

Schlumberger

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Greenwood Village, CO 80111
(303) 486-3200



SUB-SURFACE SURVEY CERTIFICATION REPORT

BP America Inc.
Company

30-845-32362

December 8, 2004
Date

Lease

Atlantic 1M
Well Name

San Juan Co., New Mexico
County/State

Survey Depths

295 to 3120 ft

Type of Survey

Measurement While Drilling Surveys

Survey Depths

3120 to 3201 ft

Type of Survey

Projection to Bit

Survey Depths

to ft

Type of Survey

Site Supervisor

Paul Curtis

The data submitted in this report conforms to the standards and procedures as set forth by Schlumberger. This report represents a true and correct directional wellbore survey based on original survey data obtained at the well site.

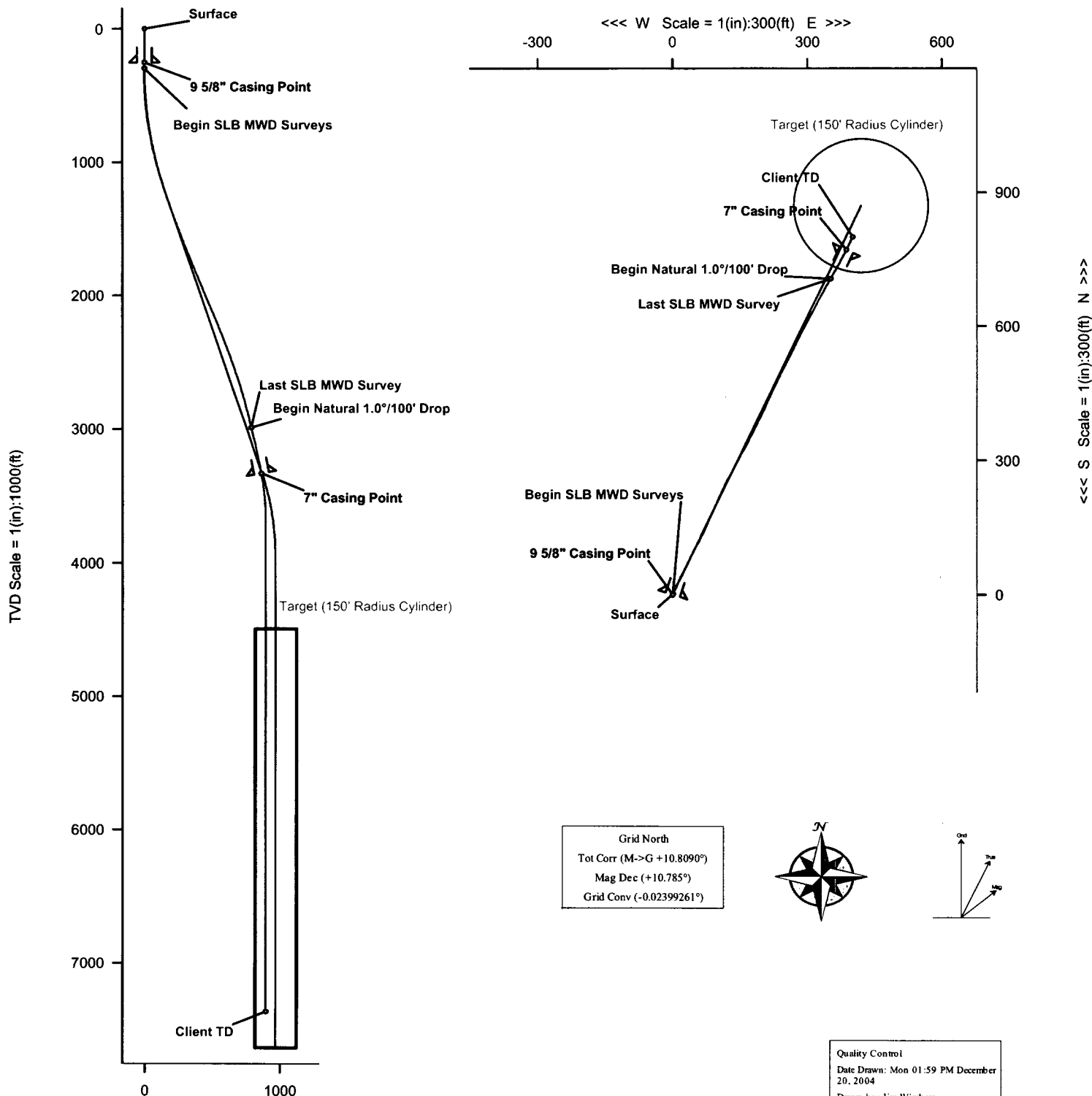
John O'Keefe
Drilling Engineer

This document has been subscribed and affirmed, or sworn before me in the county of Arapahoe in the state of Colorado, this 8th day of December 2004.

Christine J. Wilson My commission expires: 12-12-05

Surface 1770/N 1780/W, 34 T31N, R10W
BHL 970/N 2181/W

Well Atlantic 1M				Field San Juan County, New Mexico				Rig Aztec 184			
Magnetic Parameters Model BGGM 2004				Surface Location NAD83 New Mexico State Planes, Western Zone, US Feet				Miscellaneous			
Dip	63.719°	Date	December 7, 2004	Latitude	N38 51 24.000	Northing	2131152.76 NUS	Grid Convergence	-0.02399261°	Borehole	Original Hole
Mag Dec	+10.785°	Field Strength	51452.0 nT	Longitude	W107 52 24.000	Easting	2711389.45 NUS	Scale Factor	0.9999170000	Plan	EOW10H
								TVD Reference RKB (6265.00 ft above MSL.)			
								Survey Date December 20, 2004			





Atlantic 1M Final Surveys

Report Date: December 20, 2004	Survey / DLS Computation Method: Minimum Curvature / Lubinski
Client: BP America, Inc.	Vertical Section Azimuth: 25.770°
Field: NM, San Juan County (NAD 83 WZ) 2004	Vertical Section Origin: N 0.000 ft, E 0.000 ft
Structure / Slot: BP 34-31N-10W (Atlantic 1M) / Atlantic 1M	TVD Reference Datum: RKB
Well: Atlantic 1M	TVD Reference Elevation: 6265.0 ft relative to MSL
Borehole: Original Hole	Sea Bed / Ground Level Elevation: 6251.000 ft relative to MSL
UWI/API#:	Magnetic Declination: 10.785°
Survey Name / Date: EOW1OH / December 20, 2004	Total Field Strength: 51451.975 nT
Tort / AHD / DDI / ERD ratio: 54.941° / 899.89 ft / 4.702 / 0.122	Magnetic Dip: 63.719°
Grid Coordinate System: NAD83 New Mexico State Planes, Western Zone, US Feet	Declination Date: December 07, 2004
Location Lat/Long: N 36 51 24.000, W 107 52 24.000	Magnetic Declination Model: BGGM 2004
Location Grid N/E Y/X: N 2131152.757 ftUS, E 2711389.454 ftUS	North Reference: Grid North
Grid Convergence Angle: -0.02399261°	Total Corr Mag North -> Grid North: +10.809°
Grid Scale Factor: 0.99991682	Local Coordinates Referenced To: Well Head

Comments	Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Vertical Section (ft)	NS (ft)	EW (ft)	DLS (deg/100 ft)	Northing (ftUS)	Easting (ftUS)	Latitude	Longitude
Surface	0.00	0.00	198.31	0.00	0.00	0.00	0.00	0.00	2131152.76	2711389.45	N 36 51 24.000	W 107 52 24.000
9 5/8" Casing Point	252.00	0.58	198.31	252.00	-1.27	-1.21	-0.40	0.23	2131151.54	2711389.05	N 36 51 23.988	W 107 52 24.005
Begin SLB MWD Surveys	295.00	0.68	198.31	294.99	-1.74	-1.66	-0.55	0.23	2131151.10	2711388.90	N 36 51 23.984	W 107 52 24.007
	326.00	0.49	271.05	325.99	-1.97	-1.83	-0.74	2.29	2131150.92	2711388.71	N 36 51 23.982	W 107 52 24.009
	356.00	0.44	344.55	355.99	-1.94	-1.72	-0.90	1.86	2131151.04	2711388.55	N 36 51 23.983	W 107 52 24.011
	387.00	0.94	3.99	386.99	-1.61	-1.35	-0.91	1.76	2131151.40	2711388.54	N 36 51 23.987	W 107 52 24.011
	417.00	1.83	4.64	416.98	-0.94	-0.63	-0.86	2.97	2131152.13	2711388.60	N 36 51 23.994	W 107 52 24.011
	448.00	2.29	4.50	447.96	0.10	0.48	-0.77	1.48	2131153.24	2711388.69	N 36 51 24.005	W 107 52 24.009
	483.00	3.02	9.39	482.92	1.64	2.09	-0.56	2.18	2131154.84	2711388.89	N 36 51 24.021	W 107 52 24.007
	514.00	3.75	21.23	513.87	3.43	3.84	-0.06	3.25	2131156.60	2711389.39	N 36 51 24.038	W 107 52 24.001
	545.00	4.51	22.52	544.79	5.66	5.91	0.77	2.47	2131158.67	2711390.22	N 36 51 24.058	W 107 52 23.991
	577.00	5.28	27.66	576.67	8.38	8.38	1.94	2.77	2131161.13	2711391.39	N 36 51 24.083	W 107 52 23.976
	640.00	6.98	30.11	639.31	15.10	14.26	5.20	2.73	2131167.01	2711394.66	N 36 51 24.141	W 107 52 23.936
	703.00	8.52	28.45	701.73	23.58	21.67	9.35	2.47	2131174.43	2711398.80	N 36 51 24.214	W 107 52 23.885
	767.00	10.09	26.65	764.89	33.92	30.85	14.12	2.49	2131183.60	2711403.57	N 36 51 24.305	W 107 52 23.826
	831.00	11.24	27.31	827.78	45.76	41.40	19.50	1.81	2131194.16	2711408.95	N 36 51 24.409	W 107 52 23.760
	894.00	12.44	27.30	889.44	58.68	52.89	25.43	1.90	2131205.64	2711414.88	N 36 51 24.523	W 107 52 23.687
	955.00	13.41	25.60	948.89	72.32	65.11	31.50	1.71	2131217.86	2711420.95	N 36 51 24.644	W 107 52 23.613
	1019.00	14.70	25.71	1010.98	87.87	79.12	38.23	2.02	2131231.87	2711427.68	N 36 51 24.782	W 107 52 23.530
	1082.00	15.85	27.45	1071.75	104.46	93.95	45.66	1.96	2131246.70	2711435.11	N 36 51 24.929	W 107 52 23.439
	1145.00	16.85	27.77	1132.20	122.19	109.67	53.88	1.59	2131262.42	2711443.33	N 36 51 25.085	W 107 52 23.338
	1209.00	18.12	26.73	1193.24	141.41	126.77	62.68	2.04	2131279.51	2711452.13	N 36 51 25.254	W 107 52 23.229
	1273.00	18.92	24.75	1253.93	161.73	145.08	71.50	1.59	2131297.82	2711460.95	N 36 51 25.435	W 107 52 23.121
	1337.00	18.98	23.62	1314.46	182.51	164.04	80.01	0.58	2131316.78	2711469.46	N 36 51 25.622	W 107 52 23.016
	1401.00	19.74	23.73	1374.84	203.71	183.47	88.53	1.19	2131336.21	2711477.98	N 36 51 25.814	W 107 52 22.912
	1463.00	20.28	24.64	1433.10	224.92	202.82	97.23	1.01	2131355.56	2711486.67	N 36 51 26.006	W 107 52 22.805
	1526.00	20.80	23.78	1492.09	247.01	222.98	106.29	0.95	2131375.72	2711495.73	N 36 51 26.205	W 107 52 22.693
	1590.00	20.68	25.94	1551.95	269.67	243.54	115.81	1.21	2131396.28	2711505.26	N 36 51 26.409	W 107 52 22.576
	1653.00	21.00	29.65	1610.83	292.06	263.35	126.26	2.16	2131416.09	2711515.71	N 36 51 26.604	W 107 52 22.448
	1717.00	21.69	27.76	1670.44	315.32	283.79	137.45	1.52	2131436.52	2711526.89	N 36 51 26.807	W 107 52 22.310
	1781.00	21.60	27.74	1729.92	338.91	304.68	148.44	0.14	2131457.41	2711537.88	N 36 51 27.013	W 107 52 22.175
	1844.00	22.00	28.65	1788.42	362.29	325.30	159.49	0.83	2131478.03	2711548.93	N 36 51 27.217	W 107 52 22.039
	1908.00	22.34	28.25	1847.69	386.41	346.53	171.00	0.58	2131499.26	2711560.44	N 36 51 27.427	W 107 52 21.898
	1972.00	22.14	26.04	1906.93	410.62	368.08	182.05	1.34	2131520.81	2711571.49	N 36 51 27.640	W 107 52 21.762
	2036.00	22.94	25.87	1966.04	435.16	390.14	192.79	1.25	2131542.86	2711582.22	N 36 51 27.858	W 107 52 21.630
	2099.00	22.88	24.47	2024.07	459.68	412.33	203.22	0.87	2131565.06	2711592.65	N 36 51 28.078	W 107 52 21.502
	2160.00	22.54	24.68	2080.34	483.22	433.75	213.01	0.57	2131586.47	2711602.45	N 36 51 28.290	W 107 52 21.381
	2220.00	22.31	25.13	2135.80	506.11	454.51	222.65	0.48	2131607.23	2711612.08	N 36 51 28.495	W 107 52 21.263
	2285.00	22.42	25.69	2195.91	530.84	476.85	233.26	0.37	2131629.57	2711622.70	N 36 51 28.716	W 107 52 21.132
	2347.00	21.37	26.56	2253.44	553.96	497.61	243.44	1.77	2131650.33	2711632.87	N 36 51 28.921	W 107 52 21.007
	2409.00	21.00	26.89	2311.25	576.36	517.62	253.51	0.63	2131670.34	2711642.95	N 36 51 29.119	W 107 52 20.883
	2471.00	21.00	26.94	2369.13	598.58	537.44	263.57	0.03	2131690.15	2711653.00	N 36 51 29.315	W 107 52 20.760
	2533.00	20.63	25.16	2427.09	620.60	557.23	273.25	1.18	2131709.93	2711662.68	N 36 51 29.511	W 107 52 20.641
	2595.00	19.30	25.94	2485.36	641.77	576.33	282.37	2.19	2131729.03	2711671.80	N 36 51 29.700	W 107 52 20.528
	2689.00	18.39	27.37	2574.32	672.13	603.46	295.99	1.09	2131756.17	2711685.41	N 36 51 29.968	W 107 52 20.361
	2748.00	17.74	28.24	2630.41	690.41	619.65	304.52	1.19	2131772.35	2711693.95	N 36 51 30.128	W 107 52 20.256
	2810.00	17.20	27.66	2689.55	709.01	636.09	313.24	0.92	2131788.79	2711702.67	N 36 51 30.291	W 107 52 20.149
	2873.00	16.19	28.27	2749.89	727.10	652.07	321.73	1.63	2131804.78	2711711.15	N 36 51 30.449	W 107 52 20.045

	2936.00	14.93	28.83	2810.58	743.98	666.92	329.80	2.01	2131819.62	2711719.23	N 36 51 30.596	W 107 52 19.945
	2997.00	14.00	28.46	2869.65	759.19	680.29	337.11	1.53	2131832.99	2711726.53	N 36 51 30.728	W 107 52 19.856
	3058.00	13.63	29.49	2928.89	773.74	693.03	344.16	0.73	2131845.73	2711733.59	N 36 51 30.854	W 107 52 19.769
Last SLB MWD Survey	3120.00	13.94	30.37	2989.10	788.47	705.84	351.53	0.60	2131858.53	2711740.96	N 36 51 30.980	W 107 52 19.678
Begin Natural 1.0"/100' Drop	3120.01	13.94	30.37	2989.11	788.47	705.84	351.53	1.00	2131858.54	2711740.96	N 36 51 30.981	W 107 52 19.678
	3468.70	10.59	25.77	3329.80	862.40	770.95	386.71	1.00	2131923.64	2711776.13	N 36 51 31.624	W 107 52 19.246
7" Casing Point	3469.00	10.58	25.77	3330.09	862.46	771.00	386.73	3.00	2131923.69	2711776.15	N 36 51 31.625	W 107 52 19.245
	3821.70	0.00	25.77	3680.80	894.93	800.25	400.85	3.00	2131952.93	2711790.27	N 36 51 31.914	W 107 52 19.072
Client TD	7507.00	0.00	25.77	7366.09	894.93	800.25	400.85	0.00	2131952.93	2711790.27	N 36 51 31.914	W 107 52 19.072

Survey Type: Raw Proposal

Survey Error Model: SLB ISCWSA version 21 *** 3-D 95.00% Confidence 2.7955 sigma

Surveying Prog:

<u>MD From (ft)</u>	<u>MD To (ft)</u>	<u>EOU Freq</u>	<u>Survey Tool Type</u>
0.00	3120.00	1/100.00 ft	SLB_MWD-STD
3120.00	7507.00	1/100.00 ft	SLB_BLIND