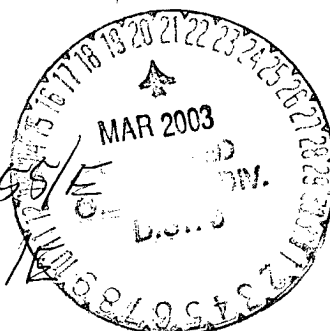


Schlumberger

6501 S. Fiddler's Green Circle, Suite 400
Greenwood Village, CO 80111
(303) 486-3200



surface: 810°N 1155°E
BHL 1272°N 679°E

30-045-31227

SUB-SURFACE SURVEY CERTIFICATION REPORT

BP America Inc. Company	March 5, 2003 Date	
Lease	Sammons GC 1N Well Name	San Juan Co., NM County/State
Survey Depths	178 to 3012 ft	
Type of Survey	Measurements While Drilling (MWD)	
Survey Depths		ft
Type of Survey		
Survey Depths		ft
Type of Survey		
Site Supervisor	D. Fulton	

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.

A. Allen Starkey
A. Allen Starkey
Account Manager

This document has been subscribed and affirmed, or sworn before me in the county of Arapahoe in the state of Colorado, this 7th day of March 2003.

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

Survey Report - Geodetic

Report Date: 05-Mar-2003 Client: BP, San Juan Performance Unit Field: NM, San Juan County (NAD 83 WZ) Structure / Slot: BP 06 31N 10W (Sammons GC 1N) (No Plat. Have coordinates) / Sammons GC 1N (NMOG Website's Coordinate) Well: Sammons GC 1N (NMOG Website's Coordinate) Borehole: Original Hole UWI/API#: Survey Name / Date: Sammons GC 1N Final Surveys / March 5, 2003 Tort / AHD / DOI / ERD ratio: 52.989° / 684.39 ft / 4.565 / 0.09E Grid Coordinate System: NAD83 New Mexico State Planes, Western Zone, US Feet Location Lat/Long: N 36 55 57.070, W 107 55 5.082 Location Grid N/E Y/X: N 2158776.452 ftUS, E 2698323.560 ftUS Grid Convergence Angle: -0.05092114° Grid Scale Factor: 0.99991737	Survey / DLS Computation Method: Minimum Curvature / Lubinski Vertical Section Azimuth: 132.210° Vertical Section Origin: N 0.000 ft, E 0.000 ft Reference Datum: RKB TVD Reference Elevation: 5879.000 ft relative to MSL Sea Bed / Ground Level Elevation: 5865.000 ft relative to MSL Magnetic Declination: +10.986° Total Field Strength: 51579.203 nT Magnetic Dip: 63.787° Declination Date: March 05, 2003 Magnetic Declination Model: BGM 2002 North Reference: True North Total Corr Mag North -> True North: +10.986° Local Coordinates Referenced To: Well Head
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Station ID	Grid Coordinates										Geographic Coordinates	
	MD (ft)	Incl (°)	Azin (°)	TVD (ft)	VSec (ft)	N/S (ft)	E/W (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude	Longitude
Surface	0.00	0.00	245.14	0.00	0.00	0.00	0.00	0.00	2158776.45	2698323.56	N 36 55 57.070	W 107 55 5.082
Begin SLB MWD Surveys	178.00	0.63	245.14	178.00	-0.38	-0.41	-0.89	0.35	2158776.04	2698322.67	N 36 55 57.066	W 107 55 5.093
	240.00	1.20	207.62	239.99	-0.35	-1.13	-1.50	1.29	2158775.32	2698322.06	N 36 55 57.059	W 107 55 5.101
	302.00	2.12	196.83	301.96	0.30	-2.80	-2.13	1.56	2158773.65	2698321.43	N 36 55 57.042	W 107 55 5.109
	364.00	2.40	184.88	363.91	1.58	-5.19	-2.57	0.88	2158771.26	2698320.98	N 36 55 57.019	W 107 55 5.114
	428.00	3.08	188.77	427.84	3.34	-8.23	-2.95	1.10	2158768.23	2698320.60	N 36 55 56.989	W 107 55 5.119
	491.00	3.34	183.09	490.74	5.43	-11.73	-3.31	0.65	2158764.72	2698320.24	N 36 55 56.954	W 107 55 5.123
	555.00	3.97	174.74	554.61	8.24	-15.80	-3.20	1.29	2158760.65	2698320.34	N 36 55 56.914	W 107 55 5.122
	587.00	4.18	171.88	586.53	9.96	-18.06	-2.94	0.91	2158758.40	2698320.61	N 36 55 56.891	W 107 55 5.118
	651.00	4.58	179.04	650.34	13.50	-22.92	-2.57	1.06	2158753.53	2698320.97	N 36 55 56.843	W 107 55 5.114
	682.00	5.30	179.88	681.23	15.31	-25.59	-2.54	2.33	2158750.86	2698321.00	N 36 55 56.817	W 107 55 5.114
714.00	5.83	178.66	713.08	17.43	-28.70	-2.50	1.70	2158747.76	2698321.03	N 36 55 56.786	W 107 55 5.113	
746.00	6.40	174.91	744.90	19.86	-32.10	-2.30	2.17	2158744.36	2698321.23	N 36 55 56.753	W 107 55 5.111	
778.00	6.54	175.09	776.69	22.50	-35.69	-1.99	0.44	2158740.77	2698321.54	N 36 55 56.717	W 107 55 5.107	
842.00	7.68	167.97	840.20	28.64	-43.50	-0.79	2.25	2158732.95	2698322.73	N 36 55 56.640	W 107 55 5.092	
873.00	7.89	167.94	870.91	32.05	-47.61	0.09	0.68	2158728.85	2698323.61	N 36 55 56.599	W 107 55 5.081	
905.00	8.22	164.01	902.60	35.78	-51.96	1.18	2.01	2158724.50	2698324.69	N 36 55 56.556	W 107 55 5.068	
937.00	8.38	158.00	934.26	39.82	-56.32	2.68	2.76	2158720.14	2698326.19	N 36 55 56.513	W 107 55 5.049	

969.00	8.52	152.83	965.92	44.14	-60.59	4.64	2.41	2158715.86	2698328.14	N 36 55 56.471	W 107 55 5.025
1001.00	8.93	149.11	997.55	48.74	-64.83	7.00	2.18	2158711.62	2698330.50	N 36 55 56.429	W 107 55 4.996
1032.00	9.42	145.84	1028.15	53.50	-68.99	9.66	2.31	2158707.46	2698333.15	N 36 55 56.388	W 107 55 4.963
1064.00	10.06	140.81	1059.69	58.81	-73.33	12.89	3.33	2158703.12	2698336.39	N 36 55 56.345	W 107 55 4.924
1096.00	10.67	138.52	1091.17	64.52	-77.71	16.62	2.90	2158698.73	2698340.11	N 36 55 56.302	W 107 55 4.878
1128.00	10.91	133.70	1122.60	70.49	-82.02	20.77	2.32	2158694.42	2698344.26	N 36 55 56.259	W 107 55 4.826
1160.00	11.36	129.86	1154.00	76.67	-86.14	25.38	2.71	2158690.30	2698348.86	N 36 55 56.218	W 107 55 4.770
1191.00	11.92	128.65	1184.36	82.92	-90.09	30.22	1.97	2158686.34	2698353.70	N 36 55 56.179	W 107 55 4.710
1223.00	12.53	130.35	1215.64	89.68	-94.40	35.45	2.21	2158682.02	2698358.92	N 36 55 56.137	W 107 55 4.646
1255.00	13.32	130.33	1246.83	96.84	-99.04	40.91	2.47	2158677.39	2698364.37	N 36 55 56.091	W 107 55 4.578
1287.00	13.93	129.02	1277.93	104.37	-103.85	46.71	2.14	2158672.57	2698370.17	N 36 55 56.043	W 107 55 4.507
1319.00	14.40	126.55	1308.95	112.17	-108.64	52.90	2.39	2158667.77	2698376.36	N 36 55 55.996	W 107 55 4.431
1351.00	14.56	125.07	1339.94	120.12	-113.32	59.39	1.26	2158663.09	2698382.84	N 36 55 55.950	W 107 55 4.351
1383.00	14.93	123.72	1370.88	128.19	-117.92	66.11	1.58	2158658.48	2698389.56	N 36 55 55.904	W 107 55 4.288
1415.00	15.54	121.83	1401.76	136.49	-122.47	73.18	2.46	2158653.93	2698396.62	N 36 55 55.859	W 107 55 4.181
1479.00	16.88	120.34	1463.21	154.01	-131.69	88.48	2.19	2158644.70	2698411.92	N 36 55 55.768	W 107 55 3.993
1574.00	17.13	121.92	1554.06	181.28	-146.05	112.26	0.55	2158630.31	2698435.68	N 36 55 55.626	W 107 55 3.700
1638.00	17.17	125.50	1615.22	199.93	-156.52	127.95	1.65	2158619.83	2698451.36	N 36 55 55.522	W 107 55 3.506
1702.00	17.64	126.16	1676.29	218.96	-167.73	143.47	0.80	2158608.61	2698466.87	N 36 55 55.412	W 107 55 3.315
1797.00	17.51	126.36	1766.85	247.49	-184.69	166.60	0.15	2158591.62	2698489.98	N 36 55 55.244	W 107 55 3.030
1893.00	18.29	127.22	1858.20	276.86	-202.37	190.23	0.86	2158573.93	2698513.59	N 36 55 55.069	W 107 55 2.739
1989.00	18.00	128.94	1949.43	306.68	-220.80	213.76	0.63	2158555.48	2698537.11	N 36 55 54.887	W 107 55 2.450
2084.00	17.73	130.96	2039.85	335.79	-239.51	236.10	0.71	2158536.75	2698559.43	N 36 55 54.702	W 107 55 2.174
2180.00	18.18	129.77	2131.18	365.37	-258.67	258.65	0.60	2158517.57	2698581.96	N 36 55 54.512	W 107 55 1.897
2275.00	18.55	131.76	2221.34	395.29	-278.22	281.32	0.77	2158498.01	2698604.60	N 36 55 54.319	W 107 55 1.618
2371.00	17.44	134.34	2312.64	424.94	-298.44	303.00	1.42	2158477.76	2698626.27	N 36 55 54.119	W 107 55 1.350
2435.00	16.59	135.20	2373.84	443.64	-311.63	316.29	1.39	2158464.57	2698639.55	N 36 55 53.989	W 107 55 1.187
2498.00	16.00	136.76	2434.31	461.28	-324.34	328.58	1.17	2158451.85	2698651.82	N 36 55 53.863	W 107 55 1.035
2562.00	16.53	133.17	2495.75	479.18	-336.99	341.26	1.78	2158439.18	2698664.49	N 36 55 53.738	W 107 55 0.879
2626.00	17.28	131.78	2556.98	497.79	-349.56	354.99	1.33	2158426.61	2698678.21	N 36 55 53.614	W 107 55 0.710
2719.00	17.43	131.45	2645.75	525.53	-367.98	375.73	0.19	2158408.17	2698698.93	N 36 55 53.432	W 107 55 0.455
2814.00	17.32	128.72	2736.42	553.87	-386.24	397.43	0.87	2158389.89	2698720.61	N 36 55 53.251	W 107 55 0.187
2909.00	15.64	131.35	2827.51	580.79	-403.55	418.08	1.93	2158372.56	2698741.24	N 36 55 53.080	W 107 54 59.933
2959.00	14.81	133.35	2875.76	593.92	-412.39	427.78	1.96	2158363.72	2698750.94	N 36 55 52.992	W 107 54 59.814
3012.00	13.93	135.60	2927.10	607.06	-421.60	437.17	1.97	2158354.50	2698760.32	N 36 55 52.901	W 107 54 59.698
3476.33	0.00	135.80	3386.87	663.13	-461.73	476.47	3.00	2158314.34	2698799.58	N 36 55 52.505	W 107 54 59.214
7296.00	0.00	135.60	7206.54	663.13	-461.73	476.47	0.00	2158314.34	2698799.58	N 36 55 52.505	W 107 54 59.214

Last SLB MWD Survey
End Client Assumed Drop
Client Assumed TD

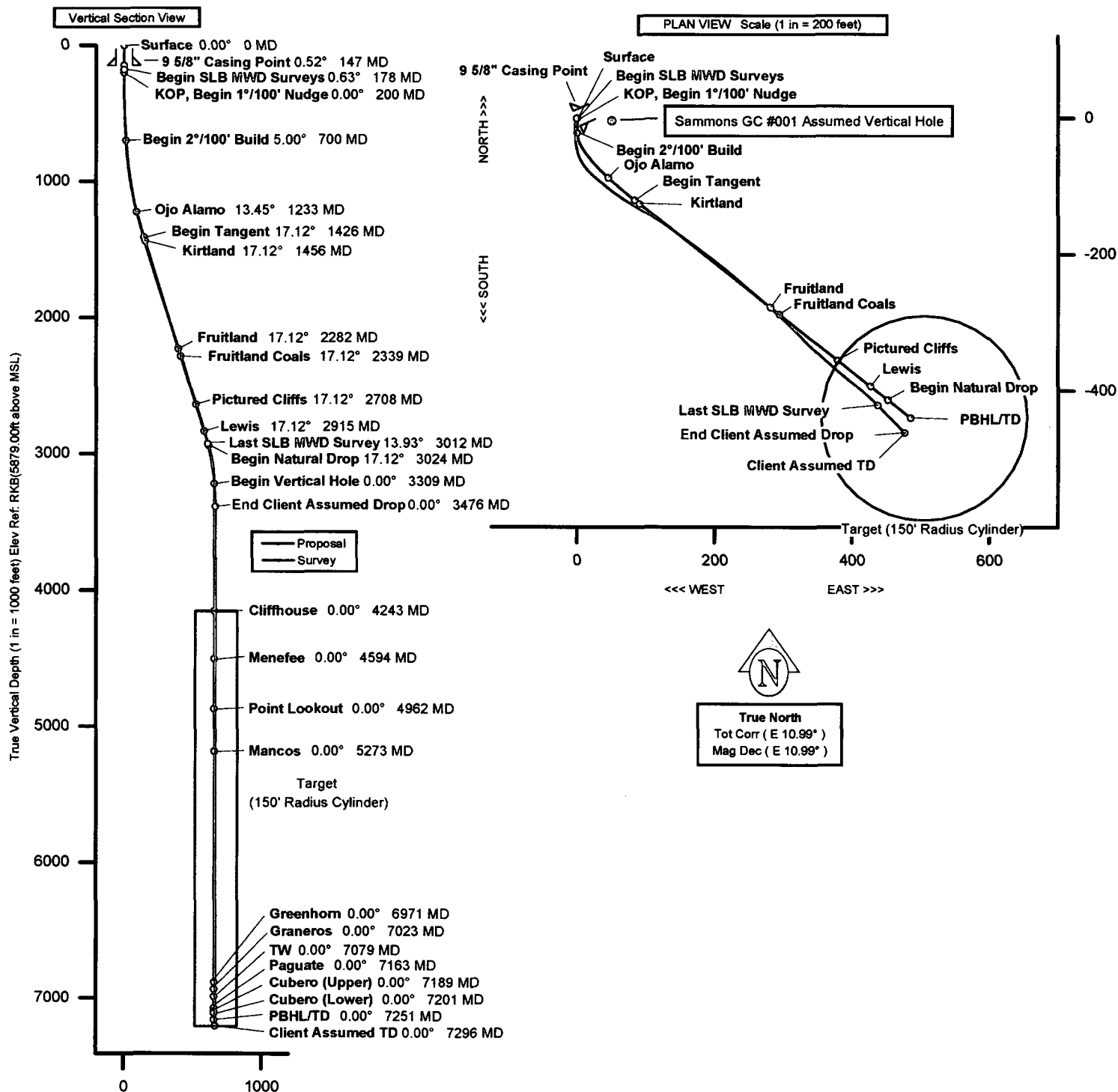
Survey Error Model: Topographic 3-D 95.00% Confidence 2.7955 sigma

Surveying Programme:

<u>MD From (ft)</u>	<u>MD To (ft)</u>	<u>EQJ Freq</u>	<u>Survey Tool Type</u>
0.00	178.00	Act-Stns	Blind Drilling
178.00	3012.00	Act-Stns	MWD1
3012.00	7296.00	Act-Stns	Blind Drilling



WELL	FIELD	RIG
Sammons GC 1N	San Juan County, New Mexico	Aztec 184
Magnetic Parameters Model: BGGM 2002 Dip: 63.787° Mag Dec: 10.986° Date: March 05, 2003 FS: 51579.2 nT	Surface Location Lat: N36 55 57.070 Lon: W107 55 5.082 North: 2158776.45 ftUS East: 2698323.56 ftUS Grid Conv: -0.0509° Scale Fact: 0.9999	Plan#: Rev1 jpk 13-Feb-03 Slot: Sammons GC 1N (NMOG Website's Coordinate) Moved 20' West Elev Ref: RKB(5879.00ft above MSL) Date Drawn: 10:26:32AM 05-Mar-2003



Vertical Section Departure at 132.21 deg from (0.0, 0.0). (1 in = 1000 feet)

Quality Control
 Date Drawn: 05-Mar-2003
 Drawn by: James Wimberg
 Checked by: John O'Keefe
 Client OK: _____