

Schlumberger

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



SUB-SURFACE SURVEY CERTIFICATION REPORT

BP America
Company

7/29/2002
Date

Lease

Gartner A 1B
Well Name

San Juan County, NM
County/State

Survey Depths

140 to 2774 ft

Type of Survey

Measurements While Drilling (MWD)

Survey Depths

2774 5811 ft

Type of Survey

Projection to TD

Survey Depths

to ft

Type of Survey

Site Supervisor

Greg Johnson

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 30th day of July, 2002.

Christine J. Wilson
Notary Public
My commission expires: 12/12/05

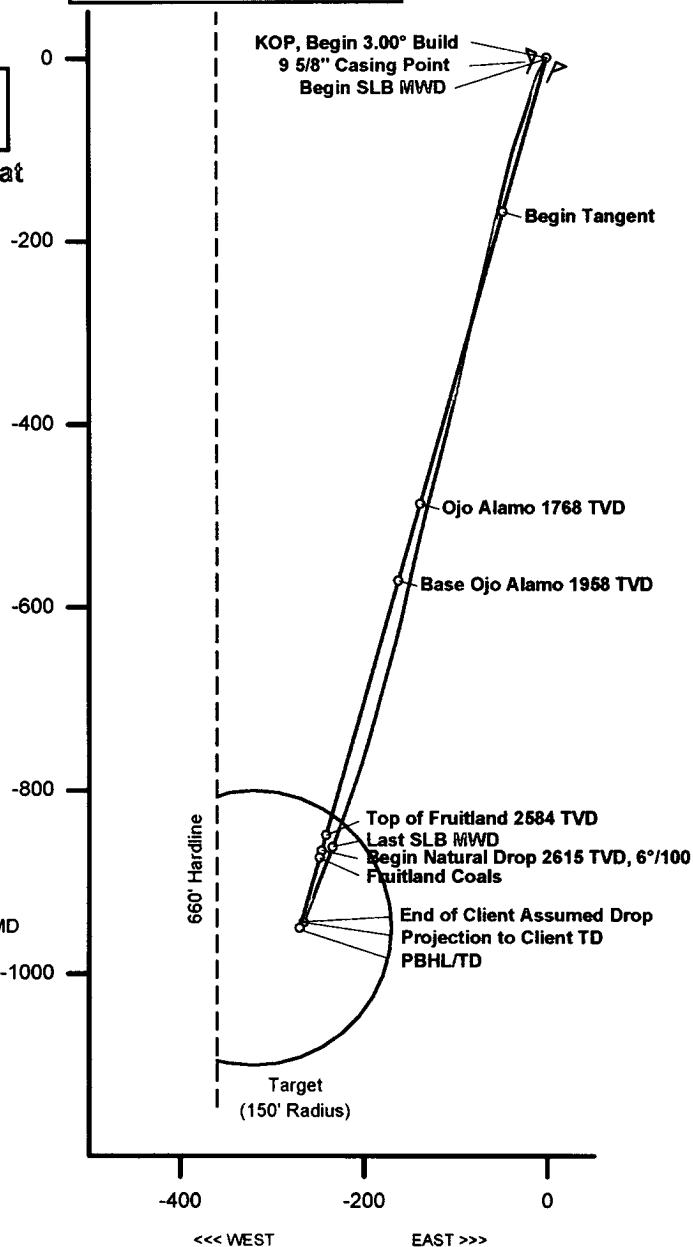
WELL	Gartner A 1B	FIELD	NM, San Juan County (NAD 83 WZ)	RIG	Aztec 184
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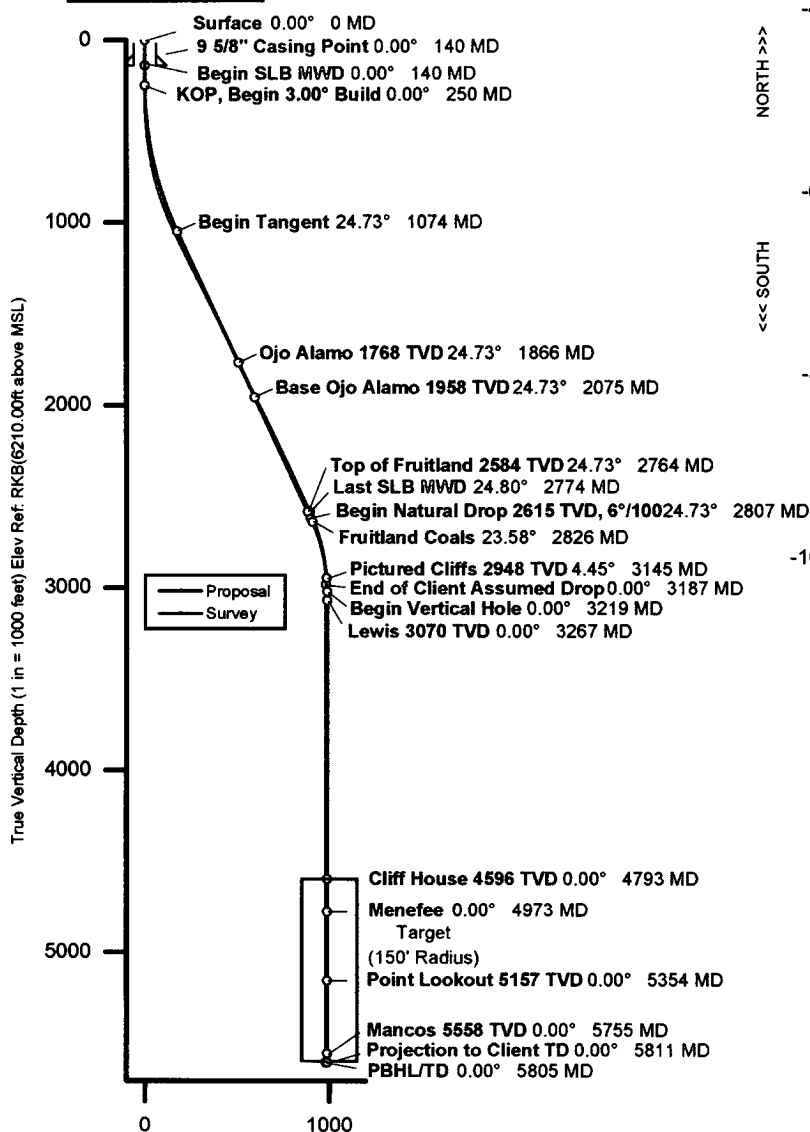
True North
Tot Corr (E 11.54°)
Mag Dec (E 11.54°)

No Certified Plat

PLAN VIEW Scale (1 in = 200 feet)



Vertical Section View



Vertical Section Departure at 195.87 deg from (0.0, 0.0). (1 in = 1000 feet)

Quality Control
Date Drawn: 29-Jul-2002
Drawn by: John O'Keefe
Checked by: Allen Starkey
Client OK: _____

Survey Report - Standard

Report Date: 29-Jul-2002		Survey / DLS Computation Method: Minimum Curvature / Lubinski	
Client: BP, San Juan Performance Unit		Vertical Section Azimuth: 195.870°	
Field: NM, San Juan County (NAD 83 WZ)		Vertical Section Origin: N 0.000 ft, E 0.000 ft	
Structure / Slot: BP 28 30N 8W (Gartner A 1B) No Certified Plat / Gartner A 1B		TVD Reference Datum: RKB	
Well: Gartner A 1B		TVD Reference Elevation: 6210.000 ft relative to MSL	
Borehole: Original Hole		Sea Bed / Ground Level Elevation: 6196.000 ft relative to MSL	
UWI / API#:		Magnetic Declination:	
Survey Name / Date: Gartner A 1B Final Surveys / July 15, 2002		Total Field Strength:	
Tort / AHD / DDI / ERD ratio: 66.988° / 982.66 ft / 4.834 / 0.175		Magnetic Dip:	
Grid Coordinate System: NAD83 New Mexico State Planes, Western Zone, US Feet		Declination Date:	
Location Lat / Long:		Magnetic Declination Model:	
Location Grid N/E Y/X:		North Reference: True North	
Grid Convergence Angle:		Total Corr Mag North -> True North:	
Grid Scale Factor:		Local Coordinates Referenced To: Well Head	

Station ID	MD (ft)	Incl (°)	Azlm (°)	TVD (ft)	VSec (ft)	N/S (ft)	E/W (ft)	Closure (ft)	at Azlm (°)	DLS (°/100ft)	TF (°)
Tie-In	0.00	0.00	24.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.5 M
Begin SLB MWD	140.00	0.00	24.49	140.00	0.00	0.00	0.00	0.00	0.00	0.00	24.5 M
	206.00	0.35	24.49	206.00	-0.20	0.18	0.08	0.20	24.49	0.53	178.8 M
	237.00	0.24	178.85	237.00	-0.23	0.20	0.12	0.24	31.23	1.86	-164.7 M
	269.00	0.47	195.30	269.00	-0.04	0.01	0.09	0.09	83.03	0.78	-157.2 M
	299.00	0.91	202.78	299.00	0.32	-0.33	-0.03	0.33	185.91	1.49	-153.7 M
	331.00	1.51	206.30	330.99	0.99	-0.94	-0.32	0.99	198.76	1.89	-150.3 M
	362.00	1.94	209.67	361.98	1.90	-1.76	-0.76	1.92	203.33	1.42	-150.3 M
	393.00	2.50	209.69	392.95	3.07	-2.80	-1.35	3.11	205.77	1.81	-151.8 M
	428.00	3.34	208.22	427.91	4.81	-4.37	-2.21	4.90	206.89	2.41	-149.9 M
	459.00	4.19	210.05	458.84	6.79	-6.14	-3.21	6.93	207.58	2.77	-152.3 M

490.00	5.22	207.73	489.73	9.26	-8.37	-4.43	9.47	207.90	3.38	0.5 G
522.00	6.16	207.81	521.58	12.37	-11.18	-5.91	12.64	207.87	2.94	-4.6 G
554.00	7.17	207.16	553.36	16.01	-14.47	-7.62	16.36	207.78	3.16	-39.8 G
586.00	8.00	202.35	585.08	20.18	-18.31	-9.38	20.57	207.13	3.26	-18.1 G
618.00	9.27	199.79	616.72	24.96	-22.79	-11.10	25.35	205.97	4.15	-34.9 G
650.00	10.06	196.69	648.26	30.33	-27.90	-12.78	30.68	204.61	2.96	13.7 G
681.00	11.15	198.06	678.73	36.03	-33.34	-14.48	36.35	203.48	3.61	-4.8 G
712.00	12.21	197.64	709.09	42.30	-39.31	-16.41	42.60	202.65	3.43	-3.0 G
743.00	13.47	197.36	739.31	49.19	-45.88	-18.48	49.47	201.93	4.07	8.7 G
775.00	14.64	198.07	770.36	56.96	-53.29	-20.84	57.22	201.36	3.70	3.1 G
804.00	15.89	198.32	798.33	64.58	-60.54	-23.23	64.84	200.99	4.32	5.7 G
836.00	17.19	198.76	829.01	73.68	-69.18	-26.13	73.95	200.69	4.08	4.6 G
868.00	18.46	199.08	859.47	83.47	-78.44	-29.30	83.74	200.48	3.98	1.7 G
898.00	19.58	199.18	887.83	93.23	-87.68	-32.51	93.51	200.34	3.73	-41.5 G
930.00	20.42	197.08	917.90	104.16	-98.08	-35.91	104.45	200.11	3.45	-42.8 G
961.00	21.34	194.78	946.87	115.21	-108.70	-38.94	115.47	199.71	3.97	-18.6 G
993.00	22.41	193.84	976.56	127.12	-120.26	-41.88	127.34	199.20	3.52	1.4 G
1024.00	23.68	193.92	1005.09	139.25	-132.04	-44.79	139.43	198.74	4.10	-12.1 G
1088.00	25.36	193.08	1063.31	165.79	-157.86	-50.99	165.89	197.90	2.68	43.4 G
1183.00	25.41	193.19	1149.14	206.47	-197.52	-60.24	206.51	196.96	0.07	13.7 G
1279.00	26.34	193.70	1235.52	248.33	-238.27	-69.98	248.34	196.37	1.00	-6.1 G
1374.00	26.93	193.56	1320.43	290.88	-279.66	-80.02	290.88	195.97	0.62	-137.8 G
1468.00	26.24	192.13	1404.50	332.89	-320.67	-89.38	332.89	195.57	1.00	47.0 G
1563.00	26.44	192.61	1489.63	374.96	-361.84	-98.41	374.98	195.21	0.31	160.1 G
1657.00	25.03	193.82	1574.31	415.73	-401.58	-107.73	415.77	195.02	1.60	25.9 G
1752.00	25.62	194.48	1660.18	456.35	-440.98	-117.66	456.41	194.94	0.69	171.9 G
1847.00	24.62	194.82	1746.19	496.67	-480.00	-127.86	496.73	194.92	1.06	-58.1 G
1943.00	25.05	193.22	1833.31	536.96	-519.11	-137.62	537.05	194.85	0.83	-7.4 G
2038.00	25.99	192.94	1919.05	577.84	-558.98	-146.88	577.96	194.72	1.00	-24.0 G
2134.00	26.73	192.21	2005.06	620.39	-600.58	-156.16	620.55	194.58	0.84	135.3 G
2228.00	25.45	195.23	2089.49	661.69	-640.73	-165.94	661.87	194.52	1.96	18.7 G
2324.00	25.81	195.51	2176.04	703.21	-680.77	-176.95	703.39	194.57	0.40	-133.7 G

	2418.00	25.56	194.90	2260.75	743.95	-720.09	-187.63	744.13	194.60	0.39	125.1 G
	2482.00	25.36	195.57	2318.54	771.46	-746.63	-194.86	771.64	194.63	0.55	134.1 G
	2577.00	24.04	199.01	2404.85	811.13	-784.53	-206.63	811.29	194.76	2.05	3.7 G
Last SLB MWD	2674.00	24.68	199.11	2493.21	851.08	-822.35	-219.69	851.19	194.96	0.66	82.3 G
	2774.00	24.80	201.02	2584.04	892.81	-861.65	-234.05	892.87	195.20	0.81	180.0 G
End of Client Assumed Drop	3187.33	0.00	201.02	2984.58	980.52	-943.86	-265.64	980.52	195.72	6.00	-159.0 M
Projection to Client TD	5811.00	0.00	201.02	5608.25	980.52	-943.86	-265.64	980.52	195.72	0.00	---

Survey Error Model: Topographic 3-D 95.00% Confidence 2.7957 sigma
Surveying Programme:

<u>MD From (ft)</u>	<u>MD To (ft)</u>	<u>EOU Freq</u>	<u>Survey Tool Type</u>
0.00	140.00	Act-Stns	Zero Tool
140.00	3187.33	Act-Stns	MWD1
3187.33	5811.00	Act-Stns	Zero Tool