

WELL: LO6-7

BUILD UP PRESSURE TEST

AND STATIC GRADIENT
(Date: May 22-27, 1995)

History

On Jan./16/85, LO6-7 Well was completed in the interval 5686'-4172' of R.Bravo Fm. which shows a regular initial production. On Feb./08/87, an acidized job was performed. The cumulative oil production up to April 1 /95 was 216 MBls. Now, it is a gas lift well producing 35 bopd.

This survey was recommended to evaluate the actual reservoir pressure.

Results

Formation	Perforated Interval (MD)	M.P.P.		Pressure (Psi/ft)		Form. Gradient (Psi/ft)	Fluids Level (VD)	Fluids Gradient (Psi/ft)
		MD	VD	Static	P*			
R.Bravo	5686'-4172'	4929'	3807'	550	1551	0.114	Gas at Surf. Oil at 4000'	0.017 0.338

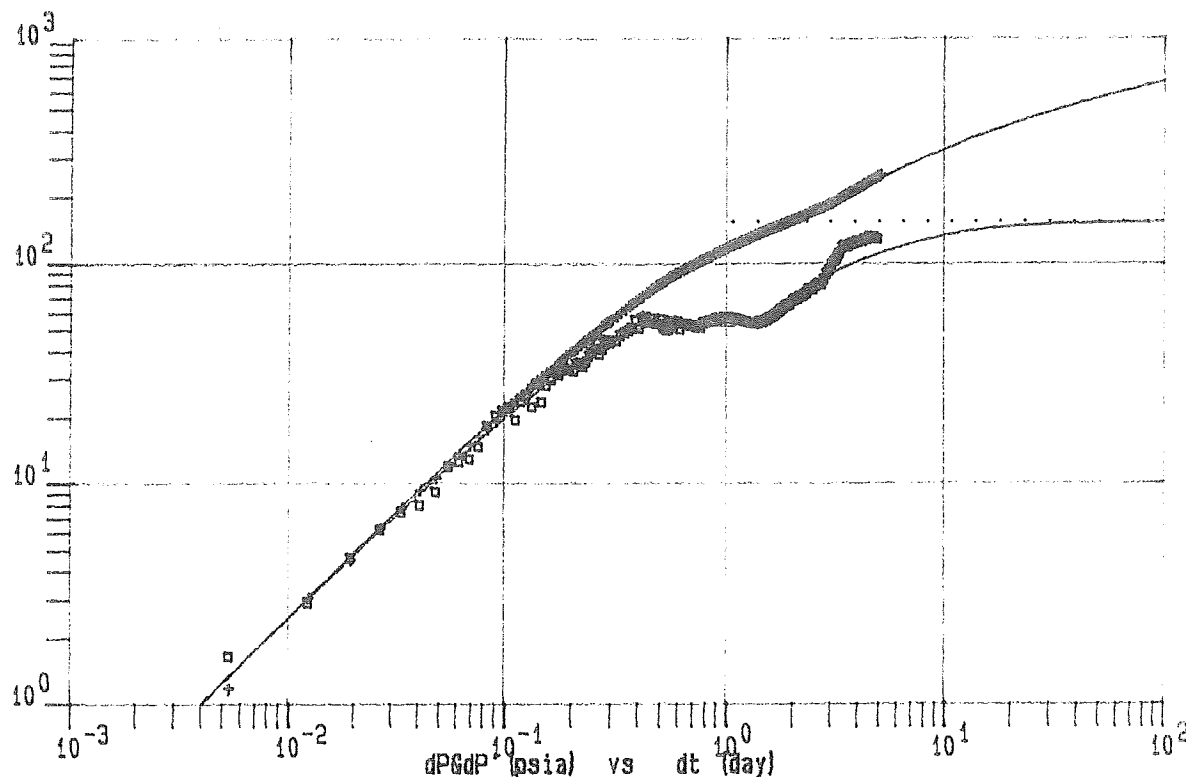
	<u>Match</u>	<u>Horner</u>
Permeability (K), md.	0.0426	0.0426
Skin Factor (S)	-4.206	-0.951

The pressure at bomb depth (5500' MD - 4224' VD) was 629 psig. The well was shut-in during 137 hours to build up pressure. The log-log plot of pressure changes and derivative versus dt. is shown in Attachment-1, where a period of stabilization is noticed almost at the end of the build up test.

The interpretation using the Changing Wellbore Storage Model adjusted better in this case, as it is shown in Attachments-1 & 2 with solid lines. The values of permeability and Skin are in agreement with those found from Horner analysis, see Attachment-3. The R.Bravo Fm. shows no damage and it has very low permeability.

VPG

PetroTech	Log-Log	L06-7
Company	PETRO-TECH	Test
Field	LOBITOS	Date
Well	L06-7	Gauge
		PBU
		MAY/22-27/95



Flow Period # 2
Rate 0 STB/day
Rate Change 26 STB/day
P @ dt=0 301.75 psia
Pi 1510.4 psia
Smoothing 0.1

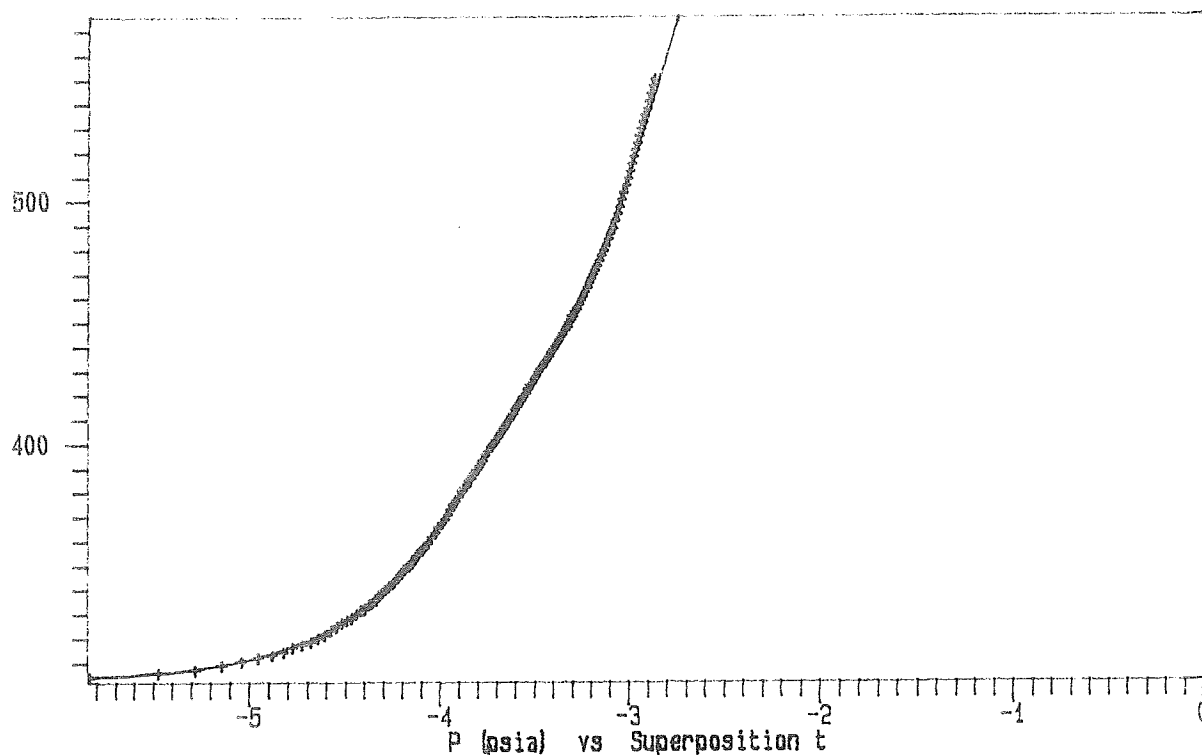
Time match 0.46937 (day)⁻¹
Pressure Match 0.0033129 (psia)⁻¹

RESERVOIR Homogeneous
WELL Changing storage
BOUNDARY Infinite

Storage C 0.21593 STB/psi
CD 3447
C factor 0.57155
Alpha 1122.2
Skin factor -4.2061

kh 16.033 md.ft
K 0.042641 md
Mobility k/mu 0.038072
Investig. R 56.402 ft

PetroTech	Semi-Log	L06-7
Company PETRO-TECH	Test PBU	
Field LOBITOS	Date MAY/22-27/95	
Well L06-7	Gauge	



Flow Period # 2
 Rate 0 STB/day
 Rate Change 26 STB/day
 P @ dt=0 301.75 psia
 Pi 1510.4 psia

Time match 0.46937 (day)⁻¹
 Pressure Match 0.0033129 (psia)⁻¹

RESERVOIR Homogeneous
 WELL Changing storage
 BOUNDARY Infinite

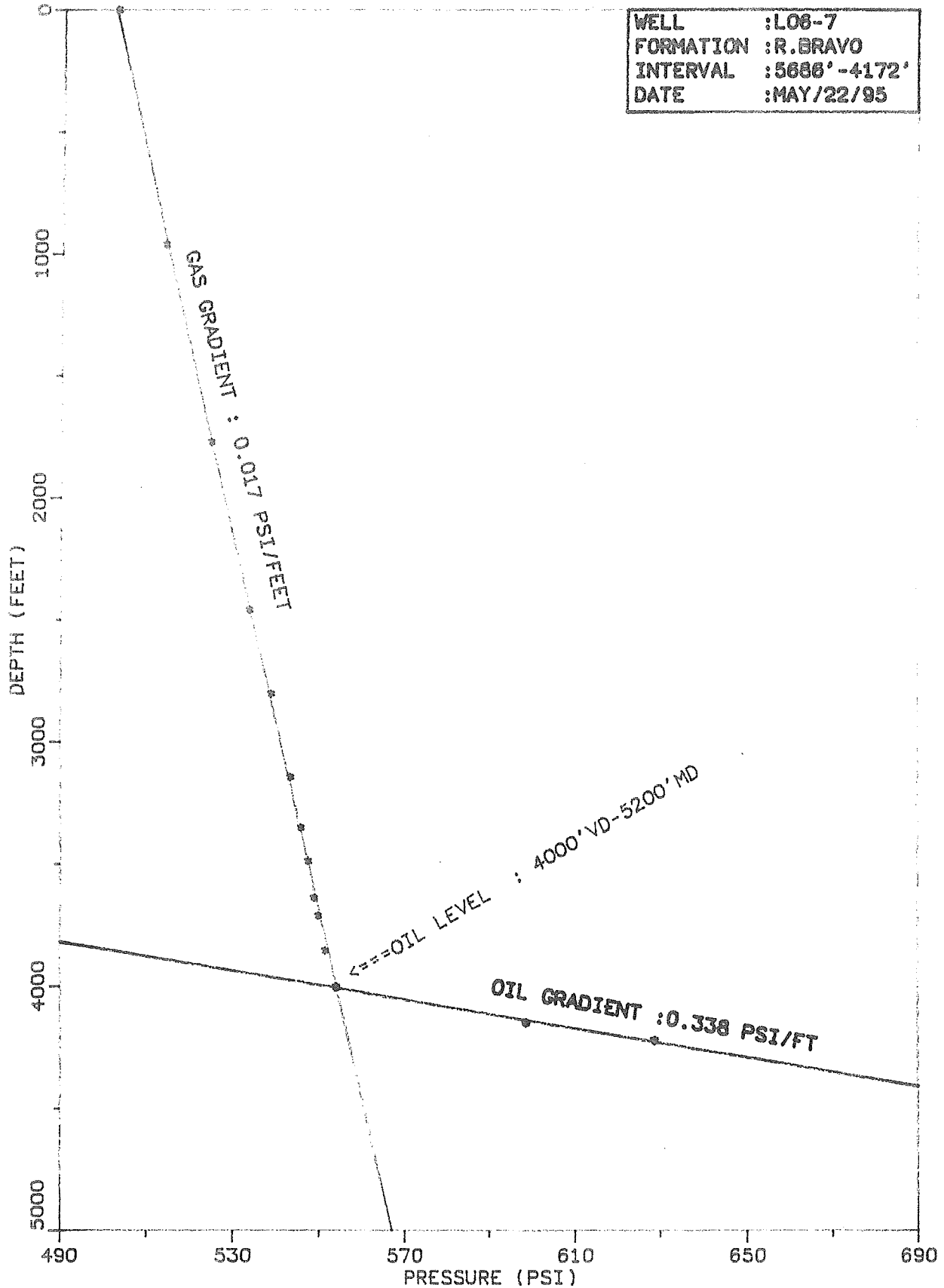
Storage C 0.21593 STB/psi
 CD 3447
 C factor 0.57155
 Alpha 1122.2
 Skin factor -4.2061

kh 16.033 md.ft
 K 0.042641 md
 Mobility k/μ 0.038072

STATIC GRADIENT SURVEY

L06-7

WELL	: L06-7
FORMATION	: R. BRAVO
INTERVAL	: 5686' - 4172'
DATE	: MAY/22/95



LWA

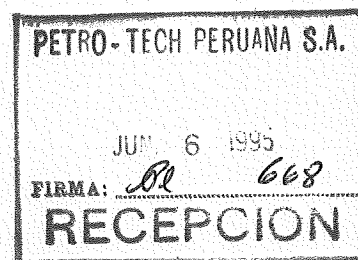
LIMA
E. R. Lormave
2/6/95
SPC

PRUEBA DE RESTAURACION DE PRESION Y GRADIENTE ESTATICA

**PETRO-TECH PERUANA S.A.
LOBITOS MAR LO6-7
TALARA - PERU
140 HRS. BUILD UP**

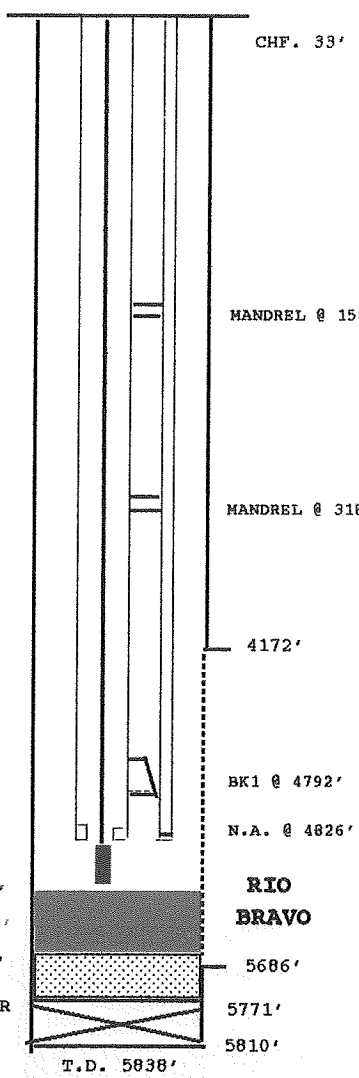
DEL 22 AL 27 DE MAYO DE 1995

REPORTE PREPARADO
POR
EDDY CORDERO



CENTRAL FILE
Geosciences

INFORMACION GENERAL

POZO : LO6-7 (Z-2-A-21-599-D-LO6)		AREA : LOBITOS MAR	
PRUEBA : REGISTRO DE RESTAURACION DE PRESION (BUILD UP) x 120 Hrs.			
FORMACION : RIO BRAVO		INTERVALO : 4172'- 5686' P.M.	
POZO LO6-7 INSTALACION DE SUBSUELO BLT TUBING 2 3/8" CASING 5 1/2"  CHF. 33' MANDREL @ 1587' MANDREL @ 3184' 4172' BK1 @ 4792' N.A. @ 4826' RIO BRAVO 5686' 5771' 5810' T.D. 5838' MEMORY GAUGE @ 5000' WLM OIL 2 5196' WATER @ 5417' TOPE 5623' F. COLLAR F. SHOE		FECHA	DATOS DEL POZO
		22/05/95	Número Oficial del Pozo : Z-2-A-21-599-D-LO6 Instalación Actual : Gas Lift - BLT. Estado del Pozo : Productor. Pruebas de Producción : 26 BOPD - MAR. 95 Producción Acumulada : 3,731 Bls. (Marzo 95). Standing Valve @ 4,780' W.L.M. Tope de Arena @ 5,623' W.L.M.
		HORA	
		10:00:00	
		11:00:00	
		DESARROLLO DE LA PRUEBA	
		11:30:00	Chequeó baterías del Memory Gauges. Prueba satisfactoria.
		12:05:00	Se conectó baterías.
		12:30:00	Presurizó Lubricador.
		12:35:00	Se procedió a bajar Memory Gauge a 5,000' W.L.M.
		12:42:00	En el fondo. Se tomó 3 ciclos de inyección de gas (30' x 3'20").
		15:25:00	Inicio del Registro Build Up. Presión Inicial de Cabeza : 0 psi.
		23/05/95	12:00:00 --- Presión de Cabeza : 285 psi.
		24/05/95	12:00:00 --- Presión de Cabeza : 375 psi.
		25/05/95	18:00:00 --- Presión de Cabeza : 410 psi.
		26/05/95	17:00:00 --- Presión de Cabeza : 460 psi.
		27/05/95	Termino del Registro Build Up.
		08:11:00	Presión final de cabeza : 500 psi.
		08:17:00	Inició Bajada @ 5500' WLM para toma de Gradientes.
		08:19:00	Gradiente Estática de 5500' W.L.M. a superficie .
		09:11:00	Se desfoga lubricador.
		09:25:00	Se desconecta baterías M.G.
		OBSERVACIONES :	
		El standing valve se encontro a la profundidad de 4780' W.L.M. la tarjeta indica una profundidad de 4826 PM. Los datos utilizados corresponden a la bomba de Fondo, serial 20611.	
		En la prueba de Gradiente Estática se determinó la presencia de gas, crudo y agua.	
		GRADIENTE PROMEDIA DEL GAS : 0.013 PSI/FT .	
		GRADIENTE PROMEDIA DEL CRUDO : 0.306 PSI/FT @ 4002 PV (5196' WLM).	
GRADIENTE PROMEDIA DEL AGUA : 0.412 PSI/FT @ 4163 PV (5416' WLM).			

COMENTARIOS

En el pozo LO6-7 del área Lobitos Mar, que tiene como arena productiva a la formación Rio Bravo con una producción promedio de 26 BOPD ,fue programado para una prueba Build Up por un periodo de 140 horas.

De la data obtenida se puede observar que la presión fluyente fue de 220 psi, y la presión estática final de 551 psi, habiendo un incremento de presión de 331 psi, esto indica que la formación tiene un regular aporte de fluido, también podemos notar que la temperatura promedio a la profundidad de 5000' es de 97°F.

En el gráfico cartesiano de Presión vs. Tiempo, se puede observar que la tendencia de la curva empieza a cambiar aproximadamente a las 17 horas, posteriormente existe un rapido incremento de presión, luego seguira un comportamiento lineal sin poder alcanzar la estabilización, la presión final alcanzada fue de 551 psia.

En el gráfico de Log-Log de Presión vs Tiempo se puede apreciar que hay un cambio en el coeficiente de almacenamiento, esto se debe a que inicialmente se toma un factor de almacenamiento debido al fluido existente en la boca del pozo, este comportamiento persiste hasta que se empieza a sentir el efecto de compresión del fluido, este fenómeno se empieza a notar con el aumento de presión en la cabeza del pozo.

Este comportamiento tambien puede ser debido a que otro miembro de la formación Rio Bravo, comiensa a aporta fluido, modificando de esta manera la constante de almacenamiento.

Del gráfico Semi-Log de Horner se puede notar los efectos de almacenamiento y la existencia de un skin negativo, que se comprueba observando la diferencia de presión entre la PIhr y la presión fluyente, ademas se obtuvo una pendiente, $M = -221.937$ psi/ciclo y una presión extrapolada de 1523 psia.

Tambien se computaron del análisis convencional de Horner los valores de permeabilidad y factor skin así como el radio de investigación, estos valores se muestran en la hoja de resultados para el Analisis Semi-Log de Horner.

Con respecto a la prueba de Gradiente Estática, podemos observar del gráfico respectivo la presencia de gas, aceite y agua.

El nivel de aceite se encontro a la profundidad de 4002 PV (5196' WLM) con una gradiente promedio de 0.306 psi/ft y el nivel de agua se encontró a 4163 PV (5416' WLM) siendo la gradiente promedio del agua de 0.412 psi/ft y la gradiente promedio del gas es de 0.013 psi/ ft.

Company: PETRO-TECH PERUANA S.A.

Well: LO6-7

Field: LOBITOS MAR

05/22/1995

Perforations: 4172' - 5686'

Gauge Depth 5000.0 feet

[INPUT PARAMETERS]
(Build-Up Analysis)

Well Type - OIL			
Reservoir Pressure	psia	P	560
Reservoir Temperature	Deg F	T	97
Final Shut-in Pressure	psia	Psi	551
Final Flowing Pressure	psia	Pwf	220
Gas Flow Rate	mcf	Qg	40.000
Oil Flow Rate	STB/D	Qo	26.0000
Sand Thickness	feet	hnet	435
Perforated Thickness	feet	hperf	435
Wellbore Radius	feet	rw	0.3200
Formation Porosity	%	POR	10
Extrapolated Pressure	psia	P*	1523
Extrapolated Press @ 1hr	psia	P1hr	55
Semi-Log Slope	psi/cycle	M	-221.937
Shut-in Time	hrs	tsi	140.00

Uo (cp) 2.0000E+00
Co (1/psi) 4.0000E-06

Bo (RB/STB) 1.1000E+00
Ct (1/psi) 8.0000E-06

[CALCULATED RESULTS]

(Semi-Log) Analysis		Pressure Method	
Transmissibility	md-ft/cp	kh/u	20.954
Flow Capacity	md-ft	kh	41.907
Permeability	md	k	0.096
Skin Damage	total	S	-3.78
Pressure Drop due to Skin	psia	dP	+0.00
Flow Efficiency	%	FE	+100.00
Drainage Radius	feet	rd	84

[Louisiana Well Analysis LTD.]

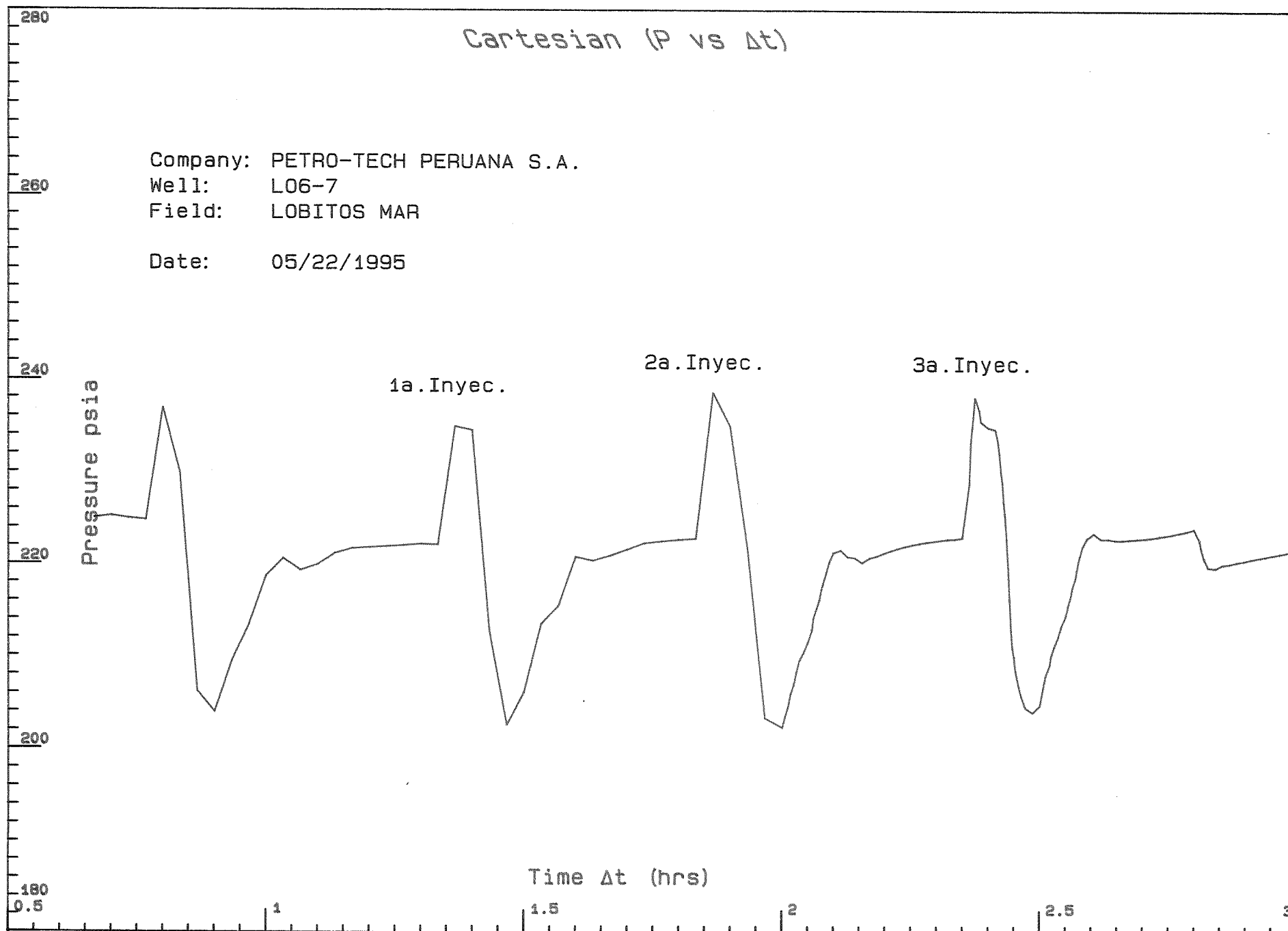
Cartesian (P vs Δt)

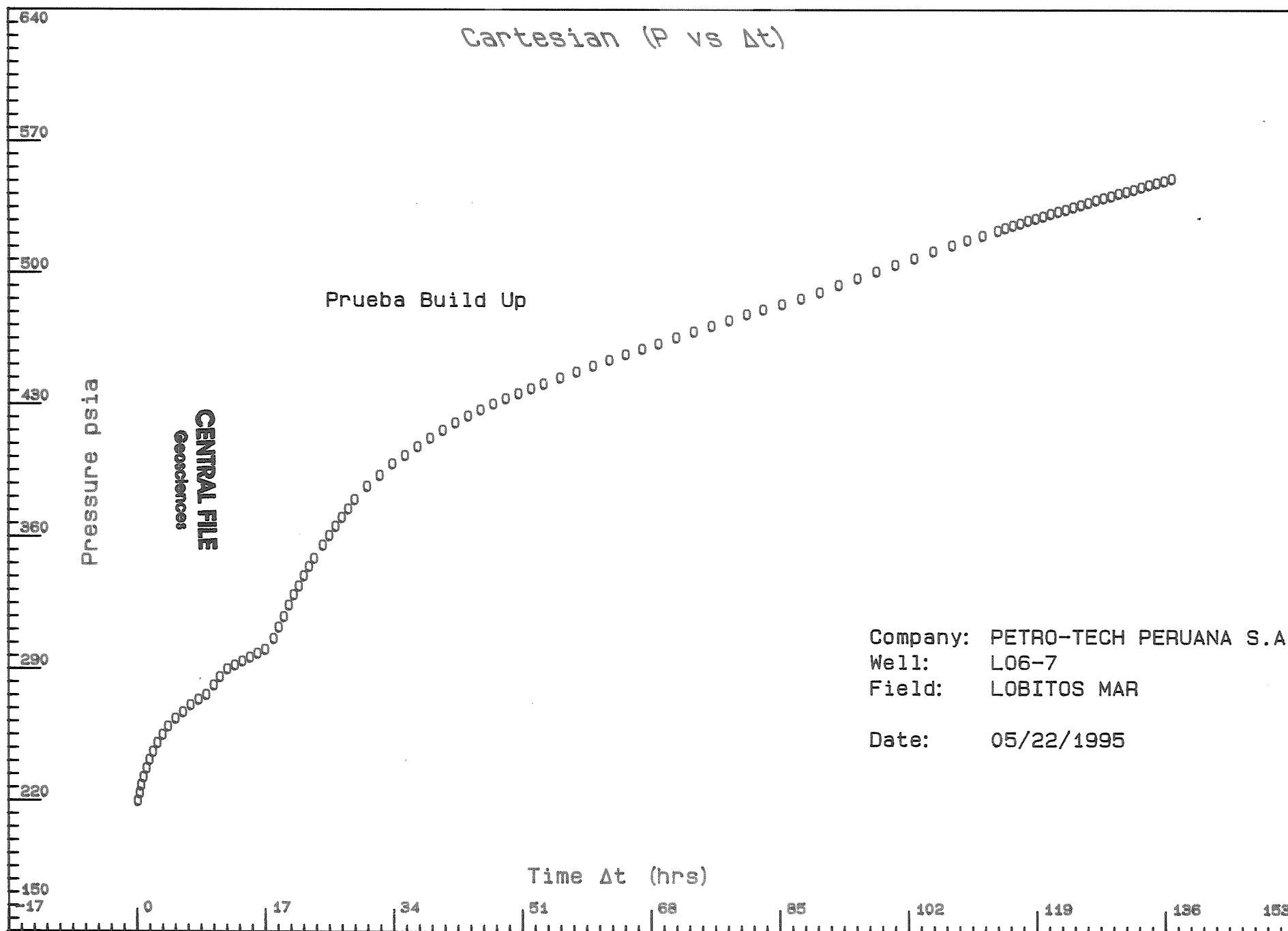
Company: PETRO-TECH PERUANA S.A.

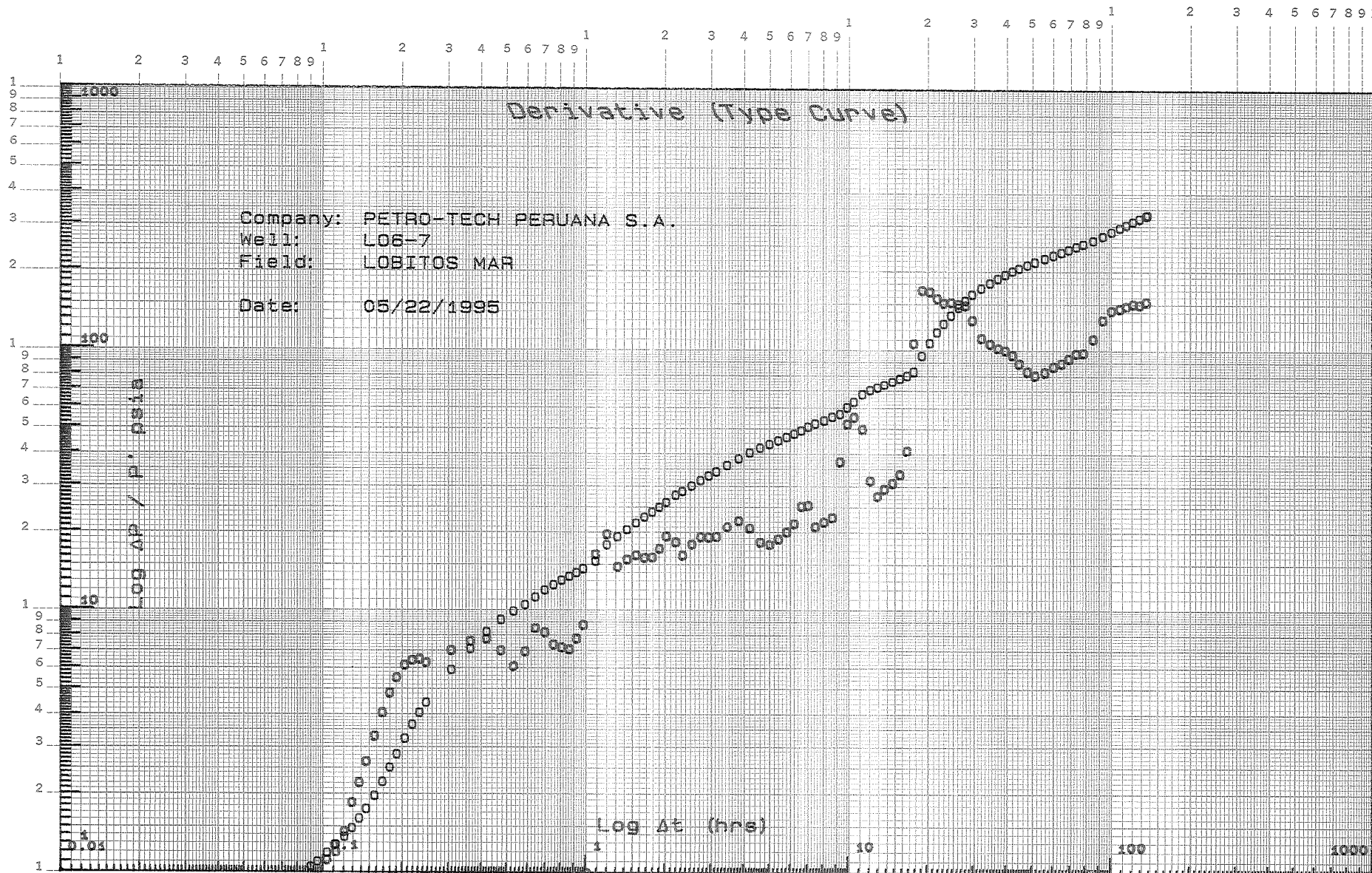
Well: L06-7

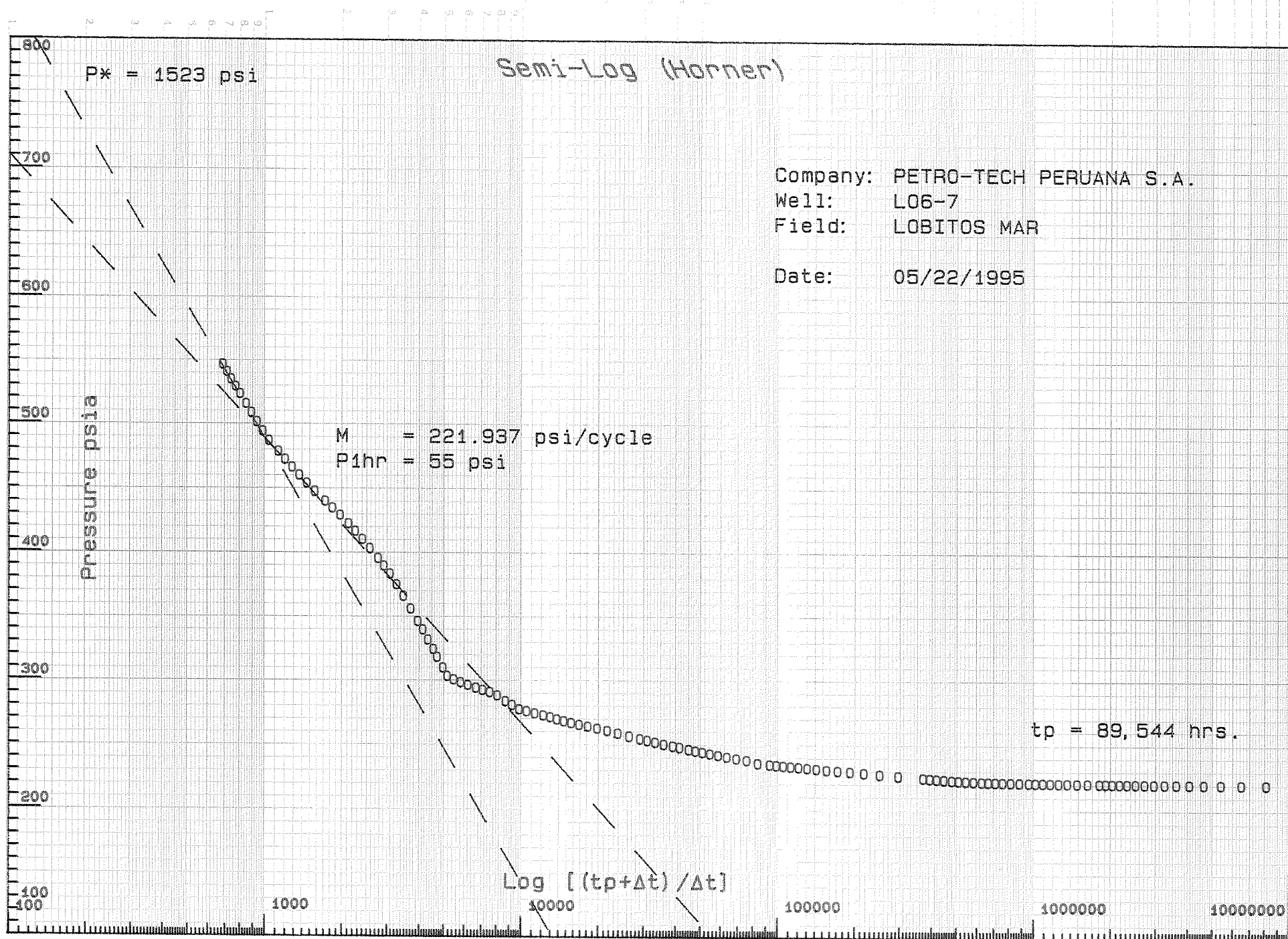
Field: LOBITOS MAR

Date: 05/22/1995









LWA**SPC**

Company: PETRO-TECH PERUANA S.A.

Well: LO6-7

Field: LOBITOS MAR

County: PERU

State: TALARA

Engineer:

Gauge Type: Starburst Ultra II

Serial No.: 20611

Gauge Range: 0-3024 psia

Gauge Depth: 5000 ft

Date: 05/22/1995

Well API: 35

Well Type: Oil

Test Type: Static Gradient

Well Status: Producer

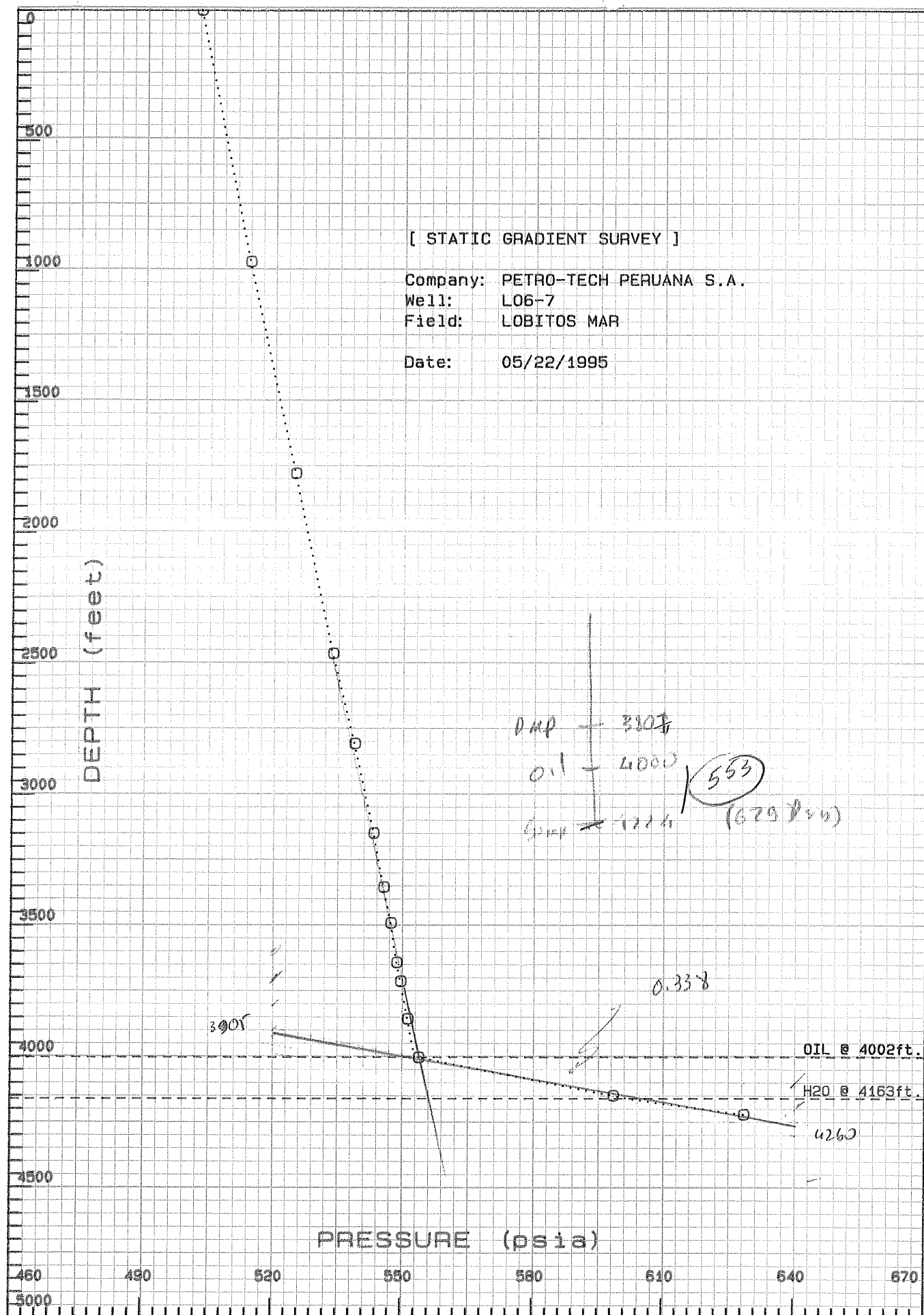
Shut-in BHP	551	@	5000 ft	Shut-in BHT	97 F	@	5000 ft
Flowing BHP	220	@	5000 ft	Flowing BHT	97 F	@	5000 ft

[GRADIENT DATA]

#	MD	TVD	PRESSURE	PSI/ft
1	0	0	502.27	
2	1000	965	514.00	0.012
3	2000	1775	524.80	0.013
4	3000	2463	533.72	0.013
5	3500	2807	538.78	0.015
6	4000	3149	543.26	0.013
7	4300	3355	545.70	0.012
8	4500	3492	547.40	0.012
9	4700	3643	548.80	0.009
10	4800	3715	549.70	0.013
11	5000	3858	551.34	0.011
12	5200	4005	553.90	0.017
13	5400	4151	598.55	0.306
14	5500	4224	628.60	0.412

46 0780

K&S 10 X 10 TO THE INCH 7 X 10 INCHES
KEUFFEL & ESSER CO. MADE IN U.S.A.



35

690

Company: PETRO-TECH PERUANA S.A.

Well: LO6-7

Field: LOBITOS MAR

[Monday: May. 22, 1995]

Page 1

REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)	BHT (Deg.F)
----------	-----	--------------	-------------	---------------	----------------

Reg.Electronicos Starburst Ultra II.

Tope:Inst#20611, Fondo:Inst#20600

Conecto Baterias: 12:04:20

Presurizo Lubricador: 12:30:00

1	0	12: 4:20	0.0000	14.50	71.14
3	0	12: 8:20	0.0667	14.50	71.13
5	0	12:12:20	0.1333	14.50	71.33
6	0	12:14:20	0.1667	14.50	71.41
8	0	12:18:20	0.2333	14.50	71.44
9	0	12:20:20	0.2667	14.50	71.40
11	0	12:24:20	0.3333	14.50	71.57
12	0	12:26:20	0.3667	14.50	71.57
14	0	12:30:20	0.4333	54.47	71.56
15	0	12:32:20	0.4667	54.82	71.55
17	0	12:36:20	0.5333	57.53	70.10
18	0	12:38:20	0.5667	58.79	71.76
20	0	12:42:20	0.6333	61.87	76.98

Reg.en el Fondo @ 5000'.

21	0	12:44:20	0.6667	224.97	80.30
23	0	12:48:20	0.7333	224.89	87.30

Primera Inyeccion de Gas.

24	0	12:50:20	0.7667	224.72	89.65
26	0	12:54:20	0.8333	229.74	92.26
27	0	12:56:20	0.8667	206.08	93.47
29	0	13: 0:20	0.9333	209.34	94.83
30	0	13: 2:20	0.9667	213.30	95.39
32	0	13: 6:20	1.0333	220.53	96.24
33	0	13: 8:20	1.0667	219.21	96.36
35	0	13:12:20	1.1333	221.09	96.76
36	0	13:14:20	1.1667	221.62	96.85
38	0	13:18:20	1.2333	221.85	96.95
39	0	13:20:20	1.2667	221.97	96.99
41	0	13:24:20	1.3333	222.05	97.03

Segunda Inyeccion de Gas.

42	0	13:26:20	1.3667	234.88	96.79
44	0	13:30:20	1.4333	212.60	96.88
45	0	13:32:20	1.4667	202.44	96.91
47	0	13:36:20	1.5333	213.40	96.95
48	0	13:38:20	1.5667	215.38	96.96
50	0	13:42:20	1.6333	220.30	96.97
51	0	13:44:20	1.6667	220.88	96.97
53	0	13:48:20	1.7333	222.23	96.97
54	0	13:50:20	1.7667	222.44	96.97
56	0	13:54:20	1.8333	222.74	96.99

Tercera Inyeccion de Gas.

57	0	13:56:20	1.8667	238.53	97.00
59	0	14: 0:20	1.9333	221.66	97.01
60	0	14: 2:20	1.9667	203.22	97.01
62	0	14: 4:30	2.0028	202.79	97.02
75	0	14: 6:40	2.0389	210.18	97.06

Company: PETRO-TECH PERUANA S.A.

Well: LO6-7

Field: LOBITOS MAR

[Monday: May. 22, 1995]

Page 2

REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)	BHT (Deg.F)
88	0	14: 8:50	2.0750	216.44	97.07
101	0	14:11: 0	2.1111	221.48	97.08
114	0	14:13:10	2.1472	220.02	97.08
126	0	14:15:10	2.1806	220.77	97.08
139	0	14:17:20	2.2167	221.53	97.07
152	0	14:19:30	2.2528	222.08	97.07
165	0	14:21:40	2.2889	222.43	97.06
178	0	14:23:50	2.3250	222.69	97.06
191	0	14:26: 0	2.3611	223.33	97.04
Cuarta Inyeccion de Gas.					
192	0	14:26:10	2.3639	228.76	97.04
204	0	14:28:10	2.3972	234.85	96.98
216	0	14:30:10	2.4306	226.63	96.92
229	0	14:32:20	2.4667	205.19	96.94
242	0	14:34:30	2.5028	205.15	97.00
255	0	14:36:40	2.5389	212.63	97.04
268	0	14:38:50	2.5750	219.94	97.06
281	0	14:41: 0	2.6111	223.16	97.07
294	0	14:43:10	2.6472	222.59	97.07
306	0	14:45:10	2.6806	222.67	97.06
319	0	14:47:20	2.7167	222.86	97.05
332	0	14:49:30	2.7528	223.17	97.04
345	0	14:51:40	2.7889	223.57	97.04
358	0	14:53:50	2.8250	219.81	97.03
Pozo Cerrado - Inicio del Build-Up.					
371	0	14:56: 0	2.8611	219.91	97.03
384	0	14:58:10	2.8972	220.34	97.04
396	0	15: 0:10	2.9306	220.75	97.05
409	0	15: 2:20	2.9667	221.13	97.05
422	0	15: 4:30	3.0028	221.61	97.05
435	0	15: 6:40	3.0389	222.42	97.05
448	0	15: 8:50	3.0750	223.49	97.05
461	0	15:11: 0	3.1111	224.49	97.05
474	0	15:13:10	3.1472	225.37	97.04
486	0	15:15:10	3.1806	226.11	97.03
499	0	15:17:20	3.2167	226.89	97.01
512	0	15:19:30	3.2528	227.65	96.99
525	0	15:21:40	3.2889	228.34	96.97
538	0	15:23:50	3.3250	228.95	96.94
551	0	15:26: 0	3.3611	229.47	96.91
564	0	15:28:10	3.3972	229.86	96.87
576	0	15:30:10	3.4306	230.20	96.85
589	0	15:32:20	3.4667	230.64	96.82
602	0	15:34:30	3.5028	231.14	96.78
615	0	15:36:40	3.5389	231.63	96.74
628	0	15:38:50	3.5750	232.06	96.71
641	0	15:41: 0	3.6111	232.41	96.66
654	0	15:43:10	3.6472	232.75	96.61
666	0	15:45:10	3.6806	233.06	96.57
679	0	15:47:20	3.7167	233.36	96.52

Company: PETRO-TECH PERUANA S.A.

Well: LO6-7

Field: LOBITOS MAR

[Monday: May. 22, 1995]

Page 3

REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)	BHT (Deg.F)
692	0	15:49:30	3.7528	233.63	96.48
705	0	15:51:40	3.7889	233.95	96.44
718	0	15:53:50	3.8250	234.27	96.42
731	0	15:56: 0	3.8611	234.53	96.41
744	0	15:58:10	3.8972	234.74	96.42
756	0	16: 0:10	3.9306	235.09	96.44
769	0	16: 2:20	3.9667	235.89	96.46
782	0	16: 4:50	4.0083	237.13	96.51
786	0	16: 6:50	4.0417	237.55	96.53
791	0	16: 9:20	4.0833	238.06	96.56
795	0	16:11:20	4.1167	238.45	96.58
855	0	16:41:20	4.6167	243.65	96.76
908	0	17:11:20	5.1167	248.15	96.82
938	0	17:41:20	5.6167	251.70	96.85
968	0	18:11:20	6.1167	254.87	96.87
998	0	18:41:20	6.6167	257.94	96.88
1024	0	19:13:20	7.1500	261.07	96.89
1034	0	19:43:20	7.6500	262.85	96.88
1045	0	20:16:20	8.2000	264.78	96.87
1055	0	20:46:20	8.7000	266.51	96.86
1065	0	21:16:20	9.2000	268.23	96.86
1075	0	21:46:20	9.7000	270.15	96.85
1083	0	22:16:20	10.2000	271.94	96.85
1088	0	22:46:20	10.7000	273.19	96.85
1093	0	23:16:20	11.2000	274.48	96.85
1098	0	23:46:20	11.7000	276.17	96.85
[Tuesday: May. 23, 1995]					
1103	1	0:16:20	12.2000	276.40	96.82
1108	1	0:46:20	12.7000	280.30	96.79
1113	1	1:16:20	13.2000	282.73	96.75
1118	1	1:46:20	13.7000	285.70	96.72
1123	1	2:16:20	14.2000	288.06	96.69
1128	1	2:46:20	14.7000	289.90	96.68
1133	1	3:16:20	15.2000	290.75	96.67
1138	1	3:46:20	15.7000	291.98	96.67
1143	1	4:16:20	16.2000	293.06	96.68
1148	1	4:46:20	16.7000	294.15	96.70
1153	1	5:16:20	17.2000	295.22	96.71
1158	1	5:46:20	17.7000	296.27	96.73
1163	1	6:16:20	18.2000	297.33	96.75
1168	1	6:46:20	18.7000	298.36	96.77
1173	1	7:16:20	19.2000	299.57	96.80
1178	1	7:46:20	19.7000	300.40	96.84
1183	1	8:24:20	20.3333	301.75	96.87
1186	1	8:54:20	20.8333	306.16	96.89
1189	1	9:24:20	21.3333	310.94	96.91
1192	1	9:54:20	21.8333	315.18	96.93
1195	1	10:24:20	22.3333	319.16	96.95
1198	1	10:54:20	22.8333	323.92	96.96
1201	1	11:24:20	23.3333	327.42	96.98

Company: PETRO-TECH PERUANA S.A.

Well: LO6-7

Field: LOBITOS MAR

[Tuesday: May. 23, 1995]

Page 4

REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)	BHT (Deg.F)
1204	1	11:54:20	23.8333	331.37	96.99
1207	1	12:24:20	24.3333	335.21	97.00
1210	1	12:54:20	24.8333	339.35	97.01
1213	1	13:24:20	25.3333	342.49	97.01
1216	1	13:54:20	25.8333	345.91	97.02
1219	1	14:24:20	26.3333	349.25	97.02
1222	1	14:54:20	26.8333	353.06	97.03
1225	1	15:24:20	27.3333	355.59	97.03
1228	1	15:54:20	27.8333	358.62	97.04
1231	1	16:24:20	28.3333	361.59	97.04
1234	1	16:54:20	28.8333	365.03	97.04
1237	1	17:24:20	29.3333	367.33	97.04
1240	1	17:54:20	29.8333	370.17	97.05
1243	1	18:24:20	30.3333	373.43	97.05
1246	1	18:54:20	30.8333	375.46	97.05
1249	1	19:24:20	31.3333	378.58	97.05
1252	1	19:54:20	31.8333	380.96	97.05
1255	1	20:24:20	32.3333	383.16	97.05
1258	1	20:54:20	32.8333	384.74	97.05
1261	1	21:24:20	33.3333	387.27	97.05
1264	1	21:54:20	33.8333	388.69	97.05
1267	1	22:24:20	34.3333	390.56	97.05
1270	1	22:54:20	34.8333	392.35	97.05
1273	1	23:24:20	35.3333	394.51	97.05
1276	1	23:54:20	35.8333	396.16	97.05
[Wednesday: May. 24, 1995]					
1279	2	0:24:20	36.3333	397.97	97.05
1282	2	0:54:20	36.8333	398.95	97.05
1285	2	1:24:20	37.3333	400.50	97.05
1288	2	1:54:20	37.8333	401.98	97.05
1291	2	2:24:20	38.3333	403.45	97.05
1294	2	2:54:20	38.8333	404.85	97.05
1297	2	3:24:20	39.3333	406.27	97.05
1300	2	3:54:20	39.8333	407.66	97.05
1303	2	4:24:20	40.3333	409.03	97.05
1306	2	4:54:20	40.8333	410.38	97.05
1309	2	5:24:20	41.3333	411.70	97.05
1312	2	5:54:20	41.8333	412.99	97.05
1315	2	6:24:20	42.3333	414.25	97.05
1318	2	6:54:20	42.8333	415.49	97.05
1321	2	7:24:20	43.3333	416.72	97.05
1324	2	7:54:20	43.8333	417.92	97.05
1327	2	8:24:20	44.3333	419.11	97.05
1330	2	8:54:20	44.8333	420.27	97.05
1333	2	9:24:20	45.3333	421.39	97.05
1336	2	9:54:20	45.8333	422.50	97.05
1339	2	10:24:20	46.3333	423.57	97.05
1342	2	10:54:20	46.8333	424.61	97.05
1345	2	11:24:20	47.3333	425.64	97.05
1348	2	11:54:20	47.8333	426.64	97.05

Company: PETRO-TECH PERUANA S.A.

Well: LO6-7

Field: LOBITOS MAR

[Wednesday: May. 24, 1995]

Page 5

REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)	BHT (Deg.F)
1351	2	12:24:20	48.3333	427.60	97.05
1354	2	12:54:20	48.8333	428.55	97.05
1357	2	13:24:20	49.3333	429.47	97.05
1360	2	13:54:20	49.8333	430.37	97.05
1363	2	14:24:20	50.3333	431.24	97.05
1366	2	14:54:20	50.8333	432.10	97.05
1369	2	15:24:20	51.3333	432.95	97.05
1372	2	15:54:20	51.8333	433.77	97.04
1375	2	16:24:20	52.3333	434.59	97.04
1378	2	16:54:20	52.8333	435.40	97.04
1381	2	17:24:20	53.3333	436.20	97.04
1384	2	17:54:20	53.8333	436.98	97.04
1387	2	18:24:20	54.3333	437.76	97.04
1390	2	18:54:20	54.8333	438.53	97.04
1393	2	19:24:20	55.3333	439.30	97.04
1396	2	19:54:20	55.8333	440.06	97.04
1399	2	20:24:20	56.3333	440.82	97.04
1402	2	20:54:20	56.8333	441.57	97.04
1405	2	21:24:20	57.3333	442.33	97.04
1408	2	21:54:20	57.8333	443.07	97.04
1411	2	22:24:20	58.3333	443.81	97.04
1414	2	22:54:20	58.8333	444.54	97.04
1417	2	23:24:20	59.3333	445.27	97.04
1420	2	23:54:20	59.8333	445.98	97.04
[Thursday: May. 25, 1995]					
1423	3	0:24:20	60.3333	446.70	97.04
1426	3	0:54:20	60.8333	447.42	97.04
1429	3	1:24:20	61.3333	448.15	97.03
1432	3	1:54:20	61.8333	448.88	97.03
1435	3	2:24:20	62.3333	449.61	97.03
1438	3	2:54:20	62.8333	450.34	97.03
1441	3	3:24:20	63.3333	451.07	97.03
1444	3	3:54:20	63.8333	451.79	97.03
1448	3	4:34:20	64.5000	452.76	97.03
1451	3	5: 4:20	65.0000	453.47	97.03
1454	3	5:34:20	65.5000	454.18	97.03
1457	3	6: 4:20	66.0000	454.90	97.03
1460	3	6:34:20	66.5000	455.60	97.03
1463	3	7: 4:20	67.0000	456.32	97.03
1466	3	7:34:20	67.5000	457.03	97.03
1469	3	8: 4:20	68.0000	457.74	97.03
1472	3	8:34:20	68.5000	458.50	97.03
1475	3	9: 4:20	69.0000	459.33	97.03
1478	3	9:34:20	69.5000	459.81	97.03
1481	3	10: 4:20	70.0000	460.52	97.03
1483	3	10:44:20	70.6667	461.44	97.03
1485	3	11:24:20	71.3333	462.11	97.03
1487	3	12: 4:20	72.0000	463.44	97.03
1489	3	12:44:20	72.6667	464.22	97.03
1491	3	13:24:20	73.3333	465.05	97.02

Company: PETRO-TECH PERUANA S.A.

Well: LO6-7

Field: LOBITOS MAR

[Thursday: May. 25, 1995]

Page 6

REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)	BHT (Deg.F)
1493	3	14: 4:20	74.0000	465.91	97.02
1495	3	14:44:20	74.6667	466.78	97.02
1497	3	15:24:20	75.3333	467.67	97.02
1499	3	16: 4:20	76.0000	468.56	97.02
1501	3	16:44:20	76.6667	469.40	97.02
1503	3	17:24:20	77.3333	470.26	97.02
1505	3	18: 4:20	78.0000	471.13	97.02
1507	3	18:44:20	78.6667	471.97	97.02
1509	3	19:24:20	79.3333	472.85	97.02
1511	3	20: 4:20	80.0000	473.71	97.02
1513	3	20:44:20	80.6667	474.54	97.02
1515	3	21:24:20	81.3333	475.39	97.02
1517	3	22: 4:20	82.0000	476.31	97.02
1519	3	22:44:20	82.6667	476.80	97.02
1521	3	23:24:20	83.3333	478.20	97.02
[Friday: May. 26, 1995]					
1523	4	0: 4:20	84.0000	478.71	97.02
1525	4	0:44:20	84.6667	479.55	97.02
1527	4	1:34:20	85.5000	480.69	97.02
1528	4	2: 4:20	86.0000	481.72	97.02
1529	4	2:34:20	86.5000	482.26	97.02
1530	4	3: 4:20	87.0000	482.80	97.02
1531	4	3:34:20	87.5000	483.36	97.02
1532	4	4: 4:20	88.0000	483.53	97.02
1533	4	4:34:20	88.5000	484.55	97.02
1534	4	5: 4:20	89.0000	485.15	97.02
1535	4	5:34:20	89.5000	485.76	97.02
1536	4	6: 4:20	90.0000	485.90	97.02
1537	4	6:34:20	90.5000	486.57	97.02
1538	4	7: 4:20	91.0000	487.12	97.02
1539	4	7:34:20	91.5000	487.71	97.02
1540	4	8: 4:20	92.0000	488.62	97.02
1541	4	8:34:20	92.5000	489.14	97.02
1542	4	9: 4:20	93.0000	490.03	97.02
1543	4	9:34:20	93.5000	490.67	97.02
1544	4	10: 4:20	94.0000	491.43	97.02
1545	4	10:34:20	94.5000	492.50	97.02
1546	4	11: 4:20	95.0000	493.19	97.01
1547	4	11:34:20	95.5000	493.88	97.01
1548	4	12: 4:20	96.0000	494.58	97.01
1549	4	12:34:20	96.5000	495.30	97.01
1550	4	13: 4:20	97.0000	496.03	97.01
1551	4	13:34:20	97.5000	496.76	97.01
1552	4	14: 4:20	98.0000	497.49	97.01
1553	4	14:34:20	98.5000	498.22	97.01
1554	4	15: 4:20	99.0000	498.96	97.01
1555	4	15:34:20	99.5000	499.67	97.01
1556	4	16: 4:20	100.0000	500.40	97.01
1557	4	16:34:20	100.5000	501.12	97.01
1558	4	17: 4:20	101.0000	501.84	97.01

Company: PETRO-TECH PERUANA S.A.

Well: LO6-7

Field: LOBITOS MAR

[Friday: May. 26, 1995]

Page 7

REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)	BHT (Deg.F)
1559	4	17:34:20	101.5000	502.54	97.01
1560	4	18: 4:20	102.0000	503.26	97.01
1561	4	18:34:20	102.5000	503.98	97.01
1562	4	19: 4:20	103.0000	504.68	97.01
1563	4	19:34:20	103.5000	505.40	97.01
1564	4	20: 4:20	104.0000	506.12	97.01
1565	4	20:34:20	104.5000	506.81	97.01
1566	4	21: 4:20	105.0000	507.51	97.01
1567	4	21:34:20	105.5000	508.21	97.01
1568	4	22: 4:20	106.0000	508.90	97.01
1569	4	22:34:20	106.5000	509.58	97.01
1570	4	23: 4:20	107.0000	510.20	97.01
1571	4	23:34:20	107.5000	511.23	97.02
[Saturday: May. 27, 1995]					
1572	5	0: 4:20	108.0000	511.94	97.02
1573	5	0:34:20	108.5000	512.39	97.02
1574	5	1: 4:20	109.0000	513.22	97.02
1575	5	1:34:20	109.5000	514.07	97.02
1576	5	2: 4:20	110.0000	514.59	97.02
1577	5	2:34:20	110.5000	515.09	97.02
1578	5	3: 4:20	111.0000	515.75	97.02
1579	5	3:34:20	111.5000	516.36	97.02
1580	5	4: 4:20	112.0000	517.17	97.02
1610	5	4:34:20	112.5000	517.90	97.02
1640	5	5: 4:20	113.0000	518.59	97.02
1670	5	5:34:20	113.5000	519.19	97.03
1700	5	6: 4:20	114.0000	519.64	97.03
1730	5	6:34:20	114.5000	520.24	97.03
1760	5	7: 4:20	115.0000	521.03	97.03
1790	5	7:34:20	115.5000	521.72	97.03
1820	5	8: 4:20	116.0000	522.25	97.03
1850	5	8:34:20	116.5000	522.89	97.03
1880	5	9: 4:20	117.0000	523.51	97.03
1910	5	9:34:20	117.5000	524.28	97.03
1940	5	10: 4:20	118.0000	525.03	97.03
1970	5	10:34:20	118.5000	525.64	97.03
2000	5	11: 4:20	119.0000	526.26	97.03
2030	5	11:34:20	119.5000	526.75	97.03
2060	5	12: 4:20	120.0000	527.41	97.03
2090	5	12:34:20	120.5000	528.22	97.03
2120	5	13: 4:20	121.0000	528.81	97.03
2150	5	13:34:20	121.5000	529.26	97.03
2180	5	14: 4:20	122.0000	529.86	97.03
2210	5	14:34:20	122.5000	530.49	97.03
2240	5	15: 4:20	123.0000	531.24	97.03
2270	5	15:34:20	123.5000	531.95	97.03
2300	5	16: 4:20	124.0000	532.52	97.03
2330	5	16:34:20	124.5000	533.12	97.03
2360	5	17: 4:20	125.0000	533.68	97.04
2390	5	17:34:20	125.5000	534.08	97.04

Company: PETRO-TECH PERUANA S.A.

Well: LO6-7

Field: LOBITOS MAR

[Saturday: May. 27, 1995]

Page 8

REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)	BHT (Deg.F)
2420	5	18: 4:20	126.0000	534.64	97.04
2450	5	18:34:20	126.5000	535.39	97.04
2480	5	19: 4:20	127.0000	536.08	97.04
2510	5	19:34:20	127.5000	536.53	97.04
2540	5	20: 4:20	128.0000	537.13	97.04
2570	5	20:34:20	128.5000	537.76	97.04
2600	5	21: 4:20	129.0000	538.52	97.04
2630	5	21:34:20	129.5000	539.18	97.03
2660	5	22: 4:20	130.0000	539.73	97.03
2690	5	22:34:20	130.5000	540.30	97.04
2720	5	23: 4:20	131.0000	540.85	97.04
2750	5	23:34:20	131.5000	541.29	97.04
[Sunday: May. 28, 1995]					
2780	6	0: 4:20	132.0000	542.00	97.04
2810	6	0:34:20	132.5000	542.74	97.04
2840	6	1: 4:20	133.0000	543.29	97.04
2870	6	1:34:20	133.5000	543.70	97.04
2900	6	2: 4:20	134.0000	544.26	97.04
2930	6	2:34:20	134.5000	544.81	97.04
2960	6	3: 4:20	135.0000	545.37	97.04
2990	6	3:34:20	135.5000	546.06	97.04
3020	6	4: 4:20	136.0000	546.78	97.04
3050	6	4:34:20	136.5000	547.35	97.04
3080	6	5: 4:20	137.0000	547.93	97.04
3110	6	5:34:20	137.5000	548.34	97.04
3140	6	6: 4:20	138.0000	548.79	97.04
3170	6	6:34:20	138.5000	549.40	97.04
3200	6	7: 4:20	139.0000	550.15	97.04
3230	6	7:34:20	139.5000	550.68	97.04
3260	6	8: 4:20	140.0000	551.13	97.07
Final de la Prueba.					
Bajando Registradores @ 5500'.					
3273	6	8:17:20	140.2167	551.34	97.04
3274	6	8:18:20	140.2333	552.27	97.04
3275	6	8:19:20	140.2500	627.73	97.07
Parada @ 5500'.					
3276	6	8:20:20	140.2667	628.58	97.24
3277	6	8:21:20	140.2833	628.70	97.81
3278	6	8:22:20	140.3000	604.28	98.32
Parada @ 5400'.					
3279	6	8:23:20	140.3167	598.55	98.66
3280	6	8:24:20	140.3333	598.50	98.73
3281	6	8:25:20	140.3500	565.12	98.81
Parada @ 5200'.					
3282	6	8:26:20	140.3667	553.92	98.86
3283	6	8:27:20	140.3833	553.75	98.86
3284	6	8:28:20	140.4000	553.43	98.84
3285	6	8:29:20	140.4167	551.82	98.82
3286	6	8:30:20	140.4333	550.08	98.75
Parada @ 4800'.					
3287	6	8:31:20	140.4500	549.72	98.57

37.3139

Company: PETRO-TECH PERUANA S.A.

Well: LO6-7

Field: LOBITOS MAR

[Sunday: May. 28, 1995]

Page 9

REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)	BHT (Deg.F)
3288	6	8:32:20	140.4667	549.50	97.66
3289	6	8:33:20	140.4833	548.83	97.12
		Parada @ 4700'.			
3290	6	8:34:20	140.5000	548.54	96.68
3291	6	8:35:20	140.5167	548.60	96.48
3292	6	8:36:20	140.5333	548.87	95.94
3293	6	8:37:20	140.5500	547.78	95.62
		Parada @ 4500'.			
3294	6	8:38:20	140.5667	547.39	95.21
3295	6	8:39:20	140.5833	547.40	95.03
3296	6	8:40:20	140.6000	545.98	95.09
		Parada @ 4300'.			
3297	6	8:41:20	140.6167	545.65	94.73
3298	6	8:42:20	140.6333	545.76	94.36
3299	6	8:43:20	140.6500	545.29	94.39
3300	6	8:44:20	140.6667	543.26	94.00
		Parada @ 4000'.			
3301	6	8:45:20	140.6833	543.24	93.80
3302	6	8:46:20	140.7000	543.29	93.65
3303	6	8:47:20	140.7167	539.94	93.39
		Parada @ 3500'.			
3304	6	8:48:20	140.7333	538.76	92.72
3305	6	8:49:20	140.7500	538.82	92.15
3306	6	8:50:20	140.7667	538.02	91.96
3307	6	8:51:20	140.7833	534.35	91.36
		Parada @ 3000'.			
3308	6	8:52:20	140.8000	533.68	90.83
3309	6	8:53:20	140.8167	533.68	89.91
3310	6	8:54:20	140.8333	533.78	89.42
3311	6	8:55:20	140.8500	530.52	88.86
3312	6	8:56:20	140.8667	526.78	88.08
		Parada @ 2000'.			
3313	6	8:57:20	140.8833	524.79	87.14
3314	6	8:58:20	140.9000	524.77	85.96
3315	6	8:59:20	140.9167	524.97	84.74
3316	6	9: 0:20	140.9333	524.77	83.92
3317	6	9: 1:20	140.9500	520.46	83.31
3318	6	9: 2:20	140.9667	515.66	82.15
		Parada @ 1000'.			
3319	6	9: 3:20	140.9833	513.99	80.49
3320	6	9: 4:20	141.0000	514.02	79.14
3321	6	9: 5:20	141.0167	513.86	77.84
3322	6	9: 6:20	141.0333	508.27	76.93
3323	6	9: 7:20	141.0500	502.70	75.23
		Parada @ 0'.			
3324	6	9: 8:20	141.0667	501.80	73.93
3325	6	9: 9:20	141.0833	502.27	72.42
3326	6	9:10:20	141.1000	502.61	71.68
3327	6	9:11:20	141.1167	502.65	71.14
3328	6	9:12:20	141.1333	27.01	70.36

Company: PETRO-TECH PERUANA S.A.

Well: LO6-7

Field: LOBITOS MAR

[Sunday: May. 28, 1995]

Page 10

REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)	BHT (Deg.F)
----------	-----	--------------	-------------	---------------	----------------

Desfogo Lubricador.

3329	6	9:13:20	141.1500	14.50	69.79
3330	6	9:14:20	141.1667	14.50	69.10
3331	6	9:15:20	141.1833	14.50	68.30
3332	6	9:16:20	141.2000	14.50	67.94
3333	6	9:17:20	141.2167	14.50	67.54
3334	6	9:18:20	141.2333	14.50	67.46
3335	6	9:19:20	141.2500	14.50	67.43
3336	6	9:20:20	141.2667	14.50	67.38
3337	6	9:21:20	141.2833	14.50	67.32
3338	6	9:22:20	141.3000	14.50	67.28
3339	6	9:23:20	141.3167	14.50	67.25
3340	6	9:24:20	141.3333	14.50	67.25
3341	6	9:25:20	141.3500	14.50	67.21
3342	6	9:26:20	141.3667	14.50	67.23

[Louisiana Well Analysis LTD.]