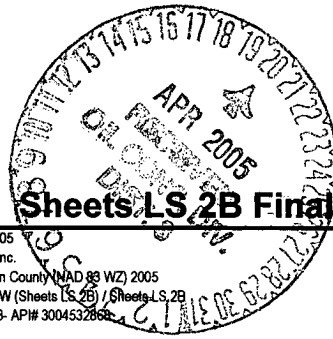




30-045-32868



Sheets LS 2B Final Surveys Report

Report Date: March 28, 2005 Client: BP America Inc. Field: NM, San Juan County (NAD 83 WZ) 2005 Structure / Slot: BP 28-31N-9W (Sheets LS 2B) / Sheets LS 2B Well: Sheets LS 2B- API# 3004532868 Borehole: Original Hole UWI/API#: Survey Name / Date: Sheets LS 2B Final Surveys / March 23, 2005 Tort / AHD / DDI / ERD ratio: 37.042" / 502.32 ft / 4.273 / 0.087 Grid Coordinate System: NAD83 New Mexico State Planes, Western Zone, US Feet Location Lat/Long: N 36 52 29.946, W 107 46 58.186 Location Grid N/E Y/X: N 2137823.196 RUS, E 2737863.335 RUS Grid Convergence Angle: +0.03030595" Grid Scale Factor: 0.99991692	Survey / DLS Computation Method: Minimum Curvature / Lubinski Vertical Section Azimuth: 238.470° Vertical Section Origin: N 0.000 ft, E 0.000 ft TVD Reference Datum: RKB TVD Reference Elevation: 6291.5 ft relative to MSL Sea Bed / Ground Level Elevation: 6281.000 ft relative to MSL Magnetic Declination: 10.717° Total Field Strength: 51447.629 nT Magnetic Dip: 63.745° Declination Date: March 23, 2005 Magnetic Declination Model: BGGM 2003 North Reference: Grid North Total Corr Mag North -> Grid North: +10.687° Local Coordinates Referenced To: Well Head
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Comments	Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Vertical Section (ft)	NS (ft)	EW (ft)	DLS (deg/100 ft)	Northing (RUS)	Easting (RUS)	Latitude	Longitude
Surface	0.00	0.00	242.84	0.00	0.00	0.00	0.00	0.00	2137823.20	2737863.34	N 36 52 29.946	W 107 46 58.186
9 5/8" Casing Point	225.00	0.63	242.84	225.00	1.23	-0.56	-1.10	0.28	2137822.63	2737862.23	N 36 52 29.940	W 107 46 58.199
Begin SLB MWD Surveys	290.00	0.81	242.84	289.99	2.05	-0.94	-1.83	0.28	2137822.26	2737861.51	N 36 52 29.937	W 107 46 58.208
	351.00	0.90	226.95	350.98	2.95	-1.46	-2.56	0.41	2137821.73	2737860.77	N 36 52 29.932	W 107 46 58.217
	411.00	1.21	224.61	410.97	4.02	-2.23	-3.35	0.52	2137820.96	2737859.99	N 36 52 29.924	W 107 46 58.227
	472.00	2.48	232.15	471.94	5.96	-3.50	-4.84	2.12	2137819.69	2737858.49	N 36 52 29.911	W 107 46 58.245
	534.00	4.18	235.80	533.83	9.55	-5.60	-7.77	2.76	2137817.60	2737855.56	N 36 52 29.891	W 107 46 58.282
	594.00	6.93	239.66	593.55	15.36	-8.65	-12.71	4.62	2137814.54	2737850.63	N 36 52 29.861	W 107 46 58.342
	654.00	9.13	240.60	652.95	23.73	-12.82	-19.98	3.67	2137810.38	2737843.36	N 36 52 29.819	W 107 46 58.432
	714.00	11.14	242.30	712.02	34.27	-17.85	-29.26	3.39	2137805.35	2737834.08	N 36 52 29.770	W 107 46 58.546
	776.00	11.90	242.44	772.77	46.63	-23.59	-40.23	1.23	2137799.60	2737823.11	N 36 52 29.713	W 107 46 58.681
	838.00	12.09	242.45	833.41	59.48	-29.55	-51.65	0.31	2137793.64	2737811.69	N 36 52 29.654	W 107 46 58.822
	901.00	12.45	242.27	894.97	72.84	-35.77	-63.51	0.57	2137787.43	2737799.83	N 36 52 29.593	W 107 46 58.968
	963.00	12.43	237.13	955.52	86.18	-42.50	-75.03	1.79	2137780.70	2737788.31	N 36 52 29.526	W 107 46 59.110
	1026.00	12.81	237.01	1017.00	99.94	-49.98	-86.59	0.60	2137773.22	2737776.76	N 36 52 29.452	W 107 46 59.252
	1087.00	11.99	236.75	1076.57	113.03	-57.14	-97.56	1.35	2137766.07	2737765.79	N 36 52 29.382	W 107 46 59.387
	1181.00	11.90	236.54	1168.54	132.48	-67.83	-113.81	0.11	2137755.37	2737749.54	N 36 52 29.276	W 107 46 59.587
	1276.00	12.29	235.52	1261.43	152.37	-78.96	-130.31	0.47	2137744.25	2737733.03	N 36 52 29.166	W 107 46 59.790
	1370.00	10.93	239.54	1353.51	171.27	-89.14	-146.24	1.68	2137734.06	2737717.10	N 36 52 29.065	W 107 46 59.986
	1463.00	11.04	238.82	1444.80	188.99	-98.22	-161.46	0.19	2137724.99	2737701.89	N 36 52 28.976	W 107 47 0.174
	1556.00	11.52	238.36	1536.00	207.18	-107.70	-176.99	0.53	2137715.50	2737686.36	N 36 52 28.882	W 107 47 0.365
	1649.00	12.21	237.65	1627.02	226.30	-117.83	-193.20	0.76	2137705.37	2737670.15	N 36 52 28.782	W 107 47 0.564
	1742.00	11.78	239.32	1717.99	245.62	-127.94	-209.67	0.59	2137695.27	2737653.68	N 36 52 28.682	W 107 47 0.767
	1835.00	10.09	241.13	1809.29	263.26	-136.72	-224.97	1.85	2137686.49	2737638.38	N 36 52 28.595	W 107 47 0.956
	1928.00	10.45	240.90	1900.80	279.82	-144.75	-239.48	0.39	2137678.45	2737623.88	N 36 52 28.516	W 107 47 1.134
	2022.00	11.28	240.74	1993.12	297.52	-153.39	-254.95	0.88	2137669.82	2737608.41	N 36 52 28.431	W 107 47 1.325
	2116.00	11.37	241.83	2085.29	315.96	-162.26	-271.13	0.25	2137660.95	2737592.22	N 36 52 28.343	W 107 47 1.524
	2208.00	11.81	239.70	2175.41	334.43	-171.29	-287.26	0.67	2137651.92	2737576.10	N 36 52 28.254	W 107 47 1.722
	2300.00	12.43	238.21	2265.36	353.74	-181.26	-303.80	0.75	2137641.95	2737559.56	N 36 52 28.155	W 107 47 1.926
	2393.00	12.24	238.97	2356.22	373.61	-191.61	-320.76	0.27	2137631.60	2737542.60	N 36 52 28.053	W 107 47 2.135
	2484.00	11.01	237.03	2445.35	391.94	-201.31	-336.31	1.42	2137621.90	2737527.05	N 36 52 27.957	W 107 47 2.326
	2578.00	10.97	236.93	2537.62	409.85	-211.08	-351.34	0.05	2137612.13	2737512.02	N 36 52 27.861	W 107 47 2.511
	2671.00	11.05	238.75	2628.91	427.61	-220.53	-366.38	0.38	2137602.68	2737496.99	N 36 52 27.767	W 107 47 2.696
	2764.00	10.93	242.07	2720.21	445.32	-229.29	-381.78	0.69	2137593.93	2737481.58	N 36 52 27.681	W 107 47 2.886
Last SLB MWD Survey	2862.00	10.39	242.66	2816.52	463.41	-237.70	-397.84	0.56	2137585.52	2737465.53	N 36 52 27.598	W 107 47 3.084
Projection to Bit	2902.00	10.39	242.66	2855.86	470.60	-241.01	-404.25	0.00	2137582.21	2737459.12	N 36 52 27.565	W 107 47 3.163
7" Casing Point	2902.01	10.39	242.66	2855.87	470.61	-241.01	-404.25	0.00	2137582.21	2737459.12	N 36 52 27.565	W 107 47 3.163
End of Natural Drop	3248.33	0.00	242.66	3200.29	501.84	-255.39	-432.07	3.00	2137567.83	2737431.30	N 36 52 27.423	W 107 47 3.505
TD	5816.00	0.00	242.66	5767.96	501.84	-255.39	-432.07	0.00	2137567.83	2737431.30	N 36 52 27.423	W 107 47 3.505

Survey Type: Definitive Survey

Survey Error Model: SLB ISCWSA version 16 *** 3-D 95.00% Confidence 2.7955 sigma

Surveying Prog:

MD From (ft.)

0.00

2764.00

MD To (ft.)

2764.00

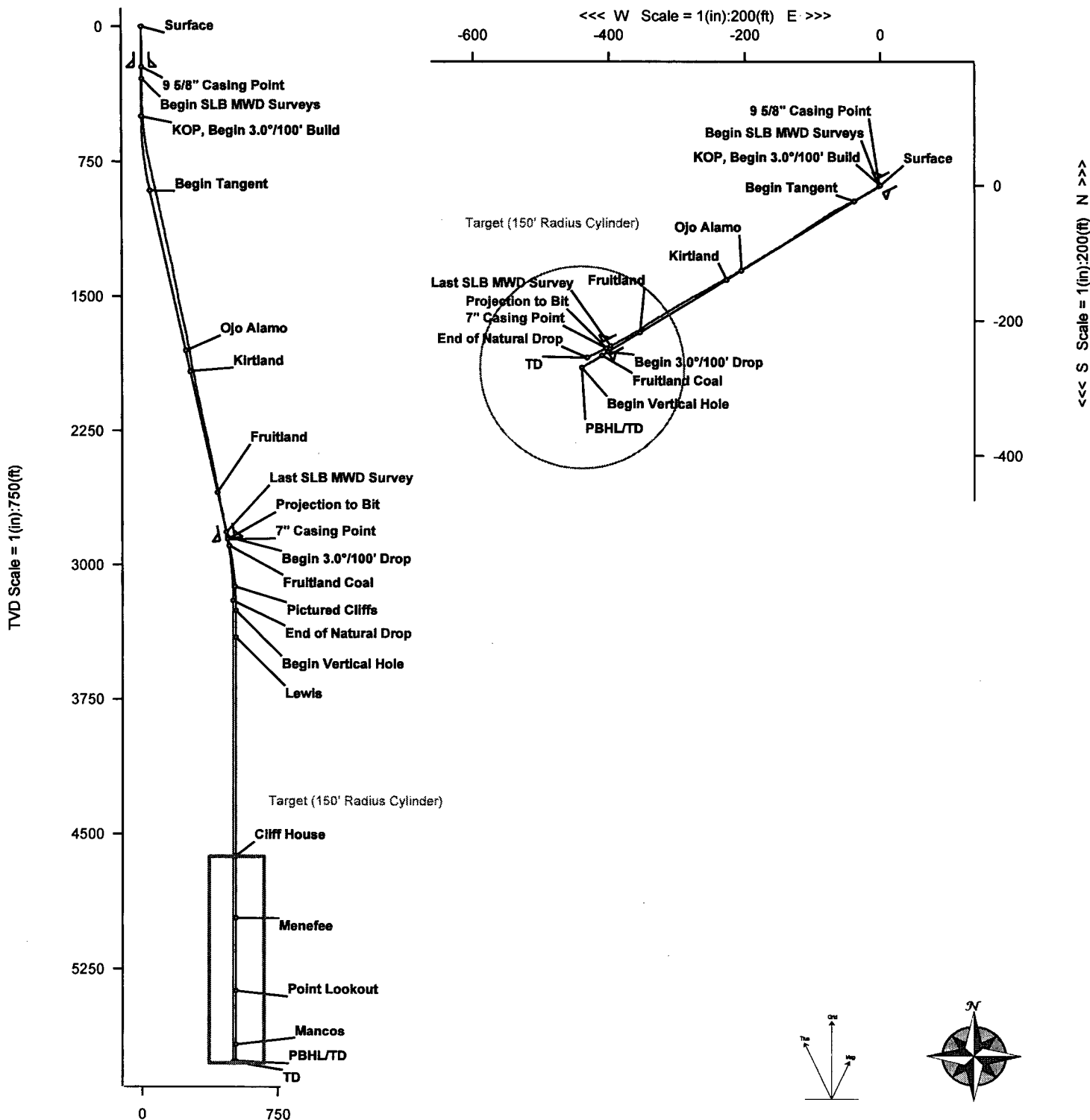
5816.00

EQU Freq Survey Tool Type

Act-Stns SLB_MWD-STD

Act-Stns SLB_BLIND+TREN

Well Sheets LS 2B- AP# 3004532868				Field San Juan County, New Mexico				Rig Aztec 507			
Magnetic Parameters Model BOOM 2004 Dip 63.745° Mag Dec +10.717°				Surface Location NAD83 New Mexico State Planes, Western Zone, US Feet Latitude N36 52 28.848 Longitude W107 46 58.186 Northing 2137823.20 Easting 2737863.34 Grid Convergence +0.03030595° Scale Factor 0.9999170000				Miscellaneous Borehole Original Hole Plan R2 Jan 03-Feb-05 TVD Reference Survey Date RNB (\$284.50 ft above MSL) March 28, 2005			



Vertical Section (ft) Azim = 238.47°, Scale = 1(in):750(ft) Origin = 0 N-S, 0 E-W

Quality Control
Date Drawn: Mon 02:50 PM March 28, 2005
Drawn by: Jim Wimberg
Checked by: Frank Brezzyak
Client OK: