



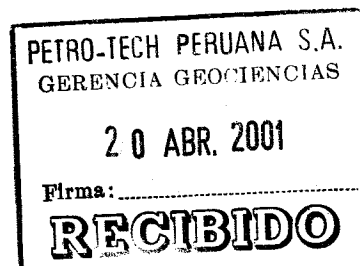
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SURVEY REPORT
PETRO-TECH PERUANA
LO-6-13
PEPESA-48
CAMPO LOBITOS, PERU
HT0301GME259

MARCH 17, 2001

CENTRAL FILE
GEOSCIENCES



A Gyrodata Directional Survey

for

PETRO-TECH PERUANA S.A.

Well: LO-6-13, CASING 5 1/2"

Location: PEPESA-48/LO-06, CAMPO LOBITOS

Job Number: HT0301GME259

Run Date: 3/17/01

Surveyor: Angel Cordozo

Calculation Method: MINIMUM CURVATURE

Survey Latitude: 4.450000 deg. S

Azimuth Correction:

Gyro: Bearings are Relative to True North

Vertical Section Calculated from Well Head Location

Closure Calculated from Well Head Location

Horizontal Coordinates Calculated from Well Head Location

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MEASURED DEPTH feet	I N C L deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.	HORIZONTAL COORDINATES feet
0.0	0.00	0.00	N 0 0 E	0.00	0.0	0.0 0.0	0.00 N 0.00 E

PROFUNDIDADES REFERIDAS A CABEZA DE POZO LO-13							
GYRO MULTISHOT CORRIDO EN CASING DE 5 1/2" DESDE 2500' HASTA SUPERFICIE							

100.0	0.53	71.54	N 71 33 E	0.53	100.0	0.5 71.5	0.15 N 0.44 E
200.0	0.48	99.20	S 80 48 E	0.25	200.0	1.3 80.0	0.23 N 1.30 E
300.0	0.27	137.28	S 42 43 E	0.31	300.0	1.9 90.4	0.01 S 1.87 E
400.0	0.52	297.32	N 62 41 W	0.78	400.0	1.6 89.3	0.02 N 1.63 E
500.0	1.11	17.35	N 17 21 E	1.14	500.0	1.9 52.6	1.16 N 1.51 E
600.0	1.32	21.50	N 21 30 E	0.22	600.0	3.9 35.2	3.15 N 2.22 E
700.0	1.46	22.11	N 22 6 E	0.15	699.9	6.2 30.0	5.40 N 3.12 E
800.0	1.63	23.37	N 23 22 E	0.17	799.9	8.9 27.8	7.89 N 4.17 E
900.0	2.28	30.59	N 30 35 E	0.70	899.8	12.3 27.8	10.91 N 5.75 E
1000.0	2.64	38.28	N 38 17 E	0.49	999.7	16.6 29.6	14.43 N 8.19 E
1100.0	2.74	40.65	N 40 39 E	0.15	1099.6	21.2 31.7	18.06 N 11.17 E
1200.0	2.86	43.58	N 43 35 E	0.19	1199.5	26.1 33.7	21.68 N 14.45 E
1300.0	3.00	45.52	N 45 31 E	0.17	1299.4	31.1 35.5	25.32 N 18.04 E
1400.0	3.06	43.82	N 43 49 E	0.11	1399.2	36.3 36.8	29.09 N 21.76 E
1500.0	3.11	45.76	N 45 45 E	0.11	1499.1	41.7 37.8	32.91 N 25.55 E
1600.0	2.64	41.28	N 41 17 E	0.52	1599.0	46.7 38.5	36.53 N 29.02 E
1700.0	2.27	41.21	N 41 13 E	0.37	1698.9	50.9 38.7	39.75 N 31.84 E
1800.0	1.67	47.70	N 47 42 E	0.64	1798.8	54.3 39.0	42.22 N 34.22 E
1900.0	1.20	103.95	S 76 3 E	1.41	1898.8	56.2 40.2	42.95 N 36.32 E
2000.0	2.26	145.09	S 34 54 E	1.57	1998.7	56.3 43.1	41.08 N 38.46 E

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MEASURED DEPTH feet	I N C L deg.	AZIMUTH deg.	BORE HOLE BEARING deg. min.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.	HORIZONTAL COORDINATES feet
2100.0	2.94	152.55	S 27 27 E	0.75	2098.6	55.2 47.6	37.18 N 40.78 E
2200.0	3.75	147.16	S 32 50 E	0.87	2198.5	54.3 53.7	32.16 N 43.73 E
2300.0	3.92	142.65	S 37 21 E	0.34	2298.3	54.6 60.7	26.69 N 47.58 E
2400.0	3.85	142.50	S 37 30 E	0.06	2398.0	55.9 67.6	21.31 N 51.70 E
2500.0	3.56	141.61	S 38 23 E	0.30	2497.8	58.0 73.8	16.21 N 55.67 E

Final Station Closure: Distance: 57.99 ft Az: 73.77 deg.

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Location: PEPESA-48/LO-06, CAMPO LOBITOS

Gyrodatta, Inc.
HT0301GME259 DEFINITIVE

