

V. Peralta

R. Gorman
7/8/95

9/16/95
Lins.

GRADIENTE ESTATICA

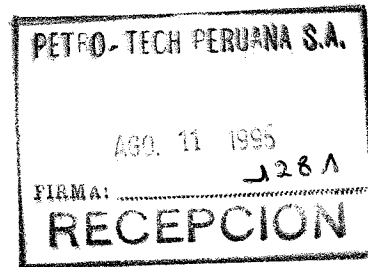
To
reference

Wm N
Check
fluids levels

PETRO-TECH PERUANA S.A.
LOBITOS MAR - LO16-21
TALARA - PERU

03 DE AGOSTO DE 1995

REPORTE PREPARADO
POR
MIGUEL BRAVO DE RUEDA F.



INFORMACION GENERAL

POZO: Z2A-21-781-D-L016		AREA : LOBITOS MAR	
PRUEBA : PRUEBA BUILD-UP			
FORMACION : BASAL SALINA		INTERVALO PRODUCTOR : 7293' - 7466' P.M.	

POZO L016-21 CASING 5 1/2"		FECHA	DATOS DEL POZO
		03/08/95	Número Oficial del Pozo : Z2A-21-781-D-L016. Tope de Arena : 7,331' WLM. Niple de Asiento : 6,961' PM.
		DESARROLLO DE LA PRUEBA	
		11:00:00	Chequeó baterías del Memory Gauges. Prueba satisfactoria.
		11:11:26	Se conectó baterías.
		12:16:00	Presurizó Lubricador.
		12:30:00	Se procedió a bajar Memory Gauge a 7,320' W.L.M. Memory Gauge a 7,320' W.L.M. por dos horas.
		14:32:00	Gradiente Estática de 7,320' W.L.M. a superficie.
			Paradas a: 7100', 6900', 6700', 6500', 6300', 6100', 5900', 5600', 5300', 5000', 4500', 4000', 3500', 3000', 2500', 2000', 1000', 0'.
		16:37:00	Se desfoga lubricador.
		16:52:00	Se desconecta baterías.
		OBSERVACIONES : Los datos utilizados corresponden a la bomba de Fondo, serial 20600. El Pozo se encontró sin Standing Valve. El Tope de Arena se encontró a 7,331' WLM. En la prueba de Gradiente Estática se logró determinar la presencia de Gas, con una Gradiente Promedia de 0.011 psi/ft.	

Louise B Salinas
Upper (2061)

DESARROLLO DE LA PRUEBA

Company: PETRO-TECH PERUANA S.A.

Well: LO16-21

Field: LOBITOS MAR.

REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)	BHT (Deg.F)
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[Jueves, 03 de Agosto de 1995]

Reg. Electronicos Starburst Ultra II.
 Tope: Inst# 20601, Fondo: Inst# 20600.
 Conecto Baterias 11:11:26

1	0	11:11:26	0.0000	14.50	65.95
70	0	12:15:56	1.0750	412.68	64.34
99	0	12:30:26	1.3167	492.58	95.38
323	0	14:22:26	3.1833	484.98	123.44
343	0	14:32:26	3.3500	483.83	123.43
355	0	14:38:26	3.4500	481.97	123.18
368	0	14:44:56	3.5583	479.55	122.53
380	0	14:50:56	3.6583	477.31	121.74
391	0	14:56:26	3.7500	475.42	120.81
401	0	15: 1:26	3.8333	473.72	119.81
414	0	15: 7:56	3.9417	470.41	118.55
424	0	15:14:26	4.0500	467.90	116.68

430	0	Parada @ 5300'.			
		15:20:26	4.1500	464.48	114.68
437	0	Parada @ 5000'.			
		15:27:26	4.2667	461.54	112.36
443	0	Parada @ 4500'.			
		15:33:26	4.3667	457.50	110.42
449	0	Parada @ 4000'.			
		15:39:26	4.4667	451.85	107.72
455	0	Parada @ 3500'.			
		15:45:26	4.5667	446.07	104.46
462	0	Parada @ 3000'.			
		15:52:26	4.6833	442.00	100.26
468	0	Parada @ 2500'.			
		15:58:26	4.7833	436.85	96.34
478	0	Parada @ 2000'.			
		16: 8:26	4.9500	429.28	90.47
487	0	Parada @ 1000'.			
		16:17:26	5.1000	418.80	84.50
496	0	Parada @ 0'.			
		16:26:26	5.2500	409.29	77.24
507	0	Desfogo Lubricador.			
		16:37:26	5.4333	14.50	69.38
521	0	Desconecto Baterias.			
		16:51:26	5.6667	14.50	66.98

COMENTARIOS

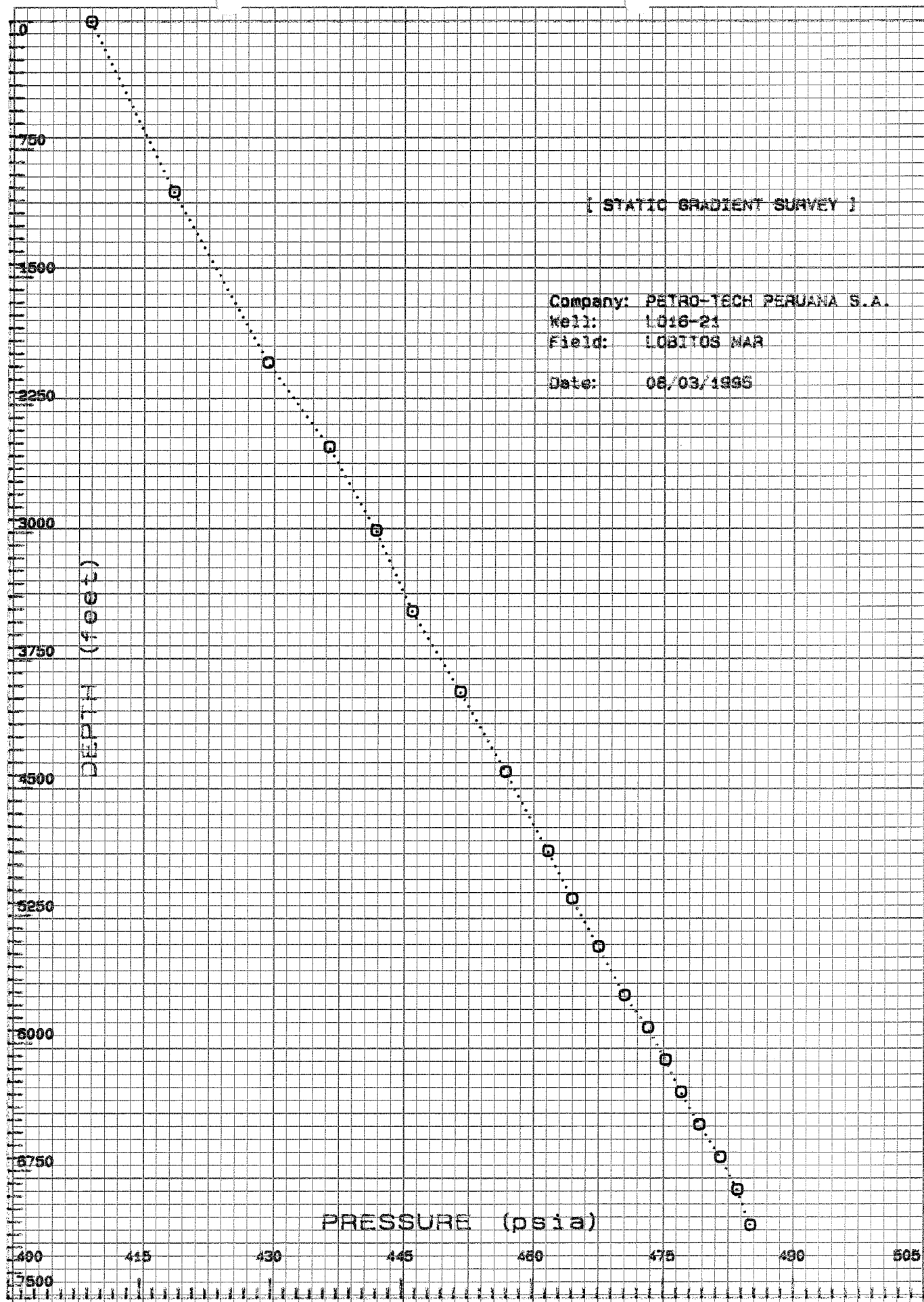
En el pozo LO16-21 del área Lobitos Mar, se programó la prueba de Gradiente Estática con el fin de determinar la existencia de fluidos con sus respectivos niveles.

Los Registradores Memory Gauge fueron colocados a la profundidad de 7,320' W.L.M. , el intervalo a analizar es el perteneciente a la formación Basal Salina (7,466' - 7,293'), el Tope de Arena se encontró a 7,331' W.L.M.

De la prueba no se encontró nivel de agua ni de crudo, se determinó presencia de Gas con una Gradiente Promedio de 0.011 psi/ft.

GRADIENTE LO16-21

P.M.	DATA	ANGULO	DATA VER	P.V.	PRES.	psi/ft
0	0	0.0	0.00	0	409.33	
1000	892	1.0	891.95	1000	418.80	0.009
2000	1749	1.0	1748.82	2000	429.54	0.011
2500	2376	8.0	2374.48	2497	436.56	0.014
3000	2916	13.3	2905.33	2987	441.92	0.011
3500	3467	19.3	3430.91	3462	446.09	0.009
4000	3987	19.2	3922.25	3935	451.60	0.012
4500	4467	21.0	4373.92	4405	456.80	0.011
5000	4982	20.5	4854.03	4871	461.70	0.011
5300	5167	21.0	5026.89	5151	464.48	0.010
5600	5541	19.0	5377.63	5433	467.50	0.011
5900	5726	18.0	5553.06	5719	470.50	0.011
6100	5910	18.0	5728.06	5909	473.20	0.014
6300	6126	18.2	5933.34	6099	475.20	0.011
6500	6402	17.5	6195.83	6289	477.00	0.009
6700	6402	17.5	6195.83	6480	479.10	0.011
6900	6708	17.0	6487.87	6671	481.55	0.013
7100	6933	17.0	6703.03	6863	483.52	0.010
7320	7300	18.0	7053.04	7072	485.01	0.007



Company: PETRO-TECH PERUANA S.A.

Well: LO16-21

Field: LOBITOS MAR

[Thursday: Aug. 3, 1995]

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REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)	BHT (Deg.F)
Reg. Electronicos Starburst Ultra II.					
Tope: Inst# 20601, Fondo: Inst# 20600.					
Conecto Baterias 11:11:26					
1	0	11:11:26	0.0000	14.50	65.95
8	0	11:18:26	0.1167	14.50	65.54
16	0	11:26:26	0.2500	14.50	65.28
23	0	11:33:26	0.3667	14.50	65.10
31	0	11:41:26	0.5000	14.50	64.96
38	0	11:48:26	0.6167	14.50	64.89
46	0	11:56:26	0.7500	14.50	64.80
53	0	12: 3:26	0.8667	14.50	64.71
61	0	12:11:26	1.0000	14.50	64.63
Presurizo Lubricador.					
70	0	12:15:56	1.0750	412.68	64.34
75	0	12:18:26	1.1167	418.05	65.64
90	0	12:25:56	1.2417	472.50	79.17
98	0	12:29:56	1.3083	492.16	93.47
Registadores @ 7320'.					
99	0	12:30:26	1.3167	492.58	95.38
102	0	12:31:56	1.3417	492.51	99.75
107	0	12:34:26	1.3833	490.76	105.33
111	0	12:36:26	1.4167	489.75	108.73
116	0	12:38:56	1.4583	488.79	111.77
120	0	12:40:56	1.4917	488.10	113.74
125	0	12:43:26	1.5333	487.48	115.48
129	0	12:45:26	1.5667	487.00	116.72
134	0	12:47:56	1.6083	486.53	117.74
138	0	12:49:56	1.6417	486.13	118.98
143	0	12:52:26	1.6833	485.80	119.78
147	0	12:54:26	1.7167	485.63	120.03
152	0	12:56:56	1.7583	485.34	120.90
156	0	12:58:56	1.7917	485.21	121.21
161	0	13: 1:26	1.8333	485.11	121.31
165	0	13: 3:26	1.8667	485.02	121.55
170	0	13: 5:56	1.9083	484.92	121.79
174	0	13: 7:56	1.9417	484.89	121.96
179	0	13:10:26	1.9833	484.83	122.15
183	0	13:12:26	2.0167	484.81	122.29
188	0	13:14:56	2.0583	484.75	122.45
192	0	13:16:56	2.0917	484.73	122.57
197	0	13:19:26	2.1333	484.71	122.69
201	0	13:21:26	2.1667	484.69	122.79
206	0	13:23:56	2.2083	484.67	122.89
210	0	13:25:56	2.2417	484.69	122.97
215	0	13:28:26	2.2833	484.70	123.04
219	0	13:30:26	2.3167	484.69	123.09
224	0	13:32:56	2.3583	484.68	123.15
228	0	13:34:56	2.3917	484.70	123.18
233	0	13:37:26	2.4333	484.69	123.22
237	0	13:39:26	2.4667	484.69	123.25

Company: PETRO-TECH PERUANA S.A.

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REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)	BHT (Deg.F)
242	0	13:41:56	2.5083	484.71	123.28
246	0	13:43:56	2.5417	484.70	123.30
251	0	13:46:26	2.5833	484.75	123.32
255	0	13:48:26	2.6167	484.77	123.34
260	0	13:50:56	2.6583	484.79	123.35
264	0	13:52:56	2.6917	484.79	123.36
269	0	13:55:26	2.7333	484.82	123.37
273	0	13:57:26	2.7667	484.84	123.38
278	0	13:59:56	2.8083	484.87	123.39
282	0	14: 1:56	2.8417	484.87	123.39
287	0	14: 4:26	2.8833	484.89	123.40
291	0	14: 6:26	2.9167	484.91	123.41
296	0	14: 8:56	2.9583	484.94	123.41
300	0	14:10:56	2.9917	484.96	123.42
305	0	14:13:26	3.0333	484.99	123.42
309	0	14:15:26	3.0667	485.01	123.43
314	0	14:17:56	3.1083	485.01	123.43
318	0	14:19:56	3.1417	485.01	123.43
Inicio de Gradiente Estatica.					
323	0	14:22:26	3.1833	484.98	123.44
324	0	14:22:56	3.1917	484.96	123.44
326	0	14:23:56	3.2083	484.93	123.44
327	0	14:24:26	3.2167	484.93	123.44
329	0	14:25:26	3.2333	484.91	123.44
330	0	14:25:56	3.2417	484.88	123.44
332	0	14:26:56	3.2583	484.75	123.44
333	0	14:27:26	3.2667	484.70	123.45
335	0	14:28:26	3.2833	484.57	123.45
336	0	14:28:56	3.2917	484.50	123.45
338	0	14:29:56	3.3083	485.21	123.45
339	0	14:30:26	3.3167	485.14	123.45
341	0	14:31:26	3.3333	484.96	123.44
342	0	14:31:56	3.3417	483.93	123.44
Parada @ 7100'.					
343	0	14:32:26	3.3500	483.83	123.43
344	0	14:32:56	3.3583	483.70	123.42
345	0	14:33:26	3.3667	483.58	123.42
347	0	14:34:26	3.3833	483.30	123.39
348	0	14:34:56	3.3917	483.17	123.37
350	0	14:35:56	3.4083	482.87	123.34
351	0	14:36:26	3.4167	482.70	123.31
353	0	14:37:26	3.4333	482.37	123.25
354	0	14:37:56	3.4417	482.17	123.22
Parada @ 6900'.					
355	0	14:38:26	3.4500	481.97	123.18
356	0	14:38:56	3.4583	481.80	123.15
357	0	14:39:26	3.4667	481.60	123.11
359	0	14:40:26	3.4833	481.26	123.01
360	0	14:40:56	3.4917	481.09	122.97
362	0	14:41:56	3.5083	480.72	122.87

Company: PETRO-TECH PERUANA S.A.

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REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)	BHT (Deg.F)
363	0	14:42:26	3.5167	480.53	122.81
365	0	14:43:26	3.5333	481.19	122.71
366	0	14:43:56	3.5417	479.96	122.65
		Parada @ 6700'.			
368	0	14:44:56	3.5583	479.55	122.53
369	0	14:45:26	3.5667	479.38	122.47
371	0	14:46:26	3.5833	478.99	122.35
372	0	14:46:56	3.5917	478.80	122.28
374	0	14:47:56	3.6083	478.44	122.16
375	0	14:48:26	3.6167	478.27	122.09
377	0	14:49:26	3.6333	477.91	121.95
378	0	14:49:56	3.6417	477.64	121.88
		Parada @ 6500'.			
380	0	14:50:56	3.6583	477.31	121.74
381	0	14:51:26	3.6667	477.14	121.66
383	0	14:52:26	3.6833	476.78	121.50
384	0	14:52:56	3.6917	476.62	121.41
386	0	14:53:56	3.7083	476.26	121.24
387	0	14:54:26	3.7167	476.13	121.16
389	0	14:55:26	3.7333	475.77	120.99
390	0	14:55:56	3.7417	474.66	120.89
		Parada @ 6300'.			
391	0	14:56:26	3.7500	475.42	120.81
392	0	14:56:56	3.7583	475.28	120.71
393	0	14:57:26	3.7667	475.12	120.62
395	0	14:58:26	3.7833	474.77	120.43
396	0	14:58:56	3.7917	474.61	120.32
398	0	14:59:56	3.8083	474.26	120.13
399	0	15: 0:26	3.8167	474.12	120.02
		Parada @ 6100'.			
401	0	15: 1:26	3.8333	473.72	119.81
402	0	15: 1:56	3.8417	473.51	119.71
404	0	15: 2:56	3.8583	473.20	119.47
405	0	15: 3:26	3.8667	472.99	119.35
407	0	15: 4:26	3.8833	472.62	119.11
408	0	15: 4:56	3.8917	472.43	119.00
410	0	15: 5:56	3.9083	472.12	118.76
411	0	15: 6:26	3.9167	472.71	118.63
413	0	15: 7:26	3.9333	471.39	118.36
		Parada @ 5900'.			
414	0	15: 7:56	3.9417	470.41	118.55
416	0	15: 8:56	3.9583	470.66	117.86
417	0	15: 9:26	3.9667	470.39	117.68
419	0	15:10:26	3.9833	470.52	117.67
420	0	15:10:56	3.9917	470.44	117.54
422	0	15:12:26	4.0167	470.52	117.35
423	0	15:13:26	4.0333	469.15	117.01
		Parada @ 5600'.			
424	0	15:14:26	4.0500	467.90	116.68
425	0	15:15:26	4.0667	467.46	116.55

Company: PETRO-TECH PERUANA S.A.

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REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)	BHT (Deg.F)
426	0	15:16:26	4.0833	467.09	116.17
427	0	15:17:26	4.1000	467.63	115.46
428	0	15:18:26	4.1167	467.78	115.20
429	0	15:19:26	4.1333	466.05	114.95
		Parada @ 5300'.			
430	0	15:20:26	4.1500	464.48	114.68
431	0	15:21:26	4.1667	465.02	114.39
432	0	15:22:26	4.1833	464.46	114.08
433	0	15:23:26	4.2000	463.88	113.75
434	0	15:24:26	4.2167	464.58	113.42
435	0	15:25:26	4.2333	463.64	113.07
436	0	15:26:26	4.2500	462.17	112.72
		Parada @ 5000'.			
437	0	15:27:26	4.2667	461.54	112.36
438	0	15:28:26	4.2833	461.73	112.30
439	0	15:29:26	4.3000	461.91	111.59
440	0	15:30:26	4.3167	461.73	111.74
441	0	15:31:26	4.3333	460.56	111.49
442	0	15:32:26	4.3500	456.95	111.18
		Parada @ 4500'.			
443	0	15:33:26	4.3667	457.50	110.42
444	0	15:34:26	4.3833	456.71	110.06
445	0	15:35:26	4.4000	456.00	109.48
446	0	15:36:26	4.4167	456.82	109.17
447	0	15:37:26	4.4333	457.00	108.75
448	0	15:38:26	4.4500	453.83	108.27
		Parada @ 4000'.			
449	0	15:39:26	4.4667	451.85	107.72
450	0	15:40:26	4.4833	451.48	107.04
451	0	15:41:26	4.5000	451.57	106.56
452	0	15:42:26	4.5167	451.48	105.74
453	0	15:43:26	4.5333	451.61	105.19
454	0	15:44:26	4.5500	449.19	105.06
		Parada @ 3500'.			
455	0	15:45:26	4.5667	446.07	104.46
456	0	15:46:26	4.5833	446.01	103.51
457	0	15:47:26	4.6000	445.98	102.94
458	0	15:48:26	4.6167	446.21	102.36
459	0	15:49:26	4.6333	446.19	101.78
460	0	15:50:26	4.6500	446.19	101.49
461	0	15:51:26	4.6667	443.92	100.56
		Parada @ 3000'.			
462	0	15:52:26	4.6833	442.00	100.26
463	0	15:53:26	4.7000	441.70	99.35
464	0	15:54:26	4.7167	441.98	98.77
465	0	15:55:26	4.7333	441.89	98.17
466	0	15:56:26	4.7500	442.04	97.58
467	0	15:57:26	4.7667	440.51	96.96
		Parada @ 2500'.			
468	0	15:58:26	4.7833	436.85	96.34

Company: PETRO-TECH PERUANA S.A.

Well: LO16-21

Field: LOBITOS MAR

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REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)	BHT (Deg.F)
469	0	15:59:26	4.8000	436.49	95.74
470	0	16: 0:26	4.8167	436.50	95.13
471	0	16: 1:26	4.8333	436.84	94.53
472	0	16: 2:26	4.8500	436.14	93.56
473	0	16: 3:26	4.8667	437.03	93.34
474	0	16: 4:26	4.8833	437.08	92.48
475	0	16: 5:26	4.9000	437.28	92.12
476	0	16: 6:26	4.9167	432.30	91.79
477	0	16: 7:26	4.9333	430.11	90.82
Parada @ 2000'.					
478	0	16: 8:26	4.9500	429.28	90.47
479	0	16: 9:26	4.9667	429.66	89.50
480	0	16:10:26	4.9833	429.46	89.15
481	0	16:11:26	5.0000	429.79	88.19
482	0	16:12:26	5.0167	430.08	87.90
483	0	16:13:26	5.0333	429.89	87.52
484	0	16:14:26	5.0500	426.91	87.08
485	0	16:15:26	5.0667	423.72	86.26
486	0	16:16:26	5.0833	419.48	85.54
Parada @ 1000'.					
487	0	16:17:26	5.1000	418.80	84.50
488	0	16:18:26	5.1167	418.80	83.24
489	0	16:19:26	5.1333	419.71	82.46
490	0	16:20:26	5.1500	418.94	81.71
491	0	16:21:26	5.1667	419.62	80.95
492	0	16:22:26	5.1833	419.67	80.65
493	0	16:23:26	5.2000	416.97	80.10
494	0	16:24:26	5.2167	413.43	79.23
495	0	16:25:26	5.2333	410.49	78.59
Parada @ 0'.					
496	0	16:26:26	5.2500	409.29	77.24
497	0	16:27:26	5.2667	408.90	76.04
498	0	16:28:26	5.2833	409.46	74.92
499	0	16:29:26	5.3000	409.65	73.85
500	0	16:30:26	5.3167	410.18	73.07
501	0	16:31:26	5.3333	410.47	72.58
502	0	16:32:26	5.3500	411.10	71.94
503	0	16:33:26	5.3667	411.16	71.34
504	0	16:34:26	5.3833	400.69	70.98
505	0	16:35:26	5.4000	386.20	70.53
506	0	16:36:26	5.4167	53.79	70.13
Desfogo Lubricador.					
507	0	16:37:26	5.4333	14.50	69.38
508	0	16:38:26	5.4500	14.50	68.87
509	0	16:39:26	5.4667	14.50	68.26
510	0	16:40:26	5.4833	14.50	68.05
511	0	16:41:26	5.5000	14.50	67.60
512	0	16:42:26	5.5167	14.50	67.08
513	0	16:43:26	5.5333	14.50	66.84
514	0	16:44:26	5.5500	14.50	66.52

LWA**S P C**

Company: PETRO-TECH PERUANA S.A.

Well: LO16-21

Field: LOBITOS MAR

[Thursday: Aug. 3, 1995]

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REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)	BHT (Deg.F)
515	0	16:45:26	5.5667	14.50	66.45
516	0	16:46:26	5.5833	14.50	66.38
517	0	16:47:26	5.6000	14.50	66.46
518	0	16:48:26	5.6167	14.50	66.49
519	0	16:49:26	5.6333	14.50	66.71
520	0	16:50:26	5.6500	14.50	66.90
		Desconecto Baterias.			
521	0	16:51:26	5.6667	14.50	66.98

[Louisiana Well Analysis LTD. & S.P.C.]