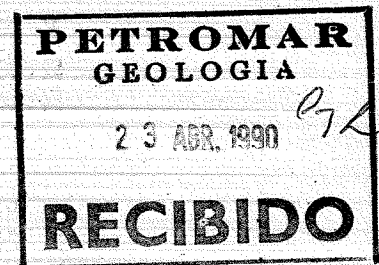


Petromar Lima
Ingo M. Chavez. 25-4-90
JMB
J. J. Ezi
24-Abril-90



POZO DIRIGIDO



Nº OFICIAL : Z2A-21-785-D-L016

Nº PETROMAR : L016-12 ✓

NP : Z2A-21-785-D-L016(L016-12)

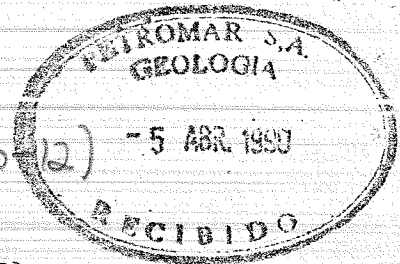
KB = 50'

WD : 305'

Long. Conductora

Pts. = 43

PF. 7729



370'

x 15°

R: N14°44'49"

N: 1596 966.09

E: 125,063.06

25/4/90

OPERADOR DIRECCIONAL :
GLAUCO IPARRAGUIRRE

O.K.

05-04-90

ANADRIILL SCHLUMBERGER
PETROMAR-TALARA
POZO: L016-12

RADIUS OF CURVATURE CALCULATIONS

Tuesday, March 13, 1990 Page 2

MEASURED DEPTH Feet	B O R E - H O L E INCLINATION Deg Min	DIRECTION Deg Min	COURSE LENGTH Feet	VERTICAL DEPTH Feet	RECTANGULAR COORDINATES Feet	Feet	CLOSURES DISTANCE Feet	DIRECTION Deg Min	DOGLEG SEVERITY Deg/100ft.
1000.00	15 0	N 18 11 E		965.93	245.88 N	80.79 E	258.81	N 18 11 E	
1091.92	17 45	N 18 11 E	91.92	1054.11	270.50 N	88.88 E	284.73	N 18 11 E	3.00
1591.92	17 45	N 18 11 E	500.00	1530.29	415.37 N	136.48 E	437.22	N 18 11 E	0.00
2091.92	17 45	N 18 11 E	500.00	2006.47	560.24 N	184.09 E	589.71	N 18 11 E	0.00
2591.92	17 45	N 18 11 E	500.00	2482.65	705.11 N	231.69 E	742.20	N 18 11 E	0.00
3091.92	17 45	N 18 11 E	500.00	2958.83	849.98 N	279.29 E	894.69	N 18 11 E	0.00
3591.92	17 45	N 18 11 E	500.00	3435.01	994.85 N	326.89 E	1047.18	N 18 11 E	0.00
4091.92	17 45	N 18 11 E	500.00	3911.19	1139.72 N	374.50 E	1199.67	N 18 11 E	0.00
4591.92	17 45	N 18 11 E	500.00	4387.37	1284.59 N	422.10 E	1352.16	N 18 11 E	0.00
5091.92	17 45	N 18 11 E	500.00	4863.55	1429.46 N	469.70 E	1504.65	N 18 11 E	0.00
5591.92	17 45	N 18 11 E	500.00	5339.73	1574.33 N	517.31 E	1657.14	N 18 11 E	0.00
6091.92	17 45	N 18 11 E	500.00	5815.91	1719.20 N	564.91 E	1809.63	N 18 11 E	0.00
6591.92	17 45	N 18 11 E	500.00	6292.08	1864.07 N	612.51 E	1962.12	N 18 11 E	0.00
6600.24	17 45	N 18 11 E	8.32	6300.01	1866.48 N	613.30 E	1964.66	N 18 11 E	0.00
6936.25	17 45	N 18 11 E	336.01	6620.01	1963.84 N	645.29 E	2067.14	N 18 11 E	0.00
7807.77	17 45	N 18 11 E	871.52	7450.01	2216.35 N	728.27 E	2332.94	N 18 11 E	0.00

Final Station Closure -- Distance: 2332.94 Feet
-- Direction: N 18 11 E

PETROMAR
WELL: L016-12

RADIUS OF CURVATURE CALCULATIONS

Saturday, April 4, 1987 Page 2

MEASURED DEPTH Feet	BORE - HOLE INCLINATION Deg Min	DIRECTION Deg Min	COURSE LENGTH Feet	VERTICAL DEPTH Feet	RECTANGULAR COORDINATES Feet	VERTICAL SECTION Feet	CLOSURES DISTANCE Feet	DIRECTION Deg Min	DOGLEG SEVERITY Deg/100ft.
0.00	11 0	N 10 0 W	0.00	0.00	0.00 N 0.00 E	0.00	0.00	0 0	
583.00	11 0	N 10 0 W	583.00	572.29	109.55 N 19.32 W	98.06	111.24	N 10 0 W	0.00
772.00	10 45	N 5 0 W	189.00	757.89	144.89 N 23.97 W	130.18	146.86	N 9 24 W	0.52
850.00	10 45	N 6 0 W	78.00	834.53	159.38 N 25.36 W	143.51	161.38	N 9 3 W	0.24
976.00	12 45	N 6 0 W	126.00	957.98	184.89 N 28.05 W	166.90 N	187.01	N 8 38 W	1.59
1101.00	16 0	N 4 0 W	125.00	1078.95	215.80 N 30.75 W	195.43	217.98	N 8 7 W	2.63
1228.00	19 0	N 4 0 W	127.00	1200.06	253.89 N 33.41 W	230.79	256.08	N 7 30 W	2.36
1355.00	22 45	N 5 0 W	127.00	1318.70	299.00 N 36.96 W	272.54	301.28	N 7 3 W	2.97
1457.00	23 15	N 4 0 W	102.00	1412.59	338.73 N 40.09 W	309.31	341.10	N 6 45 W	0.62
1610.00	23 15	N 4 0 W	153.00	1553.17	398.98 N 44.30 W	365.24	401.43	N 6 20 W	0.00
1763.00	23 15	N 1 30 W	153.00	1693.74	459.30 N 47.20 W	421.65	461.72	N 5 52 W	0.64
1946.00	23 30	N 1 0 W	183.00	1861.72	531.89 N 48.79 W	490.12	534.12	N 5 14 W	0.17
2132.00	23 30	N 1 0 W	186.00	2032.29	606.04 N 50.08 W	560.17	608.11	N 4 43 W	0.00
2285.00	23 30	N 0 0 E	153.00	2172.61	667.05 N 50.61 W	617.96	668.97	N 4 20 W	0.26
2438.00	23 0	N 1 0 W	153.00	2313.18	727.44 N 51.14 W	675.17	729.24	N 4 1 W	0.42
2525.00	23 0	N 1 0 W	187.00	2485.31	800.50 N 52.41 W	744.18	802.21	N 3 45 W	0.00
2813.00	23 15	N 1 0 E	189.00	2658.21	874.33 N 52.41 W	814.33	875.90	N 3 26 W	0.44
2970.00	23 15	N 2 0 W	157.00	2802.46	936.29 N 52.95 W	873.03	937.79	N 3 14 W	0.75
3123.00	22 45	N 1 0 W	153.00	2943.30	996.05 N 54.52 W	929.32	997.55	N 3 8 W	0.41
3250.00	22 45	N 1 0 E	127.00	3060.41	1045.16 N 54.52 W	975.98	1046.59	N 2 59 W	0.61
3377.00	23 0	N 1 0 W	127.00	3177.43	1094.53 N 54.52 W	1022.88	1095.89	N 2 51 W	0.64
3427.00	22 15	N 9 0 E	50.00	3223.58	1113.69 N 53.18 W	1041.51	1114.96	N 2 44 W	7.93
3521.00	21 0	N 11 0 E	94.00	3310.06	1147.81 N 47.16 W	1075.79	1148.77	N 2 21 W	1.54
3646.00	20 30	N 12 0 E	125.00	3427.85	1191.20 N 38.34 W	1119.78	1191.82	N 1 51 W	0.49
3771.00	19 0	N 13 0 E	125.00	3545.50	1232.44 N 29.19 W	1161.81	1232.79	N 1 21 W	1.23

PETROMAR
WELL: L016-12

RADIUS OF CURVATURE CALCULATIONS

Saturday, April 4, 1987 Page 3

MEASURED DEPTH Feet	B O R E - H O L E INCLINATION Deg Min	DIRECTION Deg Min	COURSE LENGTH Feet	VERTICAL DEPTH Feet	RECTANGULAR COORDINATES Feet	VERTICAL SECTION Feet	CLOSURES DISTANCE Feet	DIRECTION Deg Min	DOGLEG SEVERITY Deg/100ft.
3949.00	19 45	N 17 0 E	178.00	3713.41	1289.47 N	13.91 W	1220.76	N 0 37 W	0.86
4108.00	19 0	N 15 0 E	159.00	3863.41	1340.17 N	0.63 E	1273.46	N 0 2 E	0.63
4242.00	18 45	N 15 0 E	134.00	3990.20	1382.04 N	11.85 E	1316.75	N 0 29 E	0.19
4366.00	17 30	N 14 0 E	124.00	4108.05	1419.39 N	21.50 E	1355.24	N 0 52 E	1.04
4496.00	16 0	N 17 0 E	130.00	4232.53	1455.48 N	31.51 E	1392.66	N 1 14 E	1.33
4587.00	15 45	N 19 30 E	91.00	4320.06	1479.12 N	39.31 E	1417.55	N 1 31 E	0.80
4710.00	15 30	N 21 30 E	123.00	4438.51	1510.15 N	50.91 E	1450.65	N 1 56 E	0.48
4897.00	16 45	N 26 0 E	187.00	4618.15	1557.68 N	71.82 E	1502.33	N 2 38 E	0.94
5018.00	18 30	N 23 30 E	121.00	4733.47	1590.67 N	87.74 E	1538.64	N 3 9 E	1.45
5143.00	20 0	N 29 0 E	125.00	4851.47	1627.30 N	106.60 E	1579.33	N 3 45 E	1.51
5330.00	21 0	N 31 0 E	187.00	5025.63	1684.02 N	139.35 E	1643.43	N 4 44 E	0.65
5487.00	20 45	N 34 0 E	157.00	5173.32	1731.19 N	169.40 E	1697.63	N 5 35 E	0.70
5736.00	19 0	N 38 0 E	249.00	5407.48	1799.66 N	219.15 E	1778.20	N 6 57 E	0.89
6141.00	16 45	N 53 0 E	405.00	5792.91	1886.54 N	307.55 E	1888.32	N 9 16 E	1.26
6338.00	15 30	N 60 0 E	247.00	6030.19	1924.38 N	364.72 E	1942.11	N 10 44 E	0.93
6904.00	13 15	N 79 0 E	515.00	6530.00	1969.03 N	484.16 E	2021.80	N 13 49 E	1.01
7630.00	15 0	S 59 0 E	776.00	7282.51	1936.88 N	666.50 E	2048.14	N 18 59 E	1.31
7729.00	15 15	S 57 30 E	49.00	7329.81	1930.15 N	677.37 E	2045.14	N 19 20 E	0.95

Final Station Closure - Distance: 2045.56 Feet
- Direction: N 19 20 E

D.K. 