

Schlumberger

6090 Greenwood Plaza Blvd
Englewood, CO 80111
(303) 486-3250



30-045-30610
N-1-29N-8W
Surf/Gace 1200/S 2050/W
1863/S 1855/W

SUB-SURFACE SURVEY CERTIFICATION REPORT

<u>BP</u> Company	<u>4/16/2002</u> Date
<u>Lease</u>	<u>Florance 30M</u> Well Name
	<u>San Juan County, NM</u> County/State
Survey Depths	<u>0</u> to <u>2805</u> ft
Type of Survey	<u>Measurements While Drilling (MWD)</u>
Survey Depths	<u>3148</u> to <u>3458</u> ft
Type of Survey	<u>Single Shots</u>
Survey Depths	<u>3458</u> to <u>7575</u> ft
Type of Survey	<u>Projection to TD</u>
Site Supervisor	<u>Greg Johnson</u>

JK

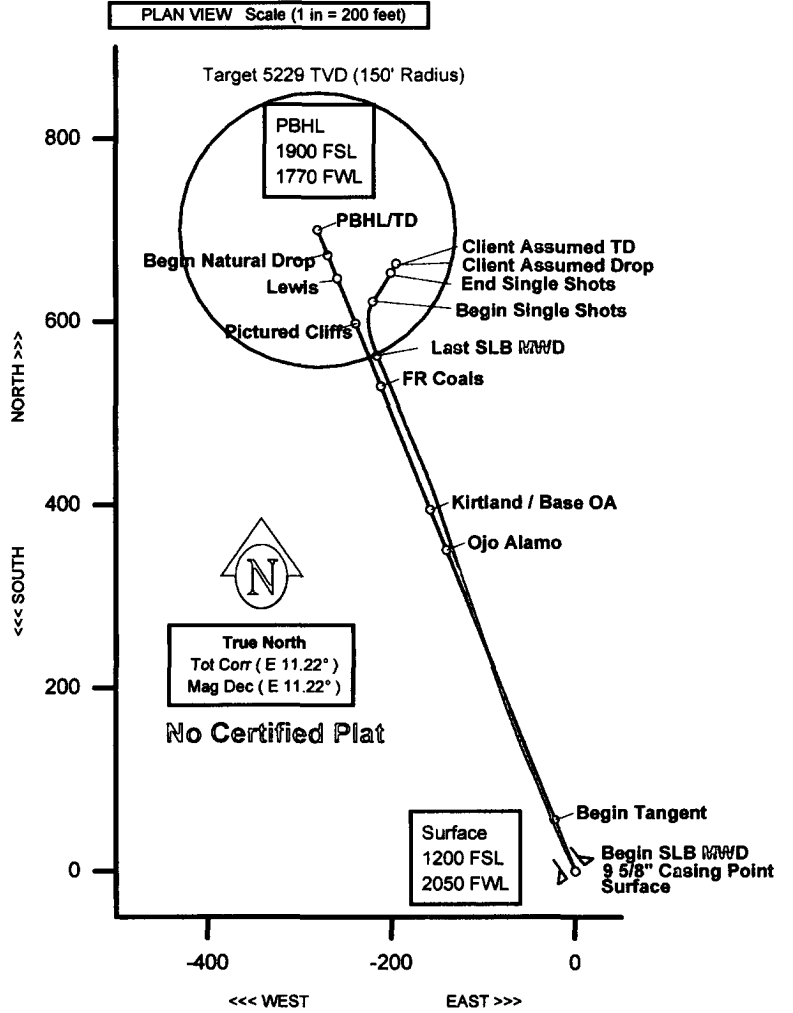
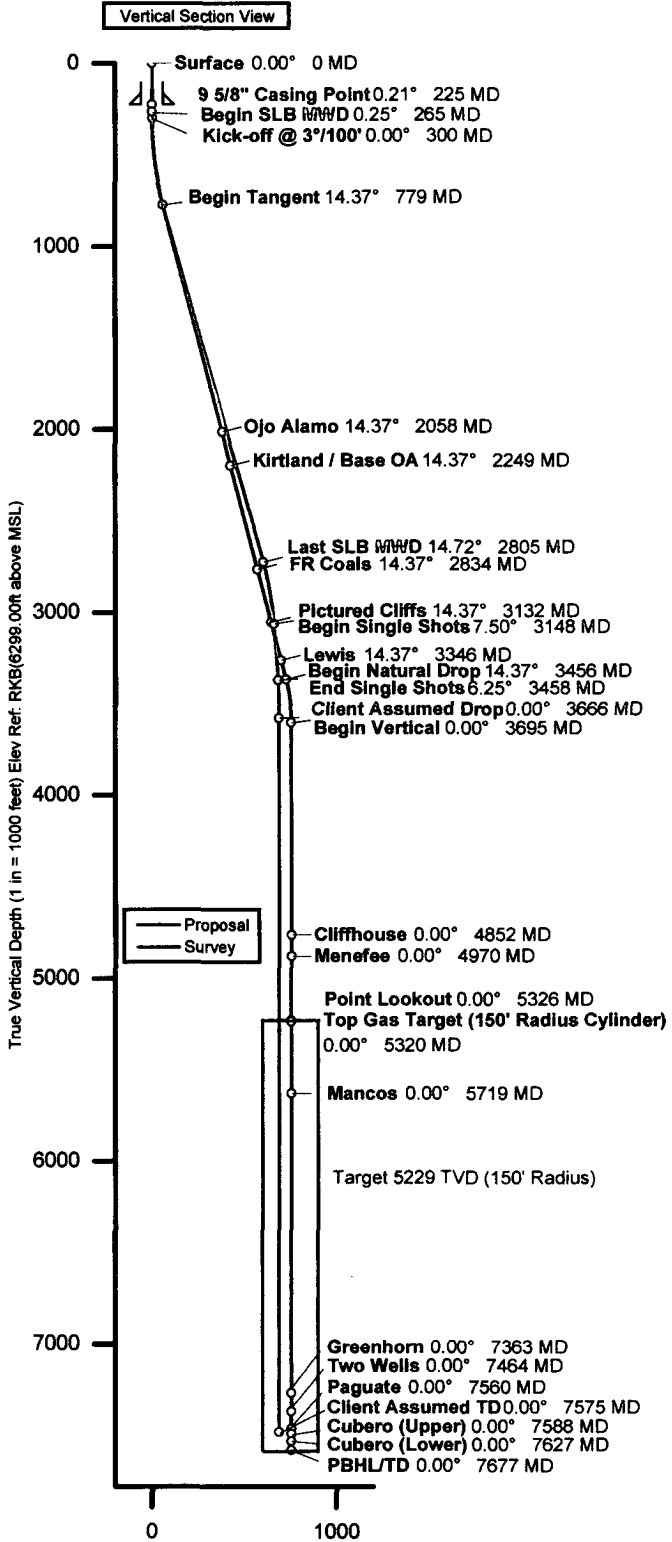
The data submitted in this report conforms to the standards and procedures as set forth by Schlumberger. This report represents a true and correct directional wellbore survey based on original survey data obtained at the well site.

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 20th day of May, 200th. 2002
Christine J. Wilson My commission expires: 12/12/05

Schlumberger BP

WELL Florance 30M	FIELD San Juan County, New Mexico	RIG Aztec 184
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Vertical Section Departure at 338.20 deg from (0.0, 0.0). (1 in = 1000 feet)

Quality Control
 Date Drawn: 16-Apr-2002
 Drawn by: John O'Keefe
 Checked by: Allen Starkey
 Client OK: _____



Survey Report - Standard

<p>Report Date: 16-Apr-2002</p> <p>Client: BP</p> <p>Field: NM, San Juan County</p> <p>Structure / Slot: BP 1 29N 8W (Florance 30M) / Florance 30M</p> <p>Well: Florance 30M</p> <p>Borehole: Original Hole</p> <p>UWI / API#:</p> <p>Survey Name / Date: Florance 30M Final Surveys / April 8, 2002</p> <p>Tort / AHD / DDI / ERD ratio: 50.113° / 714.24 ft / 4.559 / 0.095</p> <p>Grid Coordinate System: NAD83 New Mexico State Planes, Western Zone, US Feet</p> <p>Location Lat / Long:</p> <p>Location Grid NE YX:</p> <p>Grid Convergence Angle:</p> <p>Grid Scale Factor:</p>	<p>Survey / DLS Computation Method: Minimum Curvature / Lubinski</p> <p>Vertical Section Azimuth: 338.200°</p> <p>Vertical Section Origin: N 0.000 ft, E 0.000 ft</p> <p>TVD Reference Datum: RKB</p> <p>TVD Reference Elevation: 6299,000 ft relative to MSL</p> <p>Sea Bed / Ground Level Elevation: 6285,000 ft relative to MSL</p> <p>Magnetic Declination:</p> <p>Total Field Strength:</p> <p>Magnetic Dip:</p> <p>Declination Date:</p> <p>Magnetic Declination Model:</p> <p>North Reference: True North</p> <p>Total Corr Mag North -> True North:</p> <p>Local Coordinates Referenced To: Well Head</p>
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Station ID	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	VSec (ft)	N/S (ft)	E/W (ft)	Closure (ft)	at Azim (°)	DLS (°/100ft)	TF (°)
Tie-In	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		143.15 M
Begin SLB MWD	265.00	0.25	143.15	265.00	-0.56	-0.46	0.35	0.58	143.15	0.09	73.05 M
	296.00	0.17	73.05	296.00	-0.63	-0.50	0.43	0.66	139.41	0.81	8.60 M
	327.00	0.51	8.60	327.00	-0.51	-0.35	0.50	0.61	125.48	1.49	-8.60 M
	358.00	1.19	351.40	357.99	-0.08	0.10	0.47	0.48	77.81	2.32	-17.94 M
	389.00	2.21	342.06	388.98	0.83	0.99	0.24	1.02	13.44	3.40	-21.40 M
	423.00	3.28	338.60	422.94	2.46	2.52	-0.32	2.54	352.74	3.18	-26.14 M
	454.00	4.35	333.86	453.87	4.52	4.40	-1.16	4.55	345.20	3.60	-27.01 M
	486.00	5.48	332.99	485.75	7.25	6.85	-2.39	7.25	340.76	3.54	-1.79 G
	516.00	6.76	332.65	515.58	10.43	9.69	-3.85	10.43	338.33	4.27	-1.14 G
	548.00	7.86	332.49	547.32	14.48	13.31	-5.73	14.49	336.71	3.44	6.57 G

580.00	8.79	333.19	578.98	19.10	17.43	-7.84	19.11	335.78	2.92	11.60 G
612.00	9.64	334.23	610.57	24.21	22.03	-10.11	24.24	335.34	2.71	6.54 G
643.00	10.43	334.73	641.10	29.60	26.90	-12.44	29.64	335.19	2.56	7.07 G
675.00	11.58	335.44	672.51	35.69	32.44	-15.01	35.74	335.17	3.62	0.00 G
705.00	12.56	335.44	701.84	41.96	38.15	-17.62	42.02	335.21	3.27	14.24 G
737.00	13.61	336.57	733.01	49.20	44.77	-20.56	49.26	335.33	3.38	15.68 G
769.00	14.40	337.46	764.06	56.94	51.90	-23.58	57.00	335.56	2.56	12.54 G
800.00	15.19	338.13	794.03	64.86	59.23	-26.57	64.91	335.84	2.61	3.60 G
832.00	15.53	338.21	824.89	73.33	67.09	-29.72	73.38	336.11	1.06	-32.10 G
927.00	15.80	337.59	916.36	98.98	90.86	-39.37	99.02	336.57	0.33	-59.51 G
1022.00	16.01	336.32	1007.73	125.01	114.81	-49.57	125.06	336.65	0.43	140.08 G
1117.00	15.23	338.85	1099.22	150.58	138.45	-59.33	150.63	336.80	1.09	4.71 G
1211.00	15.69	338.99	1189.82	175.64	161.83	-68.34	175.67	337.11	0.49	151.97 G
1303.00	14.89	340.66	1278.56	199.89	184.60	-76.72	199.90	337.43	0.99	2.63 G
1398.00	15.47	340.76	1370.24	224.74	208.08	-84.94	224.74	337.80	0.61	4.78 G
1494.00	16.17	340.97	1462.61	250.88	232.80	-93.51	250.88	338.12	0.73	44.37 G
1589.00	16.32	341.49	1553.81	277.42	257.96	-102.06	277.42	338.41	0.22	-173.21 G
1683.00	15.26	341.01	1644.27	302.96	282.19	-110.28	302.97	338.65	1.14	-4.05 G
1779.00	15.68	340.90	1736.79	328.54	306.39	-118.64	328.56	338.83	0.44	167.43 G
1873.00	14.66	341.80	1827.51	353.10	329.69	-126.51	353.13	339.01	1.11	45.39 G
1968.00	14.67	341.84	1919.42	377.10	352.54	-134.01	377.16	339.19	0.01	2.82 G
2064.00	15.54	342.00	2012.10	402.06	376.33	-141.78	402.15	339.36	0.91	-4.52 G
2157.00	16.55	341.72	2101.47	427.72	400.75	-149.78	427.83	339.51	1.09	-76.69 G
2253.00	16.75	339.04	2193.45	455.20	426.65	-159.02	455.32	339.56	0.83	-142.46 G
2316.00	16.01	336.95	2253.89	472.96	443.13	-165.67	473.08	339.50	1.50	-179.06 G
2410.00	15.52	336.92	2344.36	498.49	466.62	-175.67	498.60	339.37	0.52	18.96 G
2505.00	16.17	337.72	2435.75	524.43	490.56	-185.67	524.52	339.27	0.72	168.42 G
2567.00	15.48	338.25	2495.40	541.33	506.23	-192.01	541.42	339.23	1.14	-167.09 G
2631.00	14.55	337.40	2557.21	557.91	521.58	-198.26	558.00	339.19	1.49	-19.45 G
2694.00	14.90	336.92	2618.14	573.92	536.34	-204.48	574.00	339.13	0.59	147.47 G
2756.00	14.80	337.17	2678.07	589.81	550.97	-210.68	589.88	339.07	0.19	147.60 G
2805.00	14.72	337.37	2725.45	602.29	562.49	-215.50	602.36	339.04	0.19	149.19 G

Last SLB MWD

Begin Single Shots	3148.00	7.50	33.00	3062.62	658.98	621.71	-220.09	659.51	340.51	3.54	-170.15 G
End Single Shots	3458.00	6.25	31.00	3370.39	680.85	653.14	-200.38	683.19	342.94	0.41	-180.00 G
Client Assumed Drop	3666.00	0.00	0.00	3577.97	687.70	662.85	-194.55	690.81	343.64	3.00	0.00 M
Client Assumed TD	7575.00	0.00	0.00	7486.97	687.70	662.85	-194.55	690.81	343.64	0.00	---

Survey Error Model: Wolff & deWardt 1.0000 sigma

Surveying Programme:

<u>MD From (ft)</u>	0.00
3148.00	

<u>MD To (ft)</u>	<u>EOU Freq</u>	<u>Survey Tool Type</u>
3148.00	Act-Stns	Anadrill MWD
7575.00	Act-Stns	Poor Mag