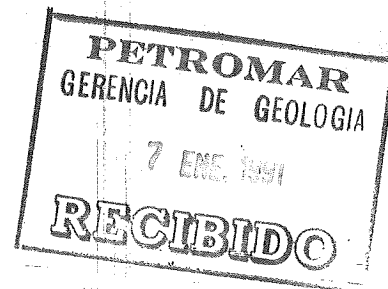


Pozo a di. 14°
09.01.91

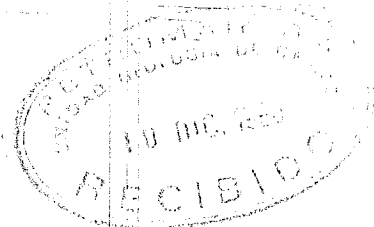
Petromar Lima



POZO DIRIGIDO

Truend 8-I-91

E. Soprani
D. Catano.



Nº OFICIAL : 72A-21-795-D-1016

Nº PETROMAR : 1016-11

11.09.90 AL 26.11.90

Total length = 382'

± cond. 14°

N 46 W

8-1-91

OPERADOR DIRECCIONAL:

WADE MAINGOT

MIGUEL DI SIervo

OK

ALARA-PERU
 116 8
 WELL: L016-11

GENO - HDG Co (800) 833-3213 RADIUS OF CURVATURE CALCULATIONS

Monday, December 10, 1990 Page 2

MEASURED DEPTH Feet	B O R E - H O L E INCLINATION Degrees	D I R E C T I O N Degrees	COURSE LENGTH Feet	VERTICAL DEPTH Feet	R E C T A N G U L A R C O O R D I N A T E S Feet	VERTICAL SECTION Feet	DOUBLE SEVERITY Deg/100ft.	TURN RATE Deg/100ft.	BUILD/GRD RATE Deg/100ft.
0.00	14.00	N 46.00 W		0.00	10.00 N 0.00 E	0.00			
447.00	14.00	N 46.00 W	447.00	433.72	75.12 N 77.73 W	97.93	0.00	-0.00	0.00
585.00	14.00	N 45.00 W	138.00	567.62	98.52 N 101.60 W	128.28	0.18	0.72	0.00
749.00	14.00	N 45.50 W	164.00	726.75	126.45 N 129.78 W	164.43	0.07	-0.30	0.00
910.00	13.50	N 42.00 W	161.00	883.14	164.09 N 155.24 W	199.69	0.60	2.17	-0.31
1001.00	13.50	N 41.50 W	91.00	971.62	169.54 N 170.38 W	219.54	0.13	0.55	0.00
1124.00	13.50	N 43.00 W	123.00	1091.22	191.19 N 183.59 W	246.28	0.28	-3.22	0.00
1245.00	13.00	N 42.00 W	122.00	1209.98	211.31 N 208.58 W	272.28	0.45	0.82	-0.41
1370.00	13.00	N 42.00 W	124.00	1330.60	232.54 N 227.24 W	298.30	0.00	0.00	0.00
1527.00	12.75	N 40.50 W	157.00	1483.35	256.84 N 250.31 W	331.10	0.27	0.96	-0.16
1683.00	12.50	N 39.50 W	155.00	1636.08	284.35 N 272.22 W	363.32	0.21	0.64	-0.16
1838.00	12.00	N 37.00 W	155.00	1797.55	310.78 N 292.58 W	394.71	0.47	1.61	-0.32
1955.00	12.75	N 36.50 W	128.00	1912.57	332.75 N 309.00 W	421.10	0.59	0.39	0.59
2119.00	13.25	N 34.00 W	153.00	2061.55	360.87 N 328.85 W	454.44	0.49	1.63	0.33
2239.00	15.00	N 35.50 W	120.00	2178.02	384.93 N 345.35 W	482.87	1.49	-1.25	1.45
2395.00	15.75	N 32.00 W	155.00	2326.06	420.40 N 359.25 W	524.47	1.28	2.24	1.12
2554.00	18.00	N 30.50 W	159.00	2479.91	450.99 N 393.88 W	571.17	0.84	0.94	0.79
2745.00	19.25	N 31.00 W	191.00	2650.80	513.41 N 425.07 W	631.27	0.65	-0.26	0.65
2929.00	20.00	N 28.00 W	184.00	2834.11	567.19 N 455.50 W	692.37	0.68	1.53	0.41
3115.00	21.00	N 27.00 W	185.00	3008.33	624.97 N 485.58 W	757.07	0.57	0.54	0.54
3344.00	21.00	N 23.50 W	229.00	3222.12	699.18 N 520.58 W	838.69	0.55	1.53	0.00
3380.00	20.75	N 29.00 W	36.00	3255.76	710.69 N 526.25 W	851.66	5.49	-15.28	-0.69
3485.00	16.50	N 35.00 W	105.00	3355.23	739.94 N 544.25 W	884.48	4.57	-6.67	-4.05
3605.00	16.50	N 34.50 W	120.00	3470.29	766.73 N 553.92 W	917.50	0.36	1.25	0.00
3727.00	17.00	N 33.00 W	122.00	3587.12	796.01 N 583.45 W	951.79	0.54	1.23	0.41

TALARA-PERU
115 8
ELL: L016-11

DEMOS - HDS 05 (8000) 835-0213 RADIUS OF CURVATURE CALCULATIONS

Monday, December 10, 1990 Page 3

MEASURED C H Feet	B O R E - H O L E INCLINATION Degrees	DIRECTION Degrees	COURSE LENGTH Feet	VERTICAL DEPTH Feet	R E C T A N G U L A R C O O R D I N A T E S Feet		VERTICAL SECTION Feet	DOGLEG SEVERITY Deg/100ft.	TURN RATE Deg/100ft.	BUILD/DRO RATE Deg/100f	
2910.00	15	17.00	N 32.00 W	183.00	3762.12	841.13 N	812.20 W	1004.19	0.16	0.55	0.00
4187.00		16.75	N 28.00 W	277.00	4027.19	910.76 N	852.40 W	1083.57	0.43	1.44	-0.09
4311.00	27	15.75	N 27.00 W	124.00	4145.98	942.45 N	858.90 W	1119.07	0.23	0.81	0.00
4496.00		19.00	N 31.00 W	188.00	4325.35	991.54 N	896.11 W	1174.63	0.92	-2.13	0.65
4621.00		16.00	N 29.00 W	122.00	4441.38	1024.19 N	714.96 W	1211.86	0.51	1.64	0.00
4779.00		18.25	N 36.00 W	158.00	4591.54	1065.62 N	741.35 W	1259.98	1.39	-4.43	0.15
4908.00		20.00	N 32.00 W	129.00	4713.41	1100.65 N	764.98 W	1301.13	1.69	3.10	1.36
4938.00	29	21.25	N 30.00 W	30.00	4741.49	1109.71 N	770.42 W	1311.53	4.78	6.67	4.17
4969.00		22.00	N 28.00 W	31.00	4770.31	1119.70 N	775.96 W	1322.84	3.39	6.45	2.42
5000.00		23.00	N 24.00 W	31.00	4798.95	1130.36 N	791.16 W	1334.66	5.90	12.90	3.23
5031.00		23.00	N 18.00 W	31.00	4827.48	1141.66 N	785.50 W	1346.76	7.56	19.35	0.00
5110.00		22.00	N 11.00 W	79.00	4900.47	1170.91 N	793.06 W	1376.79	3.62	8.86	-1.27
5235.00	25	22.25	N 9.00 W	125.00	5016.26	1217.28 N	801.24 W	1423.02	0.83	1.60	0.20
5450.00		22.75	N 7.00 W	215.00	5214.90	1298.75 N	812.69 W	1503.21	0.43	0.93	-0.23
5612.00		23.75	N 7.00 W	152.00	5353.74	1362.22 N	820.48 W	1565.29	0.62	0.00	-0.62
5800.00	5848	24.75	N 7.00 W	236.00	5578.91	1458.42 N	832.29 W	1659.38	0.42	0.00	0.42
5952.00		25.00	N 7.00 W	104.00	5673.26	1501.84 N	837.63 W	1701.84	0.24	0.00	0.24
6131.00	27	23.75	N 4.00 W	179.00	5896.31	1575.37 N	844.71 W	1773.06	0.98	1.68	-0.70
6270.00		23.00	N 4.00 W	139.00	5983.90	1630.38 N	848.55 W	1825.62	0.54	0.00	-0.54
6550.00		21.25	N 1.00 W	280.00	6223.27	1735.72 N	853.15 W	1925.87	0.74	1.07	-0.62
7150.00		15.75	N 4.75 E	600.00	6792.04	1925.85 N	846.93 W	2101.27	0.96	0.96	-0.92
7785.00		10.00	N 10.75 E	836.00	7411.79	2056.15 N	827.93 W	2225.53	0.93	0.94	-0.90
8010.00	27	10.00	N 13.00 E	224.00	7632.39	2104.21 N	819.83 W	2258.23	0.17	1.00	0.00

Final Station Closure - Distance: 2253.28 Feet
- Direction: N 21.29 W

J.K.