOR DRILL:	3.00	ORIENTING HRS:	1.33	ROTARY DRILL:	0.00
TIME DRILL:	0.00	ROTATING HRS:	1.67	MOTOR HRS:	5.58
MOTOR REAM:	0.00	TRIP:	1.00	OTHER:	17.42
CIRC:	2.58	ROTARY DRILL:	0.00	TOTAL HRS:	24.00
MOTOR HRS:	5.58	DRILL HRS:	3.00		

DRILLING PARAMETERS:

ROTARY TORQUE:	2000 ft-lb	STRING WEIGHT	68000 lbs
WOB SLIDING (HI):	25000 lbf	WOB ROTATE (HI):	65000 lbf
WOB SLIDING (LO):	10000 lbf	WOB ROTATE (LO):	15000 lbf
RPM (ROTARY):	60 rpm	DRAG UP:	69000 lbf
RPM (MOTOR):	293 rpm	DRAG DN:	67000 lbf

BHA / MOTOR / BIT INFORMATION:

BHA: 1	HOLE SIZE: 8.75 in	SECTION TYPE: Build & Hold	SURVEY TYPE: Positive Pulse MWD
MANFCT.: Bico	STABILIZER: No	SERIAL#: K872	MODEL: SS150
SETTING: 1.5 °	KICKPAD: No	SIZE: 6 3/4" (171mm)	LOBE CFG.: 4/5
MANFCT: Hughes	BIT TYPE: Hughes PDC Bit	TYPE: DP405	MTR HRS THIS DAY: 5.583333333333333
IADC BIT GRADE: 2 / 2 / BT / N / X / I / WT / BHA			MTR HRS TO DATE: 5.583333333333333
			NOZZLES: 0.752 in² TFA



Daily Activity Report

Drilling Services
v4.2.3981

Day 1 - 2013/02/14

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: Water	VISC: 29 sec/qt	WTR LOSS: 0 cc/30min	PV: 0 cP	YP: 0 lb/100 ft ²	pH: 0
DENSITY: 8.4 lb/gal	GEL 0/10: 0.00 lb/100 ft ²	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:

DRILL F/ 744 TO 1838

CUSTOMER SIGNATURE: _____

**Weatherford®**

Daily Activity Report

Drilling Services

v4.2.3981

Day 2 - 2013/02/15**FILE #:** 4028455**WELL NAME:** Dechant State 37N-W36HZ**SERVICE CO.:** Weatherford**JOB TYPE:** Horizontal**COMPANY:** Anadarko Petroleum Corporation**SURVEY TYPE:** Positive Pulse MWD**RIG & NO:** Helmerich & Payne 307**SURFACE LOCATION:** Weld County**FIELD / LOCATION:** Wattenburg Field / CO / USA**DIR Supervisor:** Josh Monroe, Charles Apodaca, Eric Hughes**MWD Supervisor:** Scott Coulter, Rusty Korms**Company Man:** Doug Barone, Doug Blair**GROUND ELEV:** 4808 ft**START DEPTH:** 1912.0 ft**PROGRESS:** 4506.0 ft**DAILY COST:** USD\$0.00**KB ELEV:** 4833 ft**END DEPTH:** 6418.0 ft**AVG. ROP.:** 283.0 ft/hr**PREVIOUS COST:** USD\$0.00**TOTAL COST:** USD\$0.00**WORK STATUS:** Operating*(All units are imperial.)*

TIME	DAILY ACTIVITY	HRS	DPTH	BHA	TIME	DAILY ACTIVITY	HRS	DPTH	BHA
00:00-00:05	Rotating With Motor	0.08	1930	1	10:45-10:50	Circ & Accumulate Surveys	0.08	3998	1
00:05-00:10	Circ & Accumulate Surveys	0.08	1930	1	10:50-11:05	Rotating With Motor	0.25	4093	1
00:10-00:20	Rotating With Motor	0.17	2021	1	11:05-11:10	Circ & Accumulate Surveys	0.08	4093	1
00:20-00:25	Circ & Accumulate Surveys	0.08	2021	1	11:10-11:25	Rotating With Motor	0.25	4187	1
00:25-00:45	Rotating With Motor	0.33	2112	1	11:25-11:30	Circ & Accumulate Surveys	0.08	4187	1
00:45-00:55	Circ & Accumulate Surveys	0.17	2112	1	11:30-11:50	Rotating With Motor	0.33	4282	1
00:55-01:15	Orienting With Motor	0.33	2123	1	11:50-12:00	Circ & Accumulate Surveys	0.17	4282	1
01:15-01:20	Work on Pumps	0.08	2123	1	12:00-12:10	Rotating With Motor	0.17	4377	1
01:20-01:30	Orienting With Motor	0.17	2137	1	12:10-12:20	Circ & Accumulate Surveys	0.17	4377	1
01:30-01:40	Rotating With Motor	0.17	2204	1	12:20-12:35	Rotating With Motor	0.25	4471	1
01:40-01:50	Circ & Accumulate Surveys	0.17	2204	1	12:35-12:45	Circ & Condition Hole	0.17	4471	1
01:50-02:05	Orienting With Motor	0.25	2229	1	12:45-13:10	Rotating With Motor	0.42	4566	1
02:05-02:30	Other - See Comments - RACK BACK WASHED	0.42	2229	1	13:10-13:15	Circ & Accumulate Surveys	0.08	4566	1
02:30-02:35	Rotating With Motor	0.08	2296	1	13:15-13:30	Rotating With Motor	0.25	4661	1
02:35-02:45	Circ & Accumulate Surveys - CONN	0.17	2296	1	13:30-13:45	Circ & Accumulate Surveys	0.25	4661	1
02:45-02:50	Rotating With Motor	0.08	2390	1	13:45-14:00	Rotating With Motor	0.25	4755	1
02:50-02:55	Circ & Accumulate Surveys	0.08	2390	1	14:00-14:10	Circ & Accumulate Surveys	0.17	4755	1
02:55-03:05	Rotating With Motor	0.17	2485	1	14:10-14:35	Rotating With Motor	0.42	4850	1
03:05-03:10	Circ & Accumulate Surveys - CONN	0.08	2485	1	14:35-14:45	Circ & Accumulate Surveys	0.17	4850	1
03:10-03:20	Rotating With Motor	0.17	2579	1	14:45-15:20	Rotating With Motor	0.58	4945	1
03:20-03:30	Circulating - See Comments - SPR	0.17	2579	1	15:20-15:30	Circ & Accumulate Surveys	0.17	4945	1
03:30-03:35	Circ & Accumulate Surveys	0.08	2579	1	15:30-15:55	Rotating With Motor	0.42	5039	1
03:35-03:50	Orienting With Motor	0.25	2599	1	15:55-16:10	Circ & Accumulate Surveys	0.25	5039	1
03:50-04:00	Rotating With Motor	0.17	2674	1	16:10-16:20	Circ & Accumulate Surveys	0.17	5039	1
04:00-04:10	Circ & Accumulate Surveys	0.17	2674	1	16:20-16:40	Rotating With Motor	0.33	5134	1
04:10-04:40	Orienting With Motor	0.50	2694	1	16:40-16:50	Circ & Accumulate Surveys	0.17	5134	1
04:40-04:45	Rotating With Motor	0.08	2737	1	16:50-17:10	Orienting With Motor	0.33	5159	1
04:45-04:55	Orienting With Motor	0.17	2742	1	17:10-17:20	Rotating With Motor	0.17	5228	1
04:55-05:00	Rotating With Motor	0.08	2768	1	17:20-17:30	Circ & Accumulate Surveys	0.17	5228	1
05:00-05:05	Circ & Accumulate Surveys	0.08	2768	1	17:30-17:45	Orienting With Motor	0.25	5243	1
05:05-05:20	Orienting With Motor	0.25	2788	1	17:45-18:00	Rotating With Motor	0.25	5323	1
05:20-05:30	Rotating With Motor	0.17	2863	1	18:00-18:10	Circ & Accumulate Surveys	0.17	5323	1
05:30-05:35	Circ & Accumulate Surveys	0.08	2863	1	18:10-18:55	Orienting With Motor	0.75	5336	1
05:35-05:50	Rotating With Motor	0.25	2958	1	18:55-19:05	Rotating With Motor	0.17	5417	1
05:50-06:00	Circ & Accumulate Surveys	0.17	2958	1	19:05-19:15	Circulating - See Comments - SPR,PU,SO,RT,WTS	0.17	5417	1
06:00-06:05	Rotating With Motor	0.08	3052	1	19:15-19:25	Circ & Accumulate Surveys	0.17	5512	1
06:05-06:15	Circ & Accumulate Surveys	0.17	3052	1	19:25-19:50	Rotating With Motor	0.42	5512	1
06:15-06:25	Orienting With Motor	0.17	3072	1	19:50-19:55	Other - See Comments - CONNECTION	0.08	5512	1
06:25-06:40	Rotating With Motor	0.25	3147	1	19:55-20:05	Rotating With Motor	0.17	5607	1
06:40-06:55	Circ & Accumulate Surveys	0.25	3147	1	20:05-20:10	Undefined - See Comments - CONNECTION	0.08	5607	1

**Weatherford®**

Daily Activity Report

Drilling Services

v4.2.3981

Day 2 - 2013/02/15

06:55-07:10	Rotating With Motor	0.25	3242	1	20:10-20:25	Rotating With Motor	0.25	5701	1
07:10-07:20	Circ & Accumulate Surveys	0.17	3242	1	20:25-20:30	Other - See Comments - CONN	0.08	5701	1
07:20-07:50	Rotating With Motor	0.50	3336	1	20:30-20:50	Rotating With Motor	0.33	5796	1
07:50-08:05	Circ & Accumulate Surveys	0.25	3336	1	20:50-21:00	Circ & Accumulate Surveys	0.17	5796	1
08:05-08:15	Orienting With Motor	0.17	3361	1	21:00-21:20	Rotating With Motor	0.33	5890	1
08:15-08:30	Rotating With Motor	0.25	3430	1	21:20-21:25	Undefined - See Comments - CONNECTION	0.08	5890	1
08:30-08:40	Circ & Accumulate Surveys	0.17	3430	1	21:25-21:40	Rotating With Motor	0.25	5985	1
08:40-08:45	Rotating With Motor	0.08	3525	1	21:40-21:45	Undefined - See Comments - CONNECTION	0.08	5985	1
08:45-08:55	Circ & Accumulate Surveys	0.17	3525	1	21:45-22:05	Rotating With Motor	0.33	6080	1
08:55-09:00	Rotating With Motor	0.08	3620	1	22:05-22:15	Circulating - See Comments - conn spr pu so rt wt	0.17	6080	1
09:00-09:15	Circ & Accumulate Surveys	0.25	3620	1	22:15-22:30	Rotating With Motor	0.25	6174	1
09:15-09:20	Orienting With Motor	0.08	3645	1	22:30-22:40	Circ & Accumulate Surveys - CONN	0.17	6174	1
09:20-09:45	Rotating With Motor	0.42	3714	1	22:40-23:00	Rotating With Motor	0.33	6269	1
09:45-09:50	Circ & Accumulate Surveys	0.08	3714	1	23:00-23:05	Other - See Comments - CONN	0.08	6269	1
09:50-10:00	Rotating With Motor	0.17	3809	1	23:05-23:20	Rotating With Motor	0.25	6363	1
10:00-10:10	Circ & Accumulate Surveys	0.17	3809	1	23:20-23:25	Undefined - See Comments - CONN	0.08	6363	1
10:10-10:20	Orienting With Motor	0.17	3834	1	23:25-23:40	Rotating With Motor	0.25	6418	1
10:20-10:30	Rotating With Motor	0.17	3904	1	23:40-23:45	Circ & Accumulate Surveys	0.08	6418	1
10:30-10:35	Circ & Accumulate Surveys	0.08	3904	1	23:45-24:00	Circ & Condition Hole	0.25	6418	1
10:35-10:45	Rotating With Motor	0.17	3998	1			0.00		

TIME SUMMARY (hrs):

MOTOR DRILL: 15.92	ORIENTING HRS: 3.83	ROTARY DRILL: 0.00	ROTARY TORQUE: 2900 ft-lb	STRING WEIGHT 144000 lbs
TIME DRILL: 0.00	ROTATING HRS: 12.08	MOTOR HRS: 22.92	WOB SLIDING (HI): 15000 lbf	WOB ROTATE (HI): 20000 lbf
MOTOR REAM: 0.00		TRIP: 0.00	WOB SLIDING (LO): 5000 lbf	WOB ROTATE (LO): 8000 lbf
CIRC: 7.00	ROTARY DRILL: 0.00	OTHER: 1.08	RPM (ROTARY): 60 rpm	DRAG UP: 173000 lbf
MOTOR HRS: 22.92	DRILL HRS: 15.92	TOTAL HRS: 24.00	RPM (MOTOR): 293 rpm	DRAG DN: 127000 lbf

BHA / MOTOR / BIT INFORMATION:

BHA: 1	HOLE SIZE: 8.75 in	SECTION TYPE: Build & Hold	SURVEY TYPE: Positive Pulse MWD
MANFCT.: Bico	STABILIZER: No	SERIAL#: K872	MODEL: SS150
SETTING: 1.5 °	KICKPAD: No	SIZE: 6 3/4" (171mm)	LOBE CFG.: 4/5
MANFCT: Hughes	BIT TYPE: Hughes PDC Bit	TYPE: DP405	MTR HRS THIS DAY: 22.91666667
IADC BIT GRADE: 2 / 2 / BT / N / X / I / WT / BHA			TOTAL HRS TO DATE: 28.5
			NOZZLES: 0.752 in ² TFA

PUMP PARAMETERS

PRESSURE ON BTM: 2200	PRESSURE OFF BTM: 2500	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: Water	VISC: 35 sec/qt	WTR LOSS: 30 cc/30min	PV: 5 cP	YP: 6 lb/100 ft ²	pH: 8.6
DENSITY: 8.4 lb/gal	GEL 0/10: 3.00 lb/100 ft ²	SAND: 0.85	SOLIDS: 4.2	OIL: 0	TEMP: 161 °F
LIQUID BASE: Water		LIQUID RATE: 0 gal/min	GAS TYPE:		GAS RATE: 0 cu ft/min

COMMENTS:

DRILL F/ 1838 TO 6418

@ 1800 ft the ROP went from 1500' per hr to 880 the motor, bit, drillstring was wanting to bounce when trying to get more weight on bit then 15k.

CUSTOMER SIGNATURE:

**Weatherford®**

Daily Activity Report

Drilling Services
v4.2.3981

Day 3 - 2013/02/16

FILE #: 4028455

WELL NAME: Dechant State 37N-W36HZ

SERVICE CO.: Weatherford

JOB TYPE: Horizontal

COMPANY: Anadarko Petroleum Corporation

SURVEY TYPE: Positive Pulse MWD

RIG & NO: Helmerich & Payne 307

SURFACE LOCATION: Weld County

FIELD / LOCATION: Wattenburg Field / CO / USA

DIR Supervisor: Josh Monroe, Charles Apodaca, Eric Hughes

MWD Supervisor: Scott Coulter, Rusty Korms

Company Man: Doug Barone, Doug Blair

GROUND ELEV: 4808 ft

START DEPTH: 6418.0 ft

PROGRESS: 889.0 ft

DAILY COST: USD\$0.00

KB ELEV: 4833 ft

END DEPTH: 7307.0 ft

AVG. ROP.: 105.6 ft/hr

PREVIOUS COST: USD\$0.00

TOTAL COST: USD\$0.00

WORK STATUS: Operating

(All units are imperial.)

TIME	DAILY ACTIVITY	HRS	DPTH	BHA	TIME	DAILY ACTIVITY	HRS	DPTH	BHA
00:00-01:20	Circ & Condition Hole	1.33	6418	1	17:30-17:45	Circ & Accumulate Surveys	0.25	6834	2
01:20-08:15	POOH To Change BHA	6.92	6418	2	17:45-18:00	Circulating - See Comments - SPR'S	0.25	6834	2
08:15-09:00	Change Pulser	0.75	6418	2	18:00-18:55	Orienting With Motor	0.92	6918	2
09:00-12:45	Trip In	3.75	6418	2	18:55-19:00	Rotating With Motor	0.08	6929	2
12:45-13:15	Orienting With Motor	0.50	6452	2	19:00-19:10	Circ & Accumulate Surveys	0.17	6929	2
13:15-13:20	Rotating With Motor	0.08	6456	2	19:10-20:00	Orienting With Motor	0.83	7004	2
13:20-13:35	Circ & Accumulate Surveys	0.25	6456	2	20:00-20:20	Rotating With Motor	0.33	7023	2
13:35-14:20	Orienting With Motor	0.75	6535	2	20:20-20:30	Circ & Accumulate Surveys	0.17	7023	2
14:20-14:30	Rotating With Motor	0.17	6550	2	20:30-20:55	Work on Pumps	0.42	7023	2
14:30-14:45	Circ & Accumulate Surveys	0.25	6550	2	20:55-21:10	Orienting With Motor	0.25	7068	2
14:45-15:15	Orienting With Motor	0.50	6620	2	21:10-21:30	Work on Pumps	0.33	7068	2
15:15-15:25	Rotating With Motor	0.17	6645	2	21:30-21:35	Orienting With Motor	0.08	7080	2
15:25-15:40	Circ & Accumulate Surveys	0.25	6645	2	21:35-22:00	Rotating With Motor	0.42	7118	2
15:40-16:10	Orienting With Motor	0.50	6715	2	22:00-22:10	Circ & Accumulate Surveys	0.17	7118	2
16:10-16:20	Rotating With Motor	0.17	6740	2	22:10-22:30	Orienting With Motor	0.33	7165	2
16:20-16:30	Circ & Accumulate Surveys	0.17	6740	2	22:30-22:55	Rotating With Motor	0.42	7213	2
16:30-17:20	Orienting With Motor	0.83	6804	2	22:55-23:05	Circ & Accumulate Surveys	0.17	7213	2
17:20-17:30	Rotating With Motor	0.17	6834	2	23:05-24:00	Orienting With Motor	0.92	7307	2

TIME SUMMARY (hrs):

MOTOR DRILL:	8.42	ORIENTING HRS:	0.00	ROTARY DRILL:	0.00
TIME DRILL:	0.00	ROTATING HRS:	0.00	MOTOR HRS:	11.83
MOTOR REAM:	0.00			TRIP:	10.67
CIRC:	3.42	ROTARY DRILL:	0.00	OTHER:	1.50
MOTOR HRS:	11.83	DRILL HRS:	8.42	TOTAL HRS:	24.00

DRILLING PARAMETERS:

ROTARY TORQUE:	2900 ft-lb	STRING WEIGHT	137000 lbs
WOB SLIDING (HI):	90000 lbf	WOB ROTATE (HI):	70000 lbf
WOB SLIDING (LO):	5000 lbf	WOB ROTATE (LO):	10000 lbf
RPM (ROTARY):	60 rpm	DRAG UP:	187000 lbf
RPM (MOTOR):	167 rpm	DRAG DN:	122000 lbf

BHA / MOTOR / BIT INFORMATION:

BHA: 1	HOLE SIZE: 8.75 in	SECTION TYPE: Build & Hold	SURVEY TYPE: Positive Pulse MWD
MANFCT.: Bico	STABILIZER: No	SERIAL#: K872	MODEL: SS150
SETTING: 1.5 °	KICKPAD: No	SIZE: 6 3/4" (171mm)	LOBE CFG.: 4/5
MANFCT: Hughes	BIT TYPE: Hughes PDC Bit	TYPE: DP405	MTR HRS THIS DAY: 1.3333333333333333
IADC BIT GRADE: 2 / 2 / BT / N / X / I / WT / BHA			MTR HRS TO DATE: 29.83333333333333
			NOZZLES: 0.752 in² TFA

BHA: 2	HOLE SIZE: 8.75 in	SECTION TYPE: Build	SURVEY TYPE: Positive Pulse MWD
MANFCT.: Weatherford	STABILIZER: No	SERIAL#: 675-4129	MODEL:
SETTING: 2.38 °	KICKPAD: No	SIZE: 6 3/4" (171mm)	LOBE CFG.: 7/8
MANFCT: Reed	BIT TYPE: Reed 5 Blade PDC	TYPE: E1202-A1B	MTR HRS THIS DAY: 10.5
IADC BIT GRADE: 1 / 2 / CT / M / X / ? / ? / ?			MTR HRS TO DATE: 10.5
			NOZZLES: 1.242 in² TFA



Daily Activity Report

Drilling Services
v4.2.3981

Day 3 - 2013/02/16

PUMP PARAMETERS

PRESSURE ON BTM: 4200

PRESSURE OFF BTM: 3000

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: 35 sec/qt

WTR LOSS: 30 cc/30min

PV: 5 cP

YP: 6 lb/100 ft²

pH: 8.6

DENSITY: 8.9 lb/gal

GEL 0/10: 3.00 lb/100 ft²

SAND: 0.85

SOLIDS: 4.2

OIL: 0

TEMP: 179 °F

LIQUID BASE: Water

LIQUID RATE: 0 gal/min

GAS TYPE:

GAS RATE: 0 cu ft/min

COMMENTS:

DRILL F 6418 TO 7307

CUSTOMER SIGNATURE: _____

**Weatherford®**

Daily Activity Report

Drilling Services
v4.2.3981

Day 4 - 2013/02/17

FILE #: 4028455

WELL NAME: Dechant State 37N-W36HZ

SERVICE CO.: Weatherford

JOB TYPE: Horizontal

COMPANY: Anadarko Petroleum Corporation

SURVEY TYPE: Positive Pulse MWD

RIG & NO: Helmerich & Payne 307

SURFACE LOCATION: Weld County

FIELD / LOCATION: Wattenburg Field / CO / USA

DIR Supervisor: Josh Monroe, Charles Apodaca, Eric Hughes

MWD Supervisor: Scott Coulter, Rusty Korms

Company Man: Doug Barone, Doug Blair

GROUND ELEV: 4808 ft

START DEPTH: 7307.0 ft

PROGRESS: 30.0 ft

DAILY COST: USD\$0.00

KB ELEV: 4833 ft

END DEPTH: 7337.0 ft

AVG. ROP.: 44.8 ft/hr

PREVIOUS COST: USD\$0.00

TOTAL COST: USD\$0.00

WORK STATUS: Operating

(All units are imperial.)

TIME	DAILY ACTIVITY	HRS	DPTH	BHA	TIME	DAILY ACTIVITY	HRS	DPTH	BHA
00:00-00:05	Orienting With Motor	0.08	7307	2	02:30-03:00	Flow Check	0.50	7337	2
00:05-00:20	Circ & Accumulate Surveys	0.25	7307	2	03:00-07:00	POOH To Run Casing	4.00	7337	2
00:20-00:55	Orienting With Motor	0.58	7337	2	07:00-07:30	Lay Down Directional Tools	0.50	7337	2
00:55-02:30	Circ & Condition Hole	1.58	7337	2	07:30-24:00	Wait On Orders	16.50	7337	2

TIME SUMMARY (hrs):

MOTOR DRILL: 0.67	ORIENTING HRS: 0.67	ROTARY DRILL: 0.00	ROTARY TORQUE: 3000 ft-lb	STRING WEIGHT: 137000 lbs
TIME DRILL: 0.00	ROTATING HRS: 0.00	MOTOR HRS: 2.50	WOB SLIDING (HI): 90000 lbf	WOB ROTATE (HI): 70000 lbf
MOTOR REAM: 0.00		TRIP: 4.00	WOB SLIDING (LO): 15000 lbf	WOB ROTATE (LO): 15000 lbf
CIRC: 1.83	ROTARY DRILL: 0.00	OTHER: 17.50	RPM (ROTARY): 30 rpm	DRAG UP: 187000 lbf
MOTOR HRS: 2.50	DRILL HRS: 0.67	TOTAL HRS: 24.00	RPM (MOTOR): 167 rpm	DRAG DN: 122000 lbf

BHA / MOTOR / BIT INFORMATION:

BHA: 2	HOLE SIZE: 8.75 in	SECTION TYPE: Build	SURVEY TYPE: Positive Pulse MWD
MANFCT.: Weatherford	STABILIZER: No	SERIAL#: 675-4129	MODEL: LOBE CFG.:7/8
SETTING: 2.38 °	KICKPAD: No	SIZE: 6 3/4" (171mm)	MTR HRS THIS DAY: 2.5
MANFCT: Reed	BIT TYPE: Reed 5 Blade PDC	TYPE: E1202-A1B	MTR HRS TO DATE: 13
NOZZLES: 1.242 in² TFA			
IADC BIT GRADE: 1 / 2 / CT / M / X / ? / ? / ?			

PUMP PARAMETERS

PRESSURE ON BTM: 4450	PRESSURE OFF BTM: 3765	TOTAL FLOW RATE: 598.00 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: Water	VISC: 38 sec/qt	WTR LOSS: 6.5 cc/30min	PV: 11 cP	YP: 7 lb/100 ft²	pH: 8.7
DENSITY: 10 lb/gal	GEL 0/10: 3.00 lb/100 ft²	SAND: 1	SOLIDS: 8.4	OIL: 0	TEMP: 179 °F
LIQUID BASE: Water		LIQUID RATE: 0 gal/min	GAS TYPE:		GAS RATE: 0 cu ft/min

COMMENTS:

DRILL F/ 7307 TO 7337

Pmps had to many issues while drilling this Curve.

Curve landed in 7.3 bit hours.

POOH and lay down directional tools.

Run 7" & wait on orders

CUSTOMER SIGNATURE: _____

**Weatherford®**

Daily Activity Report

Drilling Services
v4.2.3981

Day 5 - 2013/02/18

FILE #: 4028455

WELL NAME: Dechant State 37N-W36HZ

SERVICE CO.: Weatherford

JOB TYPE: Horizontal

COMPANY: Anadarko Petroleum Corporation

SURVEY TYPE: Positive Pulse MWD

RIG & NO: Helmerich & Payne 307

SURFACE LOCATION: Weld County

FIELD / LOCATION: Wattenburg Field / CO / USA

DIR Supervisor: Josh Monroe, Charles Apodaca, Eric Hughes

MWD Supervisor: Rusty Korms, John Mahar

Company Man: Doug Barone, Doug Blair

GROUND ELEV: 4808 ft

START DEPTH: 7337.0 ft

PROGRESS: 163.0 ft

DAILY COST: USD\$0.00

KB ELEV: 4833 ft

END DEPTH: 7500.0 ft

AVG. ROP.: 84.9 ft/hr

PREVIOUS COST: USD\$0.00

TOTAL COST: USD\$0.00

WORK STATUS: Operating

(All units are imperial.)

TIME	DAILY ACTIVITY	HRS	DPTH	BHA	TIME	DAILY ACTIVITY	HRS	DPTH	BHA
00:00-09:30	Wait On Orders	9.50	7337	3	21:45-21:55	Circulating - See Comments - SPR	0.17	7360	3
09:30-10:30	Handle Directional Tools	1.00	7337	3	21:55-22:20	Orienting With Motor	0.42	7375	3
10:30-12:15	Work On MWD - Program LWD	1.75	7337	3	22:20-22:30	Other - See Comments - LINE UP GAS BUSTER	0.17	7375	3
12:15-16:00	Pick Up Drill Pipe - Pick up 126 Joints	3.75	7337	3	22:30-22:45	Rotating With Motor	0.25	7423	3
16:00-16:45	Circulating - Circulate Bottoms Up	0.75	7337	3	22:45-22:55	Circ & Accumulate Surveys	0.17	7423	3
16:45-17:15	Pressure Test - Pressure Test Casing	0.50	7337	3	22:55-23:30	Orienting With Motor	0.58	7438	3
17:15-19:30	RIH	2.25	7337	3	23:30-23:45	Rotating With Motor	0.25	7485	3
19:30-21:35	Drill Out Flt, Shoe & Cmmt	2.08	7337	3	23:45-24:00	Orienting With Motor	0.25	7500	3
21:35-21:45	Rotating With Motor	0.17	7360	3			0.00		

TIME SUMMARY (hrs):

MOTOR DRILL:	1.92	ORIENTING HRS:	1.25	ROTARY DRILL:	0.00
TIME DRILL:	0.00	ROTATING HRS:	0.67	MOTOR HRS:	5.08
MOTOR REAM:	0.00	TRIP:	2.25	OTHER:	16.67
CIRC:	3.17	ROTARY DRILL:	0.00	OTHER:	16.67
MOTOR HRS:	5.08	DRILL HRS:	1.92	TOTAL HRS:	24.00

DRILLING PARAMETERS:

ROTARY TORQUE:		STRING WEIGHT	0 lbs
WOB SLIDING (HI):	25000 lbf	WOB ROTATE (HI):	35000 lbf
WOB SLIDING (LO):	10000 lbf	WOB ROTATE (LO):	15000 lbf
RPM (ROTARY):	55 rpm	DRAG UP:	0 lbf
RPM (MOTOR):	273 rpm	DRAG DN:	0 lbf

BHA / MOTOR / BIT INFORMATION:

BHA: 3	HOLE SIZE: 6.125 in	SECTION TYPE: Lateral 1	SURVEY TYPE: HEL LWD
MANFCT.: Weatherford	STABILIZER: No	SERIAL#: 475-2789	MODEL: ME6770
SETTING: 1.5 °	KICKPAD: No	SIZE: 5" (127mm)	LOBE CFG.: 6/7
MANFCT: Varel	BIT TYPE: Varel Bit	TYPE: VM513s	MTR HRS THIS DAY: 5.083333333333333
IADC BIT GRADE: 2 / 2 / BT / N / X / I / WT / TD			MTR HRS TO DATE: 5.083333333333333
			NOZZLES: 0.384 in ² TFA

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
PUMP 2: TYPE: PZ-11	EFF.: 95.0% SPM: 75.00	LINER: 6.00 in
PUMP 3: TYPE:	EFF.: 100.0% SPM: 0.00	LINER: 0.00 in
		STROKE VOL.: 3.8438 gal/stk
		STROKE VOL.: 3.8438 gal/stk
		STROKE VOL.: 0.0000 gal/stk

MUD RECORD

MUD TYPE: Water	VISC: 38 sec/qt	WTR LOSS: 5.2 cc/30min	PV: 13 cP	YP: 7 lb/100 ft ²	pH: 8.8
DENSITY: 10.6 lb/gal	GEL 0/10: 3.00 lb/100 ft ²	SAND: 1	SOLIDS: 10.9	OIL: 0	TEMP: 0 °F
LIQUID BASE: Water		LIQUID RATE: 0 gal/min	GAS TYPE:		GAS RATE: 0 cu ft/min

COMMENTS:

Drill f/ 7337 to 7500

CUSTOMER SIGNATURE:

**Weatherford®**

Daily Activity Report

Drilling Services

v4.2.3981

Day 6 - 2013/02/19**FILE #:** 4028455**WELL NAME:** Dechant State 37N-W36HZ**SERVICE CO.:** Weatherford**JOB TYPE:** Horizontal**COMPANY:** Anadarko Petroleum Corporation**SURVEY TYPE:** Positive Pulse MWD**RIG & NO:** Helmerich & Payne 307**SURFACE LOCATION:** Weld County**FIELD / LOCATION:** Wattenburg Field / CO / USA**DIR Supervisor:** Josh Monroe, Charles Apodaca, Eric Hughes**MWD Supervisor:** Rusty Korms, John Mahar, Anthony Danna**Company Man:** Doug Blair, Doug Barone**GROUND ELEV:** 4808 ft**START DEPTH:** 7500.0 ft**PROGRESS:** 2982.0 ft**DAILY COST:** USD\$0.00**KB ELEV:** 4833 ft**END DEPTH:** 10482.0 ft**AVG. ROP.:** 173.7 ft/hr**PREVIOUS COST:** USD\$0.00**TOTAL COST:** USD\$0.00**WORK STATUS:** Operating*(All units are imperial.)*

TIME	DAILY ACTIVITY	HRS	DPTH	BHA	TIME	DAILY ACTIVITY	HRS	DPTH	BHA
00:00-00:05	Rotating With Motor	0.08	7517	3	10:00-10:10	Circ & Accumulate Surveys	0.17	8936	3
00:05-00:10	Circ & Accumulate Surveys	0.08	7517	3	10:10-10:30	Rotating With Motor	0.33	9031	3
00:10-00:30	Rig Service	0.33	7517	3	10:30-10:40	Circ & Accumulate Surveys	0.17	9031	3
00:30-01:00	Rotating With Motor	0.50	7611	3	10:40-11:00	Rotating With Motor	0.33	9125	3
01:00-01:10	Circ & Accumulate Surveys	0.17	7611	3	11:00-11:10	Circ & Accumulate Surveys	0.17	9125	3
01:10-01:20	Orienting With Motor	0.17	7621	3	11:10-11:30	Rotating With Motor	0.33	9220	3
01:20-01:40	Rotating With Motor	0.33	7706	3	11:30-11:40	Circ & Accumulate Surveys	0.17	9220	3
01:40-01:50	Circulating - See Comments - SPR	0.17	7706	3	11:40-12:00	Rotating With Motor	0.33	9315	3
01:50-02:00	Circ & Accumulate Surveys - CONN	0.17	7706	3	12:00-12:10	Circ & Accumulate Surveys	0.17	9315	3
02:00-02:25	Rotating With Motor	0.42	7801	3	12:10-12:30	Rotating With Motor	0.33	9409	3
02:25-02:35	Circ & Accumulate Surveys	0.17	7801	3	12:30-12:40	Circ & Accumulate Surveys	0.17	9409	3
02:35-03:00	Rotating With Motor	0.42	7895	3	12:40-12:55	Rotating With Motor	0.25	9504	3
03:00-03:10	Circ & Accumulate Surveys	0.17	7895	3	12:55-13:05	Circ & Accumulate Surveys	0.17	9504	3
03:10-03:40	Work On MWD - LWD TOOL FACES	0.50	7895	3	13:05-13:30	Rotating With Motor	0.42	9598	3
03:40-03:55	Orienting With Motor	0.25	7910	3	13:30-13:40	Circ & Accumulate Surveys	0.17	9598	3
03:55-04:15	Rotating With Motor	0.33	7990	3	13:40-14:05	Rotating With Motor	0.42	9693	3
04:15-04:20	Circ & Accumulate Surveys	0.08	7990	3	14:05-14:20	Circ & Accumulate Surveys	0.25	9693	3
04:20-04:45	Rotating With Motor	0.42	8085	3	14:20-14:50	Orienting With Motor	0.50	9703	3
04:45-05:00	Circ & Accumulate Surveys	0.25	8085	3	14:50-15:05	Rotating With Motor	0.25	9788	3
05:00-05:05	Orienting With Motor	0.08	8095	3	15:05-15:15	Circ & Accumulate Surveys	0.17	9788	3
05:05-05:25	Rotating With Motor	0.33	8179	3	15:15-15:35	Rotating With Motor	0.33	9882	3
05:25-05:35	Circ & Accumulate Surveys	0.17	8179	3	15:35-15:45	Circ & Accumulate Surveys	0.17	9882	3
05:35-05:50	Rotating With Motor	0.25	8274	3	15:45-16:05	Rotating With Motor	0.33	9977	3
05:50-06:00	Circ & Accumulate Surveys	0.17	8274	3	16:05-16:15	Circ & Accumulate Surveys	0.17	9977	3
06:00-06:20	Rotating With Motor	0.33	8368	3	16:15-16:45	Orienting With Motor	0.50	9985	3
06:20-06:40	Circ & Accumulate Surveys	0.33	8368	3	16:45-17:10	Rotating With Motor	0.42	10071	3
06:40-07:00	Rotating With Motor	0.33	8463	3	17:10-17:25	Circ & Accumulate Surveys	0.25	10071	3
07:00-07:10	Circ & Accumulate Surveys	0.17	8463	3	17:25-18:00	Rotating With Motor	0.58	10166	3
07:10-07:30	Orienting With Motor	0.33	8478	3	18:00-18:15	Circ & Accumulate Surveys	0.25	10166	3
07:30-07:45	Rotating With Motor	0.25	8558	3	18:15-18:35	Rotating With Motor	0.33	10261	3
07:45-07:55	Circ & Accumulate Surveys	0.17	8558	3	18:35-18:45	Circ & Accumulate Surveys	0.17	10261	3
07:55-08:05	Orienting With Motor	0.17	8568	3	18:45-19:30	Rotating With Motor	0.75	10355	3
08:05-08:25	Rotating With Motor	0.33	8652	3	19:30-19:45	Circ & Accumulate Surveys	0.25	10355	3
08:25-08:40	Circ & Accumulate Surveys	0.25	8652	3	19:45-19:55	Rotating With Motor	0.17	10360	3
08:40-09:00	Rotating With Motor	0.33	8747	3	19:55-21:30	Orienting With Motor	1.58	10375	3
09:00-09:10	Circ & Accumulate Surveys	0.17	8747	3	21:30-21:50	Rotating With Motor	0.33	10450	3
09:10-09:35	Rotating With Motor	0.42	8842	3	21:50-22:00	Circ & Accumulate Surveys	0.17	10450	3
09:35-09:45	Circ & Accumulate Surveys	0.17	8842	3	22:00-22:10	Rotating With Motor	0.17	10455	3
09:45-10:00	Rotating With Motor	0.25	8936	3	22:10-24:00	Orienting With Motor	1.83	10482	3

**Weatherford®**

Daily Activity Report

Drilling Services

v4.2.3981

Day 6 - 2013/02/19

TIME SUMMARY (hrs):			DRILLING PARAMETERS:		
MOTOR DRILL: 17.17	ORIENTING HRS: 5.42	ROTARY DRILL: 0.00	ROTARY TORQUE: 8300 ft-lb	STRING WEIGHT	148000 lbs
TIME DRILL: 0.00	ROTATING HRS: 11.75	MOTOR HRS: 23.17	WOB SLIDING (HI): 30000 lbf	WOB ROTATE (HI):	35000 lbf
MOTOR REAM: 0.00		TRIP: 0.00	WOB SLIDING (LO): 15000 lbf	WOB ROTATE (LO):	15000 lbf
CIRC: 6.00	ROTARY DRILL: 0.00	OTHER: 0.83	RPM (ROTARY): 45 rpm	DRAG UP:	187000 lbf
MOTOR HRS: 23.17	DRILL HRS: 17.17	TOTAL HRS: 24.00	RPM (MOTOR): 273 rpm	DRAG DN:	124000 lbf

— BHA / MOTOR / BIT INFORMATION: —

BHA: 3 HOLE SIZE: 6.125 in SECTION TYPE: Lateral 1 SURVEY TYPE: HEL LWD
 MANFCT.: Weatherford STABILIZER: No SERIAL#: 475-2789 MODEL: ME6770 LOBE CFG.: 6/7
 SETTING: 1.5 ° KICKPAD: No SIZE: 5" (127mm) MTR HRS THIS DAY: 23.16666667 MTR HRS TO DATE: 28.25
 MANFCT: Varel BIT TYPE: Varel Bit TYPE: VM513s NOZZLES: 0.384 in² TFA
 IADC BIT GRADE: 2 / 2 / BT / N / X / I / WT / TD

— PUMP PARAMETERS —

PRESSURE ON BTM: 3300 PRESSURE OFF BTM: 2400 TOTAL FLOW RATE: 333.00 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: Water VISC: 34 sec/qt WTR LOSS: 7.5 cc/30min PV: 5 cP YP: 4 lb/100 ft² pH: 8.5
 DENSITY: 9.6 lb/gal GEL 0/10: 1.00 lb/100 ft² SAND: 1 SOLIDS: 6.5 OIL: 0 TEMP: 174 °F
 LIQUID BASE: Water LIQUID RATE: 0 gal/min GAS TYPE: GAS RATE: 0 cu ft/min

— COMMENTS: —

Drill F 7500 to 10482

@ 1800 PM Our target window of 15' high and 5' low was changed. @ Anadarkos Request that by 3700 to 4000' vs we are to get back to our target TVD of 6938 while trying to do so my motor has gone from yielding 9 to yielding 4.5, also having troubles sliding do to high torque and Trapped torque making it tough to transfer weight to the bit.

CUSTOMER SIGNATURE: _____

**Weatherford®**

Daily Activity Report

Drilling Services
v4.2.3981

Day 7 - 2013/02/20

FILE #: 4028455

WELL NAME: Dechant State 37N-W36HZ

SERVICE CO.: Weatherford

JOB TYPE: Horizontal

COMPANY: Anadarko Petroleum Corporation

SURVEY TYPE: Positive Pulse MWD

RIG & NO: Helmerich & Payne 307

SURFACE LOCATION: Weld County

FIELD / LOCATION: Wattenburg Field / CO / USA

DIR Supervisor: Josh Monroe, Charles Apodaca, Eric Hughes

MWD Supervisor: Rusty Korms, Anthony Danna

Company Man: Doug Barone, Doug Blair

GROUND ELEV: 4808 ft

START DEPTH: 10482.0 ft

PROGRESS: 1008.0 ft

DAILY COST: USD\$0.00

KB ELEV: 4833 ft

END DEPTH: 11490.0 ft

AVG. ROP.: 106.1 ft/hr

PREVIOUS COST: USD\$0.00

TOTAL COST: USD\$0.00

WORK STATUS: Operating

(All units are imperial.)

TIME	DAILY ACTIVITY	HRS	DPTH	BHA	TIME	DAILY ACTIVITY	HRS	DPTH	BHA
00:00-00:05	Orienting With Motor	0.08	10485	3	06:30-07:30	Rotating With Motor	1.00	10923	3
00:05-00:30	Rotating With Motor	0.42	10544	3	07:30-07:45	Circ & Accumulate Surveys	0.25	10923	3
00:30-01:00	Rig Service	0.50	10544	3	07:45-08:25	Rotating With Motor	0.67	11017	3
01:00-01:10	Rotating With Motor	0.17	10549	3	08:25-08:40	Circ & Accumulate Surveys	0.25	11017	3
01:10-03:20	Orienting With Motor	2.17	10589	3	08:40-09:25	Rotating With Motor	0.75	11112	3
03:20-03:40	Rotating With Motor	0.33	10639	3	09:25-09:40	Circ & Accumulate Surveys	0.25	11112	3
03:40-03:50	Circulating - See Comments - spr	0.17	10639	3	09:40-10:15	Rotating With Motor	0.58	11207	3
03:50-04:00	Circ & Accumulate Surveys	0.17	10639	3	10:15-10:30	Circ & Accumulate Surveys	0.25	11207	3
04:00-04:50	Rotating With Motor	0.83	10734	3	10:30-11:15	Rotating With Motor	0.75	11301	3
04:50-05:00	Circ & Accumulate Surveys	0.17	10734	3	11:15-11:30	Circ & Accumulate Surveys	0.25	11301	3
05:00-05:15	Rotating With Motor	0.25	10760	3	11:30-12:00	Rotating With Motor	0.50	11396	3
05:15-05:50	Wait On MWD Tools - troubleshoot LWD	0.58	10760	3	12:00-12:15	Circ & Accumulate Surveys	0.25	11396	3
05:50-06:15	Rotating With Motor	0.42	10828	3	12:15-12:50	Rotating With Motor	0.58	11490	3
06:15-06:30	Circ & Accumulate Surveys	0.25	10828	3	12:50-24:00	Wiper Trip	11.17	11490	3

TIME SUMMARY (hrs):

MOTOR DRILL: 9.50	ORIENTING HRS: 2.25	ROTARY DRILL: 0.00	ROTARY TORQUE: 15000 ft-lb	STRING WEIGHT: 149000 lbs
TIME DRILL: 0.00	ROTATING HRS: 7.25	MOTOR HRS: 11.75	WOB SLIDING (HI): 85000 lbf	WOB ROTATE (HI): 45000 lbf
MOTOR REAM: 0.00		TRIP: 11.17	WOB SLIDING (LO): 10000 lbf	WOB ROTATE (LO): 15000 lbf
CIRC: 2.25	ROTARY DRILL: 0.00	OTHER: 1.08	RPM (ROTARY): 75 rpm	DRAG UP: 234000 lbf
MOTOR HRS: 11.75	DRILL HRS: 9.50	TOTAL HRS: 24.00	RPM (MOTOR): 273 rpm	DRAG DN: 84000 lbf

BHA / MOTOR / BIT INFORMATION:

BHA: 3	HOLE SIZE: 6.125 in	SECTION TYPE: Lateral 1	SURVEY TYPE: HEL LWD
MANFCT.: Weatherford	STABILIZER: No	SERIAL#: 475-2789	MODEL: ME6770
SETTING: 1.5 °	KICKPAD: No	SIZE: 5" (127mm)	LOBE CFG.: 6/7
MANFCT: Varel	BIT TYPE: Varel Bit	TYPE: VM513s	MTR HRS THIS DAY: 11.75
IADC BIT GRADE: 2 / 2 / BT / N / X / I / WT / TD			MTR HRS TO DATE: 40
			NOZZLES: 0.384 in ² TFA

PUMP PARAMETERS

PRESSURE ON BTM: 3300	PRESSURE OFF BTM: 2700	TOTAL FLOW RATE: 333.00 gal/min
PUMP 1: TYPE: PZ-11	EFF.: 95.0% SPM: 78.00	LINER: 6.00 in
PUMP 2: TYPE: PZ-11	EFF.: 95.0% SPM: 0.00	LINER: 0.00 in
PUMP 3: TYPE:	EFF.: 100.0% SPM: 0.00	LINER: 0.00 in
		STROKE VOL.: 3.8438 gal/stk
		STROKE VOL.: 0.0000 gal/stk
		STROKE VOL.: 0.0000 gal/stk

MUD RECORD

MUD TYPE: Water	VISC: 42 sec/qt	WTR LOSS: 7.6 cc/30min	PV: 16 cP	YP: 8 lb/100 ft ²	pH: 8.8
DENSITY: 9.8 lb/gal	GEL 0/10: 8.00 lb/100 ft ²	SAND: 1	SOLIDS: 7.6	OIL: 0	TEMP: 213 °F
LIQUID BASE: Water		LIQUID RATE: 0 gal/min	GAS TYPE:		GAS RATE: 0 cu ft/min

COMMENTS:

Drill F/ 10482' to 11490' @ TD. We were unable to log and get toolfaces from 10760' to 11490' @ 78 Strks/Min. We were able to get surveys off bottom and rotate ahead to TD as per Anadarko.



Daily Activity Report

Drilling Services
v4.2.3981

Day 7 - 2013/02/20

CUSTOMER SIGNATURE: _____

**Weatherford®**

Daily Activity Report

Drilling Services
v4.2.3981

Day 8 - 2013/02/21

FILE #: 4028455

WELL NAME: Dechant State 37N-W36HZ

SERVICE CO.: Weatherford

JOB TYPE: Horizontal

COMPANY: Anadarko Petroleum Corporation

SURVEY TYPE: Positive Pulse MWD

RIG & NO: Helmerich & Payne 307

SURFACE LOCATION: Weld County

FIELD / LOCATION: Wattenburg Field / CO / USA

DIR Supervisor: Charles Apodaca, Joe Kelly, Eric Hughes

MWD Supervisor: Rusty Korms, Anthony Danna

GROUND ELEV: 4808 ft

START DEPTH: 11490.0 ft

PROGRESS: 0.0 ft

DAILY COST: USD\$0.00

KB ELEV: 4833 ft

END DEPTH: 11490.0 ft

AVG. ROP.: 0.0 ft/hr

PREVIOUS COST: USD\$0.00

TOTAL COST: USD\$0.00

WORK STATUS: Operating

(All units are imperial.)

TIME	DAILY ACTIVITY	HRS	DPTH	BHA	TIME	DAILY ACTIVITY	HRS	DPTH	BHA
00:00-04:30	POOH To Run Casing	4.50	11490	3	06:00-24:00	Standby	18.00	11490	n/a
04:30-06:00	Lay Down Directional Tools	1.50	11490	3			0.00		

TIME SUMMARY (hrs):

MOTOR DRILL: 0.00	ORIENTING HRS: 0.00	ROTARY DRILL: 0.00
TIME DRILL: 0.00	ROTATING HRS: 0.00	MOTOR HRS: 0.00
MOTOR REAM: 0.00		TRIP: 4.50
CIRC: 0.00	ROTARY DRILL: 0.00	OTHER: 19.50
MOTOR HRS: 0.00	DRILL HRS: 0.00	TOTAL HRS: 24.00

DRILLING PARAMETERS:

ROTARY TORQUE:	STRING WEIGHT: 0 lbs
WOB SLIDING (HI): 0 lbf	WOB ROTATE (HI): 0 lbf
WOB SLIDING (LO): 0 lbf	WOB ROTATE (LO): 0 lbf
RPM (ROTARY):	DRAG UP: 0 lbf
RPM (MOTOR):	DRAG DN: 0 lbf

BHA / MOTOR / BIT INFORMATION:

BHA: 3	HOLE SIZE: 6.125 in	SECTION TYPE: Lateral 1	SURVEY TYPE: HEL LWD
MANFCT.: Weatherford	STABILIZER: No	SERIAL#: 475-2789	MODEL: ME6770
SETTING: 1.5 °	KICKPAD: No	SIZE: 5" (127mm)	MTR HRS THIS DAY: 0
MANFCT: Varel	BIT TYPE: Varel Bit	TYPE: VM513s	NOZZLES: 0.384 in ² TFA
IADC BIT GRADE: 2 / 2 / BT / N / X / I / WT / TD			LOBE CFG.: 6/7
			MTR HRS TO DATE: 40

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
PUMP 2: TYPE: PZ-11	EFF.: 95.0% SPM: 0.00	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 ft ²	pH: 0
DENSITY: 0 lb/gal	GEL 0/10: 0.00 lb/100 ft ²	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:

Lay down Lateral BHA. Run Production Liner.

CUSTOMER SIGNATURE: _____

**Weatherford®**

Daily Activity Report

Drilling Services
v4.2.3981

Day 9 - 2013/02/22

FILE #: 4028455

WELL NAME: Dechant State 37N-W36HZ

SERVICE CO.: Weatherford

JOB TYPE: Horizontal

COMPANY: Anadarko Petroleum Corporation

SURVEY TYPE: Positive Pulse MWD

RIG & NO: Helmerich & Payne 307

SURFACE LOCATION: Weld County

FIELD / LOCATION: Wattenburg Field / CO / USA

DIR Supervisor: Charles Apodaca, Eric Hughes, Joe Kelly

MWD Supervisor: Anthony Danna, Scott Coulter

GROUND ELEV: 4808 ft

START DEPTH: 11490.0 ft

PROGRESS: 0.0 ft

DAILY COST: USD\$0.00

KB ELEV: 4833 ft

END DEPTH: 11490.0 ft

AVG. ROP.: 0.0 ft/hr

PREVIOUS COST: USD\$0.00

WORK STATUS: Standby

(All units are imperial.)

TOTAL COST: USD\$0.00

TIME	DAILY ACTIVITY	HRS	DPTH	BHA	TIME	DAILY ACTIVITY	HRS	DPTH	BHA
00:00-24:00	Standby	24.00	11490	n/a			0.00		

TIME SUMMARY (hrs):

MOTOR DRILL: 0.00	ORIENTING HRS: 0.00	ROTARY DRILL: 0.00
TIME DRILL: 0.00	ROTATING HRS: 0.00	MOTOR HRS: 0.00
MOTOR REAM: 0.00		TRIP: 0.00
CIRC: 0.00	ROTARY DRILL: 0.00	OTHER: 24.00
MOTOR HRS: 0.00	DRILL HRS: 0.00	TOTAL HRS: 24.00

DRILLING PARAMETERS:

ROTARY TORQUE:	STRING WEIGHT: 0 lbs
WOB SLIDING (HI): 0 lbf	WOB ROTATE (HI): 0 lbf
WOB SLIDING (LO): 0 lbf	WOB ROTATE (LO): 0 lbf
RPM (ROTARY):	DRAG UP: 0 lbf
RPM (MOTOR):	DRAG DN: 0 lbf

BHA / MOTOR / BIT INFORMATION:

BHA:	HOLE SIZE:	SECTION TYPE:	SURVEY TYPE:
MANFCT.:	STABILIZER:	SERIAL#:	MODEL:
SETTING:	KICKPAD:	SIZE:	MTR HRS THIS DAY:
MANFCT:	BIT TYPE:	TYPE:	NOZZLES:
IADC BIT GRADE:			LOBE CFG.:
			MTR HRS TO DATE:

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:

Standby.

CUSTOMER SIGNATURE:

**Weatherford®**

Daily Activity Report

Drilling Services
v4.2.3981

Day 10 - 2013/02/23

FILE #: 4028455

WELL NAME: Dechant State 37N-W36HZ

SERVICE CO.: Weatherford

JOB TYPE: Horizontal

COMPANY: Anadarko Petroleum Corporation

SURVEY TYPE: Positive Pulse MWD

RIG & NO: Helmerich & Payne 307

SURFACE LOCATION: Weld County

FIELD / LOCATION: Wattenburg Field / CO / USA

2013/02/23

No personnel have been recorded for this date.

GROUND ELEV: 4808 ft

START DEPTH: 11490.0 ft

PROGRESS: 0.0 ft

DAILY COST: USD\$0.00

KB ELEV: 4833 ft

END DEPTH: 11490.0 ft

AVG. ROP.: 0.0 ft/hr

PREVIOUS COST: USD\$0.00

WORK STATUS:

(All units are imperial.)

TOTAL COST: USD\$0.00

TIME	DAILY ACTIVITY	HRS	DPTH	BHA	TIME	DAILY ACTIVITY	HRS	DPTH	BHA
		0.00					0.00		

TIME SUMMARY (hrs):

MOTOR DRILL: 0.00	ORIENTING HRS: 0.00	ROTARY DRILL: 0.00
TIME DRILL: 0.00	ROTATING HRS: 0.00	MOTOR HRS: 0.00
MOTOR REAM: 0.00		TRIP: 0.00
CIRC: 0.00	ROTARY DRILL: 0.00	OTHER: 0.00
MOTOR HRS: 0.00	DRILL HRS: 0.00	TOTAL HRS: 0.00

DRILLING PARAMETERS:

ROTARY TORQUE:	STRING WEIGHT: 0 lbs
WOB SLIDING (HI): 0 lbf	WOB ROTATE (HI): 0 lbf
WOB SLIDING (LO): 0 lbf	WOB ROTATE (LO): 0 lbf
RPM (ROTARY):	DRAG UP: 0 lbf
RPM (MOTOR):	DRAG DN: 0 lbf

BHA / MOTOR / BIT INFORMATION:

BHA:	HOLE SIZE:	SECTION TYPE:	SURVEY TYPE:
MANFCT.:	STABILIZER:	SERIAL#:	MODEL:
SETTING:	KICKPAD:	SIZE:	MTR HRS THIS DAY:
MANFCT:	BIT TYPE:	TYPE:	NOZZLES:
IADC BIT GRADE:			LOBE CFG.:
			MTR HRS TO DATE:

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:

CUSTOMER SIGNATURE: _____

**Weatherford®**

Daily Activity Report

Drilling Services
v4.2.3981

Day 11 - 2013/02/24

FILE #: 4028455

WELL NAME: Dechant State 37N-W36HZ

SERVICE CO.: Weatherford

JOB TYPE: Horizontal

COMPANY: Anadarko Petroleum Corporation

SURVEY TYPE: Positive Pulse MWD

RIG & NO: Helmerich & Payne 307

SURFACE LOCATION: Weld County

FIELD / LOCATION: Wattenburg Field / CO / USA

2013/02/24

No personnel have been recorded for this date.

GROUND ELEV: 4808 ft

START DEPTH: 11490.0 ft

PROGRESS: 0.0 ft

DAILY COST: USD\$0.00

KB ELEV: 4833 ft

END DEPTH: 11490.0 ft

AVG. ROP.: 0.0 ft/hr

PREVIOUS COST: USD\$0.00

WORK STATUS:

(All units are imperial.)

TOTAL COST: USD\$0.00

TIME	DAILY ACTIVITY	HRS	DPTH	BHA	TIME	DAILY ACTIVITY	HRS	DPTH	BHA
		0.00					0.00		

TIME SUMMARY (hrs):

MOTOR DRILL: 0.00	ORIENTING HRS: 0.00	ROTARY DRILL: 0.00
TIME DRILL: 0.00	ROTATING HRS: 0.00	MOTOR HRS: 0.00
MOTOR REAM: 0.00		TRIP: 0.00
CIRC: 0.00	ROTARY DRILL: 0.00	OTHER: 0.00
MOTOR HRS: 0.00	DRILL HRS: 0.00	TOTAL HRS: 0.00

DRILLING PARAMETERS:

ROTARY TORQUE:	STRING WEIGHT: 0 lbs
WOB SLIDING (HI): 0 lbf	WOB ROTATE (HI): 0 lbf
WOB SLIDING (LO): 0 lbf	WOB ROTATE (LO): 0 lbf
RPM (ROTARY):	DRAG UP: 0 lbf
RPM (MOTOR):	DRAG DN: 0 lbf

BHA / MOTOR / BIT INFORMATION:

BHA:	HOLE SIZE:	SECTION TYPE:	SURVEY TYPE:
MANFCT.:	STABILIZER:	SERIAL#:	MODEL:
SETTING:	KICKPAD:	SIZE:	MTR HRS THIS DAY:
MANFCT:	BIT TYPE:	TYPE:	NOZZLES:
IADC BIT GRADE:			LOBE CFG.: MTR HRS TO DATE:

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:

CUSTOMER SIGNATURE:



BHA REPORTS

**Weatherford®**

BHA Report

Drilling Services
v4.2.3981

BHA 1 - Build & Hold Section

FILE #: 4028455

WELL NAME: Dechant State 37N-W36HZ

SERVICE CO.: Weatherford

JOB TYPE: Horizontal

COMPANY: Anadarko Petroleum Corporation

SURVEY TYPE: Positive Pulse MWD

RIG & NO: Helmerich & Payne 307

SURFACE LOCATION: Weld County

FIELD / LOCATION: Wattenburg Field / CO / USA

DIR Supervisor: Josh Monroe, Charles Apodaca, Eric Hughes

MWD Supervisor: Scott Coulter, Rusty Korms

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	Hughes PDC Bit	Hughes	7143942	DP405	8.75	0	0		4 1/2" REG Pin	1.00 ft	1.00 ft
1	Bico Motor	Bico	K872	SS150	7.1875	0	0.83	4 1/2" REG Box	4 1/2" IF Box	26.76 ft	27.76 ft
1	NM Muleshoe Sub	Weatherford	AES 675-33447	UBHO	6.75	2.75	0	4 1/2" IF Pin	4 1/2" IF Box	3.50 ft	31.26 ft
1	Slick NMDC	Stabadrill	SD45400	Slick NMDC	6.82	3.25	3	4 1/2" IF Pin	4 1/2" IF Box	31.07 ft	62.33 ft
1	Flex NMDC	Stabadrill	SD50363	Flex NMDC	6.82	3.25	2.67	4 1/2" IF Pin	4 1/2" IF Box	30.85 ft	93.18 ft
1	X/O Sub	Stabadrill	SD111845	X/O Sub	6.875	2.875	1.53	4 1/2" IF Pin	XT39 Box	3.00 ft	96.18 ft
75	4" HWDP	Rig	Rig	25 STDS	4	3.5	0	XT-39 Pin	XT-39 Box	2287.65	2383.83 ft

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

GENERAL INFORMATION

DATES RUN: 2013/02/14 TO 2013/02/16
 DEPTH IN: 638.00 ft ANGLE IN: 0.00 °
 DEPTH OUT: 6418.00 ft ANGLE OUT: 0.00 °
 DRILL HRS: 18.92 BUILD: 0.00 °
 ORIENTING HRS: 5.17 HOLE MADE: 5780.00 ft
 ROTATING HRS: 13.75 AVG R.O.P.: 305.50 ft/hr

MOTOR INFORMATION

MANFCT. Bico SETTING: 1.50 °
 SERIAL #: K872 KICK PAD: No
 MODEL: SS150 STABILIZER: No
 LOBE CFG: 4/5 MOTOR HRS: 29.83
 BIT TO BEND: 7.27

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: 3000 psi	ON BTM: 4200 psi	

MUD INFORMATION

MUD TYPE: Water LIQUID BASE: Water
 DENSITY: 8.9 lb/gal TEMP: 179 °F
 VISCOSITY: 35 sec/qt pH: 8.6
 WTR LOSS: 30 cc/30min SAND: 0.85 LIQUID RATE: 0 gal/min
 PLAST VISC: 5 cP SOLIDS: 4.2 GAS TYPE:
 YIELD PT: 6 lb/100 ft² OIL: 0 GAS RATE: 0 cu ft/min

BIT INFORMATION

MANFCT: Hughes TYPE: DP405 IADC BIT GRADE: 2 / 2 / BT / N / X / I / WT / BHA
 NOZZLES: 0.752 in² TFA

REASON FOR BHA CHANGE

Change BHA To drill the Curve.

FORMATION CHARACTERISTICS

Formation seemed abrasive and had little tendency for drop but yet seemed to want to hold angle.

MWD COMMENTS

Battery consumption =19 % We had a 60 deg. Orifice and a 6 3/4 Pulser.

SIDETRACKING PROCEDURE COMMENTS



RUN SUMMARY

Average buildup rates experienced were 7 deg. per 100' and 3/8" of squat when squat testing motor, also we had a Muleshoe wash out our set plug which was gone and the pulser had damage to it on the outside.

**Weatherford®**

BHA Report

BHA 2 - Build Section

Drilling Services
v4.2.3981**FILE #:** 4028455**JOB TYPE:** Horizontal**RIG & NO:** Helmerich & Payne 307**WELL NAME:** Dechant State 37N-W36HZ**COMPANY:** Anadarko Petroleum Corporation**SURFACE LOCATION:** Weld County**SERVICE CO.:** Weatherford**SURVEY TYPE:** Positive Pulse MWD**FIELD / LOCATION:** Wattenburg Field / CO / USA**DIR Supervisor:** Josh Monroe, Charles Apodaca, Eric Hughes**MWD Supervisor:** Scott Coulter, Rusty Korms**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	Reed 5 Blade PDC Reed		E168009	E1202-A1B	8.75	0	0		4 1/2" REG Pin	1.00 ft	1.00 ft
1	Weatherford Motor Weatherford		675-4129		7.25	0	0	4 1/2" REG Box	4 1/2" IF Box	27.50 ft	28.50 ft
1	NM Muleshoe Sub Weatherford		675-33438		6.75	3	0	4 1/2" IF Pin	4 1/2" IF Box	3.60 ft	32.10 ft
1	Slick NMDC	Stabadrill	SD45400	Slick NMDC	6.82	3.25	3	4 1/2" IF Pin	4 1/2" IF Box	31.07 ft	63.17 ft
1	Flex NMDC	Stabadrill	SD50363	Flex NMDC	6.82	3.25	2.67	4 1/2" IF Pin	4 1/2" IF Box	30.85 ft	94.02 ft
1	X/O Sub	Stabadrill	SD111845	X/O Sub	6.875	2.875	1.53	4 1/2" IF Pin	XT39 Box	3.00 ft	97.02 ft
75	4" HWDP	Rig	Rig	25 STDS	4	3.5	0	XT-39 Pin	XT-39 Box	2287.65	2384.67 ft

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

GENERAL INFORMATION

DATES RUN: 2013/02/16 TO 2013/02/17
DEPTH IN: 6418.00 ft **ANGLE IN:** 0.00 °
DEPTH OUT: 7337.00 ft **ANGLE OUT:** 0.00 °
DRILL HRS: 9.08 **BUILD:** 0.00 °
ORIENTING HRS: 7.08 **HOLE MADE:** 919.00 ft
ROTATING HRS: 2.00 **AVG R.O.P.:** 101.21 ft/hr

MOTOR INFORMATION

MANFCT. Weatherford **SETTING:** 2.38 °
SERIAL #: 675-4129 **KICK PAD:** No
MODEL: **STABILIZER:** No
LOBE CFG: 7/8 **MOTOR HRS:** 13.00
BIT TO BEND: 6.2

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:	598 gal/min		
PUMP PRESSURE:	OFF BTM: 3765 psi	ON BTM: 4450 psi	

MUD INFORMATION

MUD TYPE: Water **LIQUID BASE:** Water
DENSITY: 10 lb/gal **TEMP:** 179 °F
VISCOSITY: 38 sec/qt **pH:** 8.7
WTR LOSS: 6.5 cc/30min **SAND:** 1 **LIQUID RATE:** 0 gal/min
PLAST VISC: 11 cP **SOLIDS:** 8.4 **GAS TYPE:**
YIELD PT: 7 lb/100 ft² **OIL:** 0 **GAS RATE:** 0 cu ft/min

BIT INFORMATION

MANFCT: Reed **TYPE:** E1202-A1B **IADC BIT GRADE:** 1 / 2 / CT / M / X / ? / ? / ?
NOZZLES: 1.242 in² TFA

REASON FOR BHA CHANGE

T.d. Curve

FORMATION CHARACTERISTICS

Formation acted as expected. We were expecting to cross a fault but never saw any indication while drilling or in our surveys that the fault had any negative impact while building curve.

MWD COMMENTS

MWD performed as expected. 6.75 pulser and 60 deg orifice used. Bottom hole temp was 166 deg. Battery consumption was 20%.

SIDETRACKING PROCEDURE COMMENTS



RUN SUMMARY

Average build rates were 13 deg per 100'. Condition of BHA was good when pulled. Build rates were achieved as expected. Motor tested and drained on surface. Overall performance w/ 7.3 drilling hours to complete curve was excellent.

**Weatherford®**

BHA Report

Drilling Services
v4.2.3981

BHA 3 - Lateral 1 Section

FILE #: 4028455

WELL NAME: Dechant State 37N-W36HZ

SERVICE CO.: Weatherford

JOB TYPE: Horizontal

COMPANY: Anadarko Petroleum Corporation

SURVEY TYPE: Positive Pulse MWD

RIG & NO: Helmerich & Payne 307

SURFACE LOCATION: Weld County

FIELD / LOCATION: Wattenburg Field / CO / USA

DIR Supervisor: Josh Monroe, Charles Apodaca, Eric Hughes

MWD Supervisor: Rusty Korms, John Mahar

Company Man: Doug Barone, Doug Blair

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	Varel Bit	Varel	4005224	VM513s	6.125	0	0		4 1/2" REG Pin	1.00 ft	1.00 ft
1	Weatherford Motor	Weatherford	475-2789	ME6770	5.41	0	0.61	3 1/2" REG Box	3 1/2" IF Box	28.05 ft	29.05 ft
1	IBS Stabilizer	Stabadrill	SD27775	IBS Stabilizer	5.79	2.25	0.92	3 1/2" IF Pin	3 1/2" IF Box	3.92 ft	32.97 ft
1	SAGR	Weatherford	NW130439	Azi/Gamma	4.75	2.5	0	3 1/2" IF Pin	3 1/2" IF Box	14.08 ft	47.05 ft
1	split IDS	Weatherford	NW130438		4.75	2.43	0	3 1/2" IF Pin	3 1/2" IF Box	11.87 ft	58.92 ft
1	HEL LWD	Weatherford	NW130436	Svy Snr	4.75	2.25	10.39	3 1/2" IF Pin	3 1/2" IF Box	14.57 ft	73.49 ft
1	IBS Stabilizer	Stabadrill	SD29121	IBS Stabilizer	5.86	2.75	2.45	3 1/2" IF Pin	3 1/2" IF Box	5.89 ft	79.38 ft
1	Slick NMDC	Stabadrill	SD47008	Slick NMDC	4.62	2.75	2.81	3 1/2" IF Pin	3 1/2" IF Box	29.89 ft	109.27 ft
1	X/O Sub	Stabadrill	SD111071	X/O Sub	4.75	2.25	0	3 1/2" IF Pin	XT39 Box	2.20 ft	111.47 ft
1	Ghost Reamer	Rig	SD 802459	Ghost Reamer	5.02	2.5	0	XT-39 Pin	XT-39 Box	7.39 ft	118.86 ft
132	4" Drill Pipe	Rig	Rig	44 STDS	4	3.5	0	XT-39 Pin	XT-39 Box	4161.54	4280.40 ft
75	4" HWDP	Rig	Rig	25 STDS	4	3.5	0	XT-39 Pin	XT-39 Box	2291.64	6572.04 ft

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

GENERAL INFORMATION

DATES RUN: 2013/02/18 TO 2013/02/21
DEPTH IN: 7337.00 ft **ANGLE IN:** 0.00 °
DEPTH OUT: 11490.00 ft **ANGLE OUT:** 0.00 °
DRILL HRS: 28.58 **BUILD:** 0.00 °
ORIENTING HRS: 8.92 **HOLE MADE:** 4153.00 ft
ROTATING HRS: 19.67 **AVG R.O.P.:** 145.31 ft/hr

MOTOR INFORMATION

MANFCT. Weatherford **SETTING:** 1.50 °
SERIAL #: 475-2789 **KICK PAD:** No
MODEL: ME6770 **STABILIZER:** No
LOBE CFG: 6/7 **MOTOR HRS:** 40.00
BIT TO BEND: 5.75

PUMP INFORMATION

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

MUD INFORMATION

MUD TYPE: Water **LIQUID BASE:** Water
DENSITY: 9.8 lb/gal **TEMP:** 213 °F
VISCOSITY: 42 sec/qt **pH:** 8.8
WTR LOSS: 7.6 cc/30min **SAND:** 1 **LIQUID RATE:** 0 gal/min
PLAST VISC: 16 cP **SOLIDS:** 7.6 **GAS TYPE:**
YIELD PT: 8 lb/100 ft² **OIL:** 0 **GAS RATE:** 0 cu ft/min

BIT INFORMATION

MANFCT: Varel **TYPE:** VM513s **IADC BIT GRADE:** 2 / 2 / BT / N / X / I / WT / TD
NOZZLES: 0.384 in² TFA

REASON FOR BHA CHANGE

TD'D Well @ 11490'

FORMATION CHARACTERISTICS

Formation acted as expected.



MWD COMMENTS

Downhole Temp at TD was 227 degrees. From approx. 10760' to 11490' @ TD we were unable to log and get toolfaces @ 300 gpm. We were able to get surveys all the way to TD as per Anadarko we rotated ahead without logging to TD.

SIDETRACKING PROCEDURE COMMENTS

N/A

RUN SUMMARY

Average build rates were 10 deg per 100'. Condition of BHA was good when pulled. Build rates were achieved as expected. Motor tested and drained on surface. Overall performance w/ 23 drilling hours to complete section was fair. The torque and drag on this well was high. We attempted to slide @ 11200' and were unable to get to bottom without rotating the string. We used all WOB available except for the top drive in this attempt.



MOTOR REPORTS

**Weatherford**

Motor / RSS Evaluation Report

Drilling Services
v4.2.3981

BHA 1 - Build & Hold Section, Motor #K872

FILE #: 4028455 WELL NAME: Dechant State 37N-W36HZ SERVICE CO.: Weatherford
 JOB TYPE: Horizontal COMPANY: Anadarko Petroleum Corporation SURVEY TYPE: Positive Pulse MWD
 RIG & NO: Helmerich & Payne 307 SURFACE LOCATION: Weld County FIELD / LOCATION: Wattenburg Field / CO / USA

DIR Supervisor: Josh Monroe, Charles Apodaca, Eric Hughes
 MWD Supervisor: Scott Coulter, Rusty Korms
 Company Man: Doug Barone, Doug Blair

BHA SURVEY TYPE: Positive Pulse MWD

HOLE SIZE: 8.75 in

GENERAL INFORMATION:

BHA #: 1 START DEPTH: 638.00 ft
 DATE IN: 2013/02/14 END DEPTH: 6418.00 ft
 DATE OUT: 2013/02/16 HOLE MADE: 5780.00 ft
 ANGLE IN: 0.00 ° AVG ROP: 305.50 ft/hr
 ANGLE OUT: 0.00 °
 ORIENTING HRS: 5.17 ROTATING HRS: 13.75

MOTOR INFORMATION:

MANFCT: Bico
 SERIAL #: K872
 MODEL: SS150
 LOBE: 4/5 BIT TO BEND: 7.27 ft
 SETTING: 1.50 ° KICKPAD: No
 STABILIZER: No

DRILLING INFORMATION:

BIT TYPE: DP405 IADC BIT GRADE: 2 / 2 / BT / N / X / I / WT / BHA
 BIT PRESS DROP: 0.00 psi TOTAL FLOW RATE: 547.75 gal/min PUMP PRESS: (OFF) 3000.00 psi
 MTR PRESS DROP: 0.00 psi NOZZLES: 0.752 in² TFA (ON) 4200.00 psi

MUD INFORMATION:

MUD TYPE: Water LIQUID BASE: Water (All units are imperial.)
 DENSITY: 9 lb/gal VISCOSITY: 35 sec/qt
 SAND: 0.850 WATER LOSS: 30.00 cc/30min LIQUID RATE: 0.00 gal/min
 SOLIDS: 4.200 PLASTIC VISC: 5.0 cP GAS TYPE:
 OIL: 0.000 YIELD POINT: 6.0 lb/100 ft² GAS RATE: 0.00 cu ft/min
 TEMP: 179 °F pH: 8.6

TIME INFORMATION:

CIRCULATING HOURS: 10.92
 REAMING HOURS: 0.00
 TIME DRILL HOURS: 0.00
 MOTOR DRILL HOURS: 18.92
 MOTOR HOURS THIS RUN: 29.83
 PREVIOUS HOURS: 0.00
 TOTAL MOTOR HOURS: 29.83
 TOTAL BRT HOURS: 29.83

MOTOR EVALUATION COMMENTS:

Motor Ran as expected we had no problems with it. Motor had a total 29.83 hrs on it. Motor had 3/8 of squat in it when squat testing.
 Max diff ran on this motor was 1500

REASON FOR BHA CHANGE:

Change BHA To drill the Curve.

COMMENTS FROM LAST DAY RAN:

DRILL F 6418 TO 7307

**Weatherford**

Motor / RSS Evaluation Report

Drilling Services
v4.2.3981

BHA 2 - Build Section, Motor #675-4129

FILE #: 4028455 WELL NAME: Dechant State 37N-W36HZ SERVICE CO.: Weatherford
 JOB TYPE: Horizontal COMPANY: Anadarko Petroleum Corporation SURVEY TYPE: Positive Pulse MWD
 RIG & NO: Helmerich & Payne 307 SURFACE LOCATION: Weld County FIELD / LOCATION: Wattenburg Field / CO / USA

DIR Supervisor: Josh Monroe, Charles Apodaca, Eric Hughes
 MWD Supervisor: Scott Coulter, Rusty Korms
 Company Man: Doug Barone, Doug Blair

BHA SURVEY TYPE: Positive Pulse MWD

HOLE SIZE: 8.75 in

GENERAL INFORMATION:

BHA #: 2 START DEPTH: 6418.00 ft
 DATE IN: 2013/02/16 END DEPTH: 7337.00 ft
 DATE OUT: 2013/02/17 HOLE MADE: 919.00 ft
 ANGLE IN: 0.00 ° AVG ROP: 101.21 ft/hr
 ANGLE OUT: 0.00 °
 ORIENTING HRS: 7.08 ROTATING HRS: 2.00

MOTOR INFORMATION:

MANFCT: Weatherford
 SERIAL #: 675-4129
 MODEL:
 LOBE: 7/8 BIT TO BEND: 6.2 ft
 SETTING: 2.38 ° KICKPAD: No
 STABILIZER: No

DRILLING INFORMATION:

BIT TYPE: E1202-A1B IADC BIT GRADE: 1 / 2 / CT / M / X / ? / ? / ?
 BIT PRESS DROP: 0.00 psi TOTAL FLOW RATE: 598.00 gal/min PUMP PRESS: (OFF) 3765.00 psi
 MTR PRESS DROP: 0.00 psi NOZZLES: 1.242 in² TFA (ON) 4450.00 psi

MUD INFORMATION:

MUD TYPE: Water LIQUID BASE: Water (All units are imperial.)
 DENSITY: 10 lb/gal VISCOSITY: 38 sec/qt
 SAND: 1.000 WATER LOSS: 6.50 cc/30min LIQUID RATE: 0.00 gal/min
 SOLIDS: 8.400 PLASTIC VISC: 11.0 cP GAS TYPE:
 OIL: 0.000 YIELD POINT: 7.0 lb/100 ft² GAS RATE: 0.00 cu ft/min
 TEMP: 179 °F pH: 8.7

TIME INFORMATION:

CIRCULATING HOURS: 3.92
 REAMING HOURS: 0.00
 TIME DRILL HOURS: 0.00
 MOTOR DRILL HOURS: 9.08
 MOTOR HOURS THIS RUN: 13.00
 PREVIOUS HOURS: 0.00
 TOTAL MOTOR HOURS: 13.00
 TOTAL BRT HOURS: 13.00

MOTOR EVALUATION COMMENTS:

Motor Ran as expected. Average build rates were between 12-14 deg/ 100. Motor Hours this run was 13. Motor had a max weight of 90000 ran on it. Curve drilled in 7.3 bit hours with an average ROP of 129 ft/ hr.

REASON FOR BHA CHANGE:

T.d. Curve

COMMENTS FROM LAST DAY RAN:

DRILL F/ 7307 TO 7337

Pmps had to many issues while drilling this Curve.



BHA 2 - Build Section, Motor #675-4129

Curve landed in 7.3 bit hours.

POOH and lay down directional tools.

Run 7" & wait on orders

**Weatherford®**

Motor / RSS Evaluation Report

Drilling Services
v4.2.3981

BHA 3 - Lateral 1 Section, Motor #475-2789

FILE #: 4028455 WELL NAME: Dechant State 37N-W36HZ SERVICE CO.: Weatherford
 JOB TYPE: Horizontal COMPANY: Anadarko Petroleum Corporation SURVEY TYPE: Positive Pulse MWD
 RIG & NO: Helmerich & Payne 307 SURFACE LOCATION: Weld County FIELD / LOCATION: Wattenburg Field / CO / USA

DIR Supervisor: Josh Monroe, Charles Apodaca, Eric Hughes
 MWD Supervisor: Rusty Korms, John Mahar
 Company Man: Doug Barone, Doug Blair

BHA SURVEY TYPE: HEL LWD

HOLE SIZE: 6.125 in

GENERAL INFORMATION:

BHA #: 3 START DEPTH: 7337.00 ft
 DATE IN: 2013/02/18 END DEPTH: 11490.00 ft
 DATE OUT: 2013/02/21 HOLE MADE: 4153.00 ft
 ANGLE IN: 0.00 ° AVG ROP: 145.31 ft/hr
 ANGLE OUT: 0.00 °
 ORIENTING HRS: 8.92 ROTATING HRS: 19.67

MOTOR INFORMATION:

MANFCT: Weatherford
 SERIAL #: 475-2789
 MODEL: ME6770
 LOBE: 6/7 BIT TO BEND: 5.75 ft
 SETTING: 1.50 ° KICKPAD: No
 STABILIZER: No

DRILLING INFORMATION:

BIT TYPE: VM513s IADC BIT GRADE: 2 / 2 / BT / N / X / I / WT / 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: 0.384 in² TFA (ON) 0.00 psi

MUD INFORMATION:

MUD TYPE: Water LIQUID BASE: Water (All units are imperial.)
 DENSITY: 10 lb/gal VISCOSITY: 42 sec/qt
 SAND: 1.000 WATER LOSS: 7.60 cc/30min LIQUID RATE: 0.00 gal/min
 SOLIDS: 7.600 PLASTIC VISC: 16.0 cP GAS TYPE:
 OIL: 0.000 YIELD POINT: 8.0 lb/100 ft² GAS RATE: 0.00 cu ft/min
 TEMP: 213 °F pH: 8.8

TIME INFORMATION:

CIRCULATING HOURS: 11.42
 REAMING HOURS: 0.00
 TIME DRILL HOURS: 0.00
 MOTOR DRILL HOURS: 28.58
 MOTOR HOURS THIS RUN: 40.00
 PREVIOUS HOURS: 0.00
 TOTAL MOTOR HOURS: 40.00
 TOTAL BRT HOURS: 40.00

MOTOR EVALUATION COMMENTS:

Motor had a total of 38.53 circulating hours on it w/23.35 drilling hours and an average ROP of 178 ft/hr. Average build rates of 10 deg per 100'. Motor showed no squat when tested and drained on surfaced. Overall performance with this motor was as expected. Penetration rate and allowable WOB run on assembly was limited towards end of lateral due to high torque and drag in well bore. Average WOB was 10-40K, RPM 50-85 and Diff. Pressure was 800-1400 psi.

REASON FOR BHA CHANGE:

TD'D Well @ 11490'

COMMENTS FROM LAST DAY RAN:

Lay down Lateral BHA. Run Production Liner.



SLIDE SHEET REPORTS



Drilling Parameters

BHA # 1

Motor Type: 1.5 degree BICO 6 3/4" 4:5 6.2 stage

Rig: H&P 307

Operator: Anadarko

Motor Fit: ?

Start Date: 14-Feb

Well Name: Dechant State 37N-W36HZ

Bit to Bend: 6.19'

End Date:

Survey Depth	INC	AZI	Start Depth	End Depth	Feet	R or S	TF or RPM	Drill Hours	WOB 1000#	PU/SO/RW 1000#	GPM	Diff PSI	ROP	Comment
956	0.63	132.18	1016	1041	25	S	81 M	0.08	10	56,54,55	598	150	313	
			1041	1108	67	R	50	0.17	35	56,54,56	598	608	394	
1048	2.61	104.18	1108	1133	25	S	70 M	0.17	10	56,54,56	598	200	147	
			1133	1200	67	R	50	0.08	35	56,54,56	598	1200	838	
1140	5.49	90	1200	1220	20	S	20 L	0.33	10	56,54,56	598	250	61	
			1220	1291	71	R	50	0.08	35	69,67,68	598	1200	888	
1231	8.09	86.45	1291	1311	20	S	20 L	0.33	10	69,67,68	598	250	61	
			1311	1383	72	R	50	0.08	35	69,67,68,	598	900	900	
1323	10.13	83.79	1383	1388	5	S	90 L	0.17	10	69,67,68	598	150	29	
			1388	1475	87	R	50	0.08	18	69,67,68	598	1100	1088	
1415	10.59	76.93	1475	1566	91	R	65	0.17	16	69,67,68	598	900	535	
1506	10.29	76.56	1566	1656	90	R	65	0.08	16	69,67,68	598	1250	1125	
1596	9.93	77	1656	1748	92	R	65	0.08	16	69,67,68	598	1148	1150	
1688	9.59	77.76	1748	1838	90	R	65	0.17	15	69,67,68	598	1053	529	
1778	9.09	75.63	1838	1930	92	R	50	0.08	16	69,67,68,	598	700	1150	
1870	9.09	74.38	1930	2021	91	R	50	0.08	13	69,67,68	598	800	1138	
1961	8.4	73.46	2021	2112	91	R	55	0.33	13	86,79,82	598	500	276	
2052	7.38	74.5	2112	2137	25	S	HS	0.17	10	86,79,82	422	100	147	1 Pump
			2137	2204	67	R	50	0.17	14	86,79,82	598	700	394	
2144	8.91	78.55	2204	2229	25	S	10R	0.25	7	86,79,82	598	200	100	
			2229	2296	67	R	50	0.08	16	86,79,82	598	900	838	
2236	11.22	81.94	2296	2390	94	R	50	0.08	12	86,79,82	598	900	1175	
2330	11.21	79.1	2390	2485	95	R	60	0.17	13.5		598	1200	559	
2425	10.08	73.58	2485	2579	94	R	50	0.17	22		598	1000	553	
2519	9.31	70.06	2579	2599	20	S	20 R	0.25	10		598	200	80	
			2599	2674	75	R	50	0.17	18		598	1000	441	
2614	9.52	72.93	2674	2694	20	S	45 R	0.17	10	98,87,93	598	150	118	
			2694	2737	43	R	50	0.08	15		598	1200	538	
			2737	2742	5	S	90 R	0.17	10		598	200	29	
			2742	2768	26	R	50	0.08	15		598	1500	325	
2708	10.28	79.33	2768	2788	20	S	45 R	0.25	10		598	150	80	
			2788	2863	75	R	50	0.17	20	98,87,93	598	1125	441	
2803	10.5	95	2863	2958	95	R	50	0.25	20		598	900	380	
2898	10.05	93.51	2958	3052	94	R	40	0.08	16		598	1200	1175	
2992	9.38	92.18	3052	3072	20	S	30 L	0.17	10		598	200	118	
3087	10.97	89.1	3072	3147	75	R	40	0.25	15		422	800	300	1 PUMP
3182	10.38	87.92	3147	3242	95	R	40	0.25	15	106,93,100	598	850	380	
3276			3242	3336	94	R	40	0.17	15		598	850	553	
			3336	3361	25	S	20L	0.17	15		598	350	147	
3370	11.41	87.55	3361	3430	69	R	50	0.25	15	109, 92,103	598	850	276	



Rig: H&P 307

Start Date: 14-Feb

End Date:

Survey Depth	INC	AZI	Start Depth	End Depth	Feet	R or S	TF or RPM	Drill Hours	WOB 1000#	PU/SO/RW 1000#	GPM	Diff PSI	ROP	Comment
3465	10.52	85.22	3430	3525	95	R	50	0.08	21		598	850	1188	
3560	9.66	85.96	3525	3620	95	R	50	0.08	21		598	850	1188	
			3620	3645	25	S	20L	0.08	15		598	350	313	
3654	10.63	79.81	3645	3714	69	R	50	0.42	21		598	1100	164	
3749	9.48	78.46	3714	3809	95	R	50	0.17	15		598	1100	559	
			3809	3834	25	S	HS	0.17	16		598	350	147	
3844	10.78	77.91	3834	3904	70	R	50	0.17	22		598	1400	412	
3938			3904	3998	94	R	50	0.17	22	117, 98, 107	598	1400	553	
4033	10.48	76.59	3998	4093	95	R	50	0.25	21		598	1400	380	
4127			4093	4187	94	R	50	0.25	22		598	1300	376	
4222	10.07	73.8	4187	4282	95	R	60	0.33	22		598	1450	288	
4317	9.27	72.24	4282	4377	95	R	60	0.17	22		598	1450	559	
4411	8.1	69.72	4377	4471	94	R	60	0.25	12		422	1000	376	1 Pump
4506	7.5	67.91	4471	4566	95	R	60	0.42	12		422	1000	226	1 Pump
4601	7.29	67.07	4566	4661	95	R	60	0.25	22		598	1200	380	
4695	6.67	66.04	4661	4755	94	R	70	0.25	22		422	950	376	1 Pump
4790	5.87	66.64	4755	4850	95	R	80	0.42	22		422	950	226	1 Pump
4885	5.24	66	4850	4945	95	R	80	0.58	17		422	1150	164	1 Pump
4979	4.77	65.09	4945	5039	94	R	80	0.25	16		422	1000	376	1 Pump
5074	4.49	64.21	5039	5134	95	R	80	0.25	16		598	1300	380	
			5134	5159	25	O	LS	0.17	15		598	350	147	
5168	2.34	76.44	5159	5228	69	R	80	0.17	17		598	850	406	
			5228	5243	15	O	255M	0.25	15		598	850	60	
5263	1.03	85.06	5243	5323	80	R	80	0.25	15		598	850	320	
			5323	5336	13	O	265 M	0.75	2		598	75	17.33	
5441	0.43	306.15	5336	5417	81	R	80	0.17	17	156,114,132	598	1230	476.5	
			5417	5512	95	R	65	0.17	17		598	1200	558.8	
			5512	5607	95	R	65	0.17	17		598	1200	558.8	
			5607	5701	94	R	65	0.42	17		598	1200	223.8	
5736	1.47	162.67	5701	5796	95	R	65	0.08	17		598	1000	1188	
			5796	5890	94	R	65	0.33	17		598	1072	284.8	
			5890	5985	95	R	65	0.25	17		598	1050	380	
			5985	6080	95	R	65	0.33	17		598	1050	287.9	
6114	1.54	151.02	6080	6174	94	R	65	0.25	17		598	1035	376	
			6174	6269	95	R	65	0.33	16		598	1025	287.9	
			6269	6363	94	R	65	0.25	15		598	1224	376	
6358	1.44	160.79	6363	6418	55	R	65	0.25	15	173,127,144	598	1200	220	

Rig: H&P 307

Start Date: 15-Feb

End Date: _____

[illegible]

**Weatherford®****Drilling Parameters**BHA # 3Motor Type: 1.5 degree WFT 5" 6:7 7.0 stageRig: Xtreme 23Operator: AnadarkoMotor Fit: 5 titeStart Date: 5-Feb

Well Name: _____

Bit to Bend: 6.2End Date: 5-Feb

Survey Depth	INC	AZI	Start Depth	End Depth	Feet	R or S	TF or RPM	Drill Hours	WOB 1000#	PU/SO/RW 1000#	GPM	Diff PSI	ROP	Comment
			7337	7360	23	R or	50	0.17	15		333	600	135.3	
			7360	7375	15	s	90L	0.42	15		333	275	35.71	
7369	90.74	183.16	7375	7423	48	R or	50	0.25	25		333	900	192	
			7423	7438	15	S	90 L	0.58	25		333	375	25.86	
			7438	7485	47	R or	55	0.25	35	187,124,148	333	900	188	
			7485	7500	15	S	90 L	0.25	25		333	350	60	
7463	89.88	180.74	7500	7517	17	R or	55	0.08	35		333	900	212.5	
7557	89.44	179.14	7517	7611	94	R or	45	0.5	40		333	950	188	
			7611	7621	10	s	HS	0.17	35		333	200	58.82	
7652	90.49	178.65	7621	7706	85	R or	45	0.33	40		333	1106	257.6	
7747	90.33	178.6	7706	7801	95	R or	65	0.42	36		333	1025	226.2	
7835	90.44	178.42	7801	7895	94	R or	65	0.42	35		333	1025	223.8	
			7895	7910	15	s	90 R	0.25	35		333	275	60	
7936	90.19	180.02	7910	7990	80	R or	65	0.33	39	195,116,147	333	1000	242.4	
8031	89.74	180.01	7990	8085	95	R or	65	0.42	39		333	1000	226.2	
			8085	8095	10	s	HS	0.08	25		333	350	125	
8125	90.43	179.27	8095	8179	84	R or	45	0.33	35		333	1000	254.5	
8220	90.19	179.19	8179	8274	95	R or	65	0.25	50		333	1190	380	
8314	90.06	179.15	8274	8368	94	R	80	0.25	45		333	1150	376	
8409	89.94	178.76	8368	8463	95	R	85	0.33	45		333	1175	287.9	
			8463	8478	15	S	70R	0.33	25		333	350	45.45	
8504	90.37	180.89	8478	8558	80	R	85	0.33	45	202,138, 114	333	1260	242.4	
			8558	8568	10	S	80R	0.2	25		333	350	50	
8598	90.74	182.15	8568	8652	84	R	85	0.3	45		333	1260	280	
8693	90.06	182.15	8652	8747	95	R	85	0.33	45		333	1250	287.9	
8788	90.12	181.41	8747	8842	95	R	85	0.33	40		300	1250	287.9	
8882	89.81	181.18	8842	8936	94	R	85	0.33	45		300	1170	284.8	
8977	89.81	181.41	8936	9031	95	R	85	0.33	45		300	1250	287.9	
9071	89.63	180.87	9031	9125	94	R	85	0.33	45	216,98,148	300	1250	284.8	
9166	89.75	181.08	9125	9220	95	R	85	0.33	45		300	1205	287.9	
9261	90.19	181.62	9220	9315	95	R	85	0.33	45		300	1205	287.9	
9355	90.18	181.68	9315	9409	94	R	85	0.33	45		300	1137	284.8	
9450	90.31	181.44	9409	9504	95	R	85	0.33	45		300	1180	287.9	
9544	90.68	181.25	9504	9598	94	R	85	0.25	45		300	1200	376	
9639	91.17	181.3	9598	9693	95	R	85	0.4	45		300	1200	237.5	
			9693	9703	10	S	150L	0.5	85		300		20	
9734	90.31	181.47	9703	9788	85	R	85	0.25	45	236,82,150	300	1200	340	
9828	90.18	180.89	9788	9882	94	R	85	0.25	85		300	1200	376	
9923	90.12	180.57	9882	9977	95	R	85	0.33	45		300	1200	287.9	
			9977	9985	8	S	155L	0.5	90		300	100	16	



Drilling Parameters

Rig: Xtreme 23

Start Date: 5-Feb

End Date: 5-Feb

[illegible]



ADDITIONAL REPORTS
