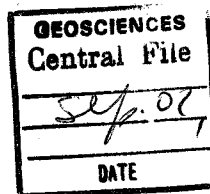


K & C

SERVICES S. A. C.

INITIAL PRESSURE



PETRO-TECH PERUANA S.A.

**LO16-26
LOBITOS OFFSHORE**

TALARA – PERU

AUGUST 25th, 2002

PREPARED BY

GISELA ARAUJO LUDENA

GENERAL INFORMATION

WELL : LO16-26

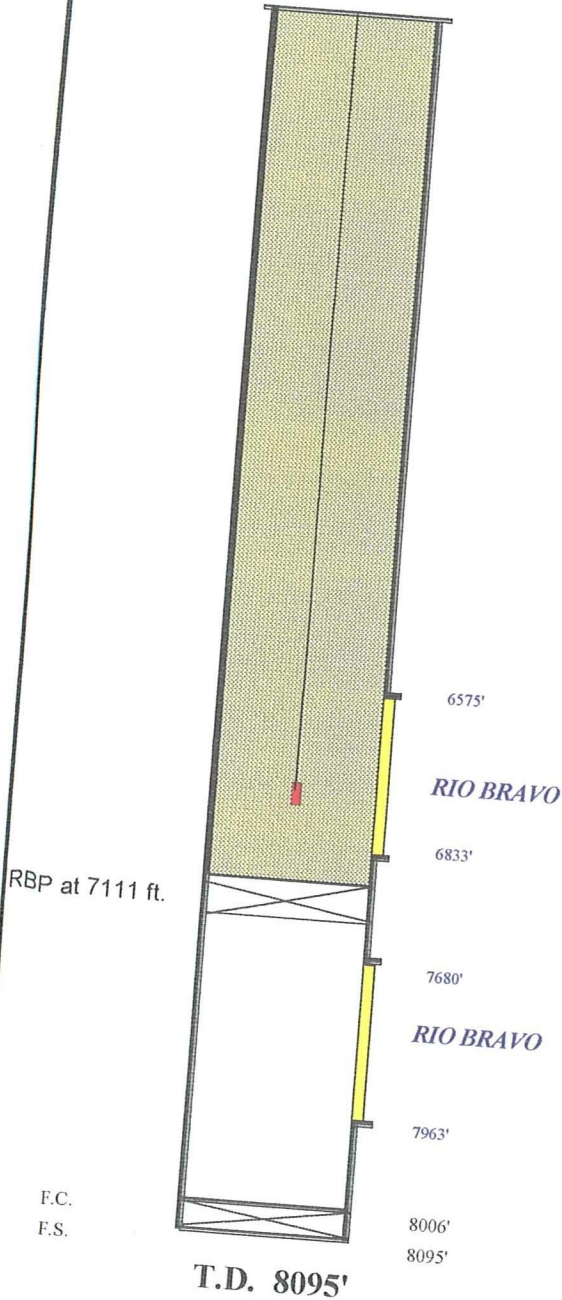
FIELD : LOBITOS OFFSHORE

TEST : INITIAL PRESSURE

FORMATION : RIO BRAVO (6833' - 6575')

LO16 - 26

CASING 5 1/2" O.D.



DATE

WELL DATA

08/25/2002

Current Installation : Casing 5 1/2" O.D.
Formation : Rio Bravo
Intervale : 6833' - 6575'
RBP : 7111 ft.
F.C. : 8006'
F.S. : 8095'

WELL TEST PROCEDURE

08/25/2002

10:30:00 Nipple up wire line unit.
10:47:00 Connecting battery to the gauges N°20601 - N ° 20600
11:30:00 Memories are setting inside of lubricator
Gauges at 6710 ft. Closed for 02 hours 40 minutes
Recording initial pressure
WHP = 480 psig
12:00:00 WHP = 520 psig
12:30:00 WHP = 550 psig
13:00:00 WHP = 570 psig
13:30:00 WHP = 600 psig
14:00:00 WHP = 600 psig
14:10:00 Pulling out gauges with the following steps:

6710	6300	4000
6650	6200	3000
6600	6100	2000
6550	6000	1000
6500	5500	0
6400	5000	

15:25:00 Bleeding off lubricator
15:30:00 Disconnecting battery from memories
15:35:00 The test is over

REMARKS

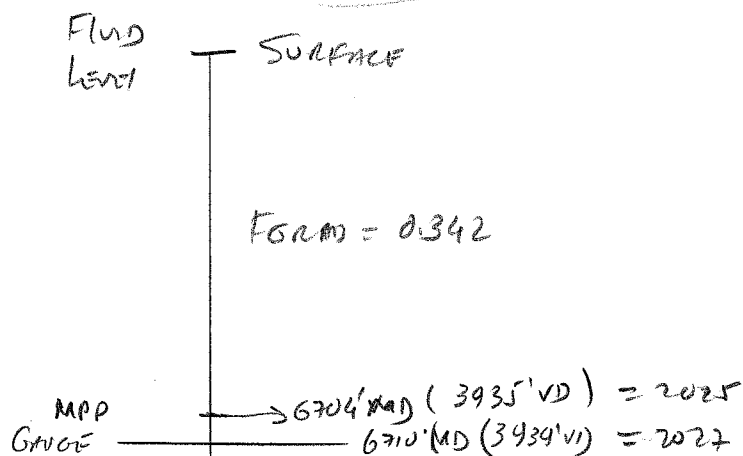
Data registered from gauge N° 20600.
Initial Pressure @ 6710 ft MD (3938.65 ft VD) : 2026.62 psi.
Formation gradient at 6710 ft MD : $2026.62 / 3938.65 = 0.514$ psi/ft.
Static Temperature @ 6710 ft MD (3938.65 ft VD) : 98.41 °F.

SUMMARY OF RESULTS

Date of Test	August 25th, 2002
Well	LO16 - 26
Formation	Rio Bravo
Shot Interval	6833' - 6575'
Depth of gauges	6710 MD ft 3938.65 VD ft

02.50 hr at Static Condition

Well Head Pressure (11:30)	480 psig (Manometer)
Well Head Pressure (12:00)	520 psig (Manometer)
Well Head Pressure (12:30)	550 psig (Manometer)
Well Head Pressure (13:00)	570 psig (Manometer)
Well Head Pressure (13:30)	600 psig (Manometer)
Well Head Pressure (14:00)	600 psig (Manometer)
Initial Pressure at 6710 ft MD	2026.62 psia (Memory)
Initial Temperature at 6710 ft MD	98.41 °F
Formation Gradient at 6710 ft MD	0.514 psi/ft
Fluid gradient	0.342 psi/ft
Increment last hour	21.36 psi/hour



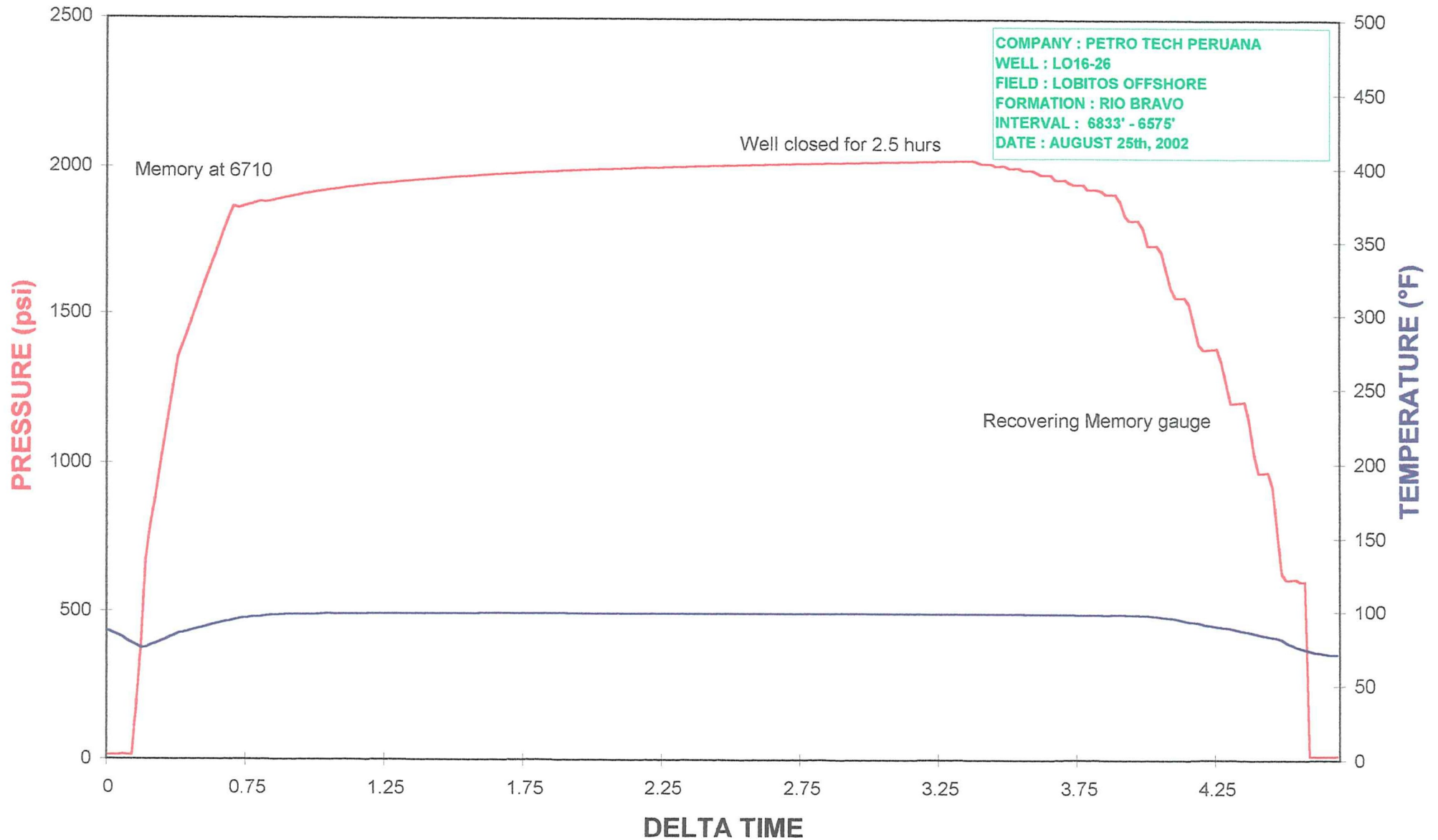
1208.5 BW
CF

$$F. GRAD = \frac{2025}{3935} = 0.5146$$

$$F. GRAD = 0.515 \text{ psi/ft}$$

$$WIAP = 600 \text{ psi}$$

PRESSURE VS DELTA TIME



STATIC GRADIENTE SURVEY

Company : PETRO-TECH PERUANA S.A.

Well : LO16-26

Area : LOBITOS OFFSHORE

Formation : Rio Bravo

Interval : 6833' - 6575'

Date : August 25th, 2002

Measured depth (ft)	Vertical depth (ft)	Pressure (psi)	Gradient (psi/ft)
0	0.00	610.00	
1000	992.86	970.00	0.363
2000	1659.92	1207.00	0.355
3000	2153.36	1386.86	0.365
4000	2623.71	1560.00	0.368
5000	3103.54	1737.10	0.369
5500	3342.35	1824.62	0.366
6000	3584.46	1913.40	0.367
6100	3635.28	1929.85	0.324
6200	3684.83	1946.64	0.339
6300	3733.92	1961.91	0.311
6400	3784.90	1978.24	0.320
6500	3834.58	1993.63	0.310
6550	3859.10	2001.00	0.301
6600	3884.10	2008.84	0.314
6650	3909.10	2016.25	0.296
6710	3938.65	2026.62	0.351

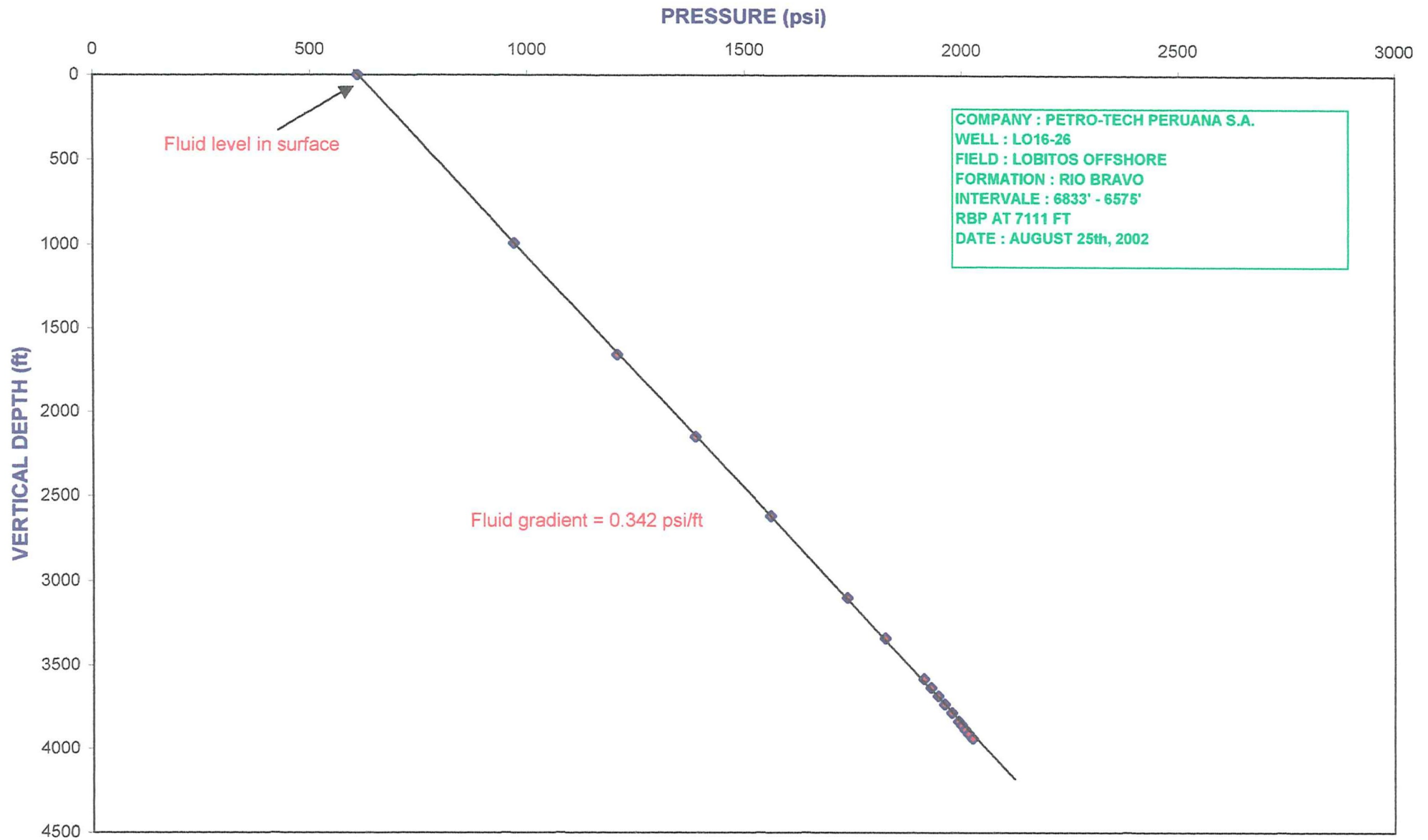
Formation Gradient at 6710' MD : 0.514 psi/ft

Flowing Gradient at 6710' MD : 0.342 psi/ft

Fluid level in surface

6710
6650
654

FLOWING GRADIENT



Company : PETRO-TECH PERUANA S.A.

Well : L016-26

Area : LOBITOS OFFSHORE

Formation : Rio Bravo

Interval : 6833' - 6575'

Date : August 25th, 2002

HORAS	DTIME	Pressure (psi)	Temp (°F)
10:47:35	0.0000	14.5	86.31
10:49:35	0.0333	14.5	84.82
10:51:35	0.0667	14.5	83.62
10:53:35	0.1000	16.54	81.97
10:55:35	0.1333	14.5	79.8
10:57:35	0.1667	14.5	78.11
10:59:35	0.2000	187.63	76.56
11:01:35	0.2333	388.46	74.52
11:03:35	0.2667	673.94	75.19
11:05:35	0.3000	787.89	76.54
11:07:35	0.3333	881.17	77.96
11:09:35	0.3667	979.94	79.19
11:11:35	0.4000	1076.67	80.4
11:13:35	0.4333	1166.88	81.89
11:15:35	0.4667	1261.28	83.27
11:17:35	0.5000	1352.76	84.74
11:18:35	0.5167	1395.97	85.41
11:19:35	0.5333	1439.11	86.21
11:20:35	0.5500	1484.46	87.05
11:21:35	0.5667	1528.9	87.95
11:22:35	0.5833	1573.07	88.65
11:23:35	0.6000	1617.13	89.41
11:24:35	0.6167	1661.02	90.46
11:25:35	0.6333	1703.27	91.3
11:26:35	0.6500	1748.12	91.92
11:27:35	0.6667	1791.76	92.85
11:28:35	0.6833	1832.81	93.34
11:29:35	0.7000	1867.45	94.05
11:30:35	0.7167	1861.1	94.88
11:31:35	0.7333	1866.28	95.29
11:32:35	0.7500	1870.64	95.59
11:33:35	0.7667	1875.02	96.05
11:34:35	0.7833	1879.24	96.14
11:35:35	0.8000	1883.23	96.46
11:36:35	0.8167	1880.67	96.87
11:37:35	0.8333	1883.5	97.11
11:38:35	0.8500	1887.79	97.24
11:39:35	0.8667	1891.3	97.4
11:40:35	0.8833	1895.15	97.52
11:41:35	0.9000	1898.06	97.6
11:42:35	0.9167	1901.22	97.7
11:43:35	0.9333	1904.49	97.77
11:44:35	0.9500	1907.41	97.54
11:45:35	0.9667	1910.19	97.65
11:46:35	0.9833	1912.74	97.75
11:47:35	1.0000	1915.52	97.83
11:48:35	1.0167	1917.98	98.24
11:49:35	1.0333	1920.58	98.29
11:50:35	1.0500	1923.11	98.32
11:51:35	1.0667	1925.26	98.07
11:52:35	1.0833	1927.37	98.11
11:53:35	1.1000	1929.64	98.14
11:54:35	1.1167	1931.94	98.18
11:55:35	1.1333	1933.86	98.2
11:56:35	1.1500	1936.04	98.23
11:57:35	1.1667	1937.85	98.27
11:58:35	1.1833	1939.67	98.3
11:59:35	1.2000	1941.37	98.33
12:00:35	1.2167	1943.32	98.35
12:01:35	1.2333	1944.84	98.36
12:02:35	1.2500	1946.46	98.37
12:03:35	1.2667	1948.23	98.38
12:04:35	1.2833	1949.59	98.4
12:05:35	1.3000	1951.11	98.41
12:06:35	1.3167	1952.71	98.42
12:07:35	1.3333	1954.12	98.44
12:08:35	1.3500	1955.49	98.45
12:09:35	1.3667	1956.75	98.46
12:10:35	1.3833	1958.07	98.47
12:11:35	1.4000	1959.26	98.48
12:12:35	1.4167	1960.69	98.48
12:13:35	1.4333	1961.92	98.49

Company : PETRO-TECH PERUANA S.A.

Well : 016-26

Area : LOBITOS OFFSHORE

Formation : Rio Bravo

Interval : 6833' - 6575'

Date : August 25th, 2002

HORAS	DTIME	Pressure (psi)	Temp (°F)
12:14:35	1.4500	1963.04	98.5
12:15:35	1.4667	1964.47	98.5
12:16:35	1.4833	1965.58	98.51
12:17:35	1.5000	1966.65	98.52
12:18:35	1.5167	1967.84	98.52
12:19:35	1.5333	1968.83	98.53
12:20:35	1.5500	1970.12	98.53
12:21:35	1.5667	1971.03	98.53
12:22:35	1.5833	1972.26	98.54
12:23:35	1.6000	1973.29	98.54
12:24:35	1.6167	1974.35	98.54
12:25:35	1.6333	1975.37	98.54
12:26:35	1.6500	1975.75	98.54
12:27:35	1.6667	1977.27	98.54
12:28:35	1.6833	1978.18	98.54
12:29:35	1.7000	1979.07	98.54
12:30:35	1.7167	1980.09	98.54
12:31:35	1.7333	1980.87	98.54
12:32:35	1.7500	1981.79	98.54
12:33:35	1.7667	1982.51	98.54
12:34:35	1.7833	1983.37	98.54
12:35:35	1.8000	1984.17	98.54
12:36:35	1.8167	1985.18	98.54
12:37:35	1.8333	1985.87	98.54
12:38:35	1.8500	1986.69	98.54
12:39:35	1.8667	1986.95	98.54
12:40:35	1.8833	1988.22	98.54
12:41:35	1.9000	1988.43	98.54
12:42:35	1.9167	1989.57	98.53
12:43:35	1.9333	1990.34	98.53
12:44:35	1.9500	1991	98.53
12:45:35	1.9667	1991.23	98.53
12:46:35	1.9833	1992.34	98.53
12:47:35	2.0000	1992.59	98.53
12:48:35	2.0167	1993.82	98.52
12:49:35	2.0333	1993.87	98.52
12:50:35	2.0500	1994.49	98.52
12:51:35	2.0667	1995.6	98.52
12:52:35	2.0833	1995.72	98.52
12:53:35	2.1000	1996.29	98.51
12:54:35	2.1167	1996.89	98.51
12:55:35	2.1333	1997.46	98.51
12:56:35	2.1500	1998.5	98.51
12:57:35	2.1667	1998.58	98.51
12:58:35	2.1833	1999.72	98.5
12:59:35	2.2000	2000.29	98.5
13:00:35	2.2167	2000.24	98.5
13:01:35	2.2333	2000.75	98.5
13:02:35	2.2500	2001.29	98.5
13:03:35	2.2667	2001.81	98.49
13:04:35	2.2833	2002.31	98.49
13:05:35	2.3000	2002.82	98.49
13:06:35	2.3167	2003.32	98.49
13:07:35	2.3333	2003.83	98.49
13:08:35	2.3500	2004.31	98.48
13:09:35	2.3667	2004.78	98.48
13:10:35	2.3833	2005.26	98.48
13:11:35	2.4000	2005.72	98.48
13:12:35	2.4167	2006.17	98.48
13:13:35	2.4333	2006.62	98.48
13:14:35	2.4500	2007.08	98.48
13:15:35	2.4667	2007.54	98.48
13:16:35	2.4833	2007.99	98.48
13:17:35	2.5000	2008.43	98.48
13:18:35	2.5167	2008.86	98.48
13:19:35	2.5333	2009.29	98.48
13:20:35	2.5500	2009.72	98.48
13:21:35	2.5667	2010.14	98.48
13:22:35	2.5833	2010.56	98.47
13:23:35	2.6000	2010.97	98.47
13:24:35	2.6167	2011.37	98.47
13:25:35	2.6333	2011.78	98.47

Company : PETRO-TECH PERUANA S.A.

Well : L016-26

Area : LOBITOS OFFSHORE

Formation : Rio Bravo

Interval : 6833' - 6575'

Date : August 25th, 2002

HORAS	DTIME	Pressure (psi)	Temp (°F)
13:26:35	2.6500	2012.18	98.47
13:27:35	2.6667	2012.58	98.47
13:28:35	2.6833	2012.97	98.47
13:29:35	2.7000	2013.35	98.47
13:30:35	2.7167	2013.73	98.46
13:31:35	2.7333	2014.11	98.46
13:32:35	2.7500	2014.49	98.46
13:33:35	2.7667	2014.85	98.46
13:34:35	2.7833	2015.22	98.46
13:35:35	2.8000	2015.58	98.46
13:36:35	2.8167	2015.95	98.46
13:37:35	2.8333	2016.31	98.45
13:38:35	2.8500	2016.66	98.45
13:39:35	2.8667	2017.01	98.45
13:40:35	2.8833	2017.35	98.45
13:41:35	2.9000	2017.69	98.45
13:42:35	2.9167	2018.03	98.45
13:43:35	2.9333	2018.37	98.44
13:44:35	2.9500	2018.71	98.44
13:45:35	2.9667	2019.05	98.44
13:46:35	2.9833	2019.38	98.44
13:47:35	3.0000	2019.71	98.44
13:48:35	3.0167	2020.04	98.44
13:49:35	3.0333	2020.36	98.44
13:50:35	3.0500	2020.69	98.43
13:51:35	3.0667	2021.02	98.43
13:52:35	3.0833	2021.35	98.43
13:53:35	3.1000	2021.66	98.43
13:54:35	3.1167	2021.97	98.43
13:55:35	3.1333	2022.29	98.43
13:56:35	3.1500	2022.6	98.43
13:57:35	3.1667	2022.92	98.43
13:58:35	3.1833	2023.06	98.43
13:59:35	3.2000	2023.68	98.43
14:00:35	3.2167	2023.94	98.43
14:01:35	3.2333	2024.26	98.43
14:02:35	3.2500	2024.56	98.43
14:03:35	3.2667	2024.85	98.43
14:04:35	3.2833	2025.13	98.43
14:05:35	3.3000	2025.44	98.43
14:06:35	3.3167	2025.76	98.43
14:07:35	3.3333	2025.9	98.42
14:08:35	3.3500	2026.24	98.42
14:09:35	3.3667	2026.62	98.41
14:10:35	3.3833	2022.62	98.41
14:11:35	3.4000	2015.93	98.41
14:12:35	3.4167	2016.25	98.4
14:13:35	3.4333	2015.36	98.39
14:14:35	3.4500	2008.23	98.38
14:15:35	3.4667	2008.84	98.37
14:16:35	3.4833	2009.27	98.35
14:17:35	3.5000	2000.69	98.34
14:18:35	3.5167	2001	98.33
14:19:35	3.5333	2001.47	98.31
14:20:35	3.5500	1993.6	98.29
14:21:35	3.5667	1993.63	98.27
14:22:35	3.5833	1994	98.26
14:23:35	3.6000	1985.87	98.24
14:24:35	3.6167	1977.87	98.21
14:25:35	3.6333	1978.24	98.19
14:26:35	3.6500	1978.5	98.16
14:27:35	3.6667	1961.81	98.14
14:28:35	3.6833	1961.91	98.12
14:29:35	3.7000	1962.48	98.1
14:30:35	3.7167	1952.87	98.07
14:31:35	3.7333	1946.23	98.05
14:32:35	3.7500	1946.64	98.02
14:33:35	3.7667	1946.97	97.98
14:34:35	3.7833	1929.59	97.95
14:35:35	3.8000	1929.85	97.91
14:36:35	3.8167	1930.15	97.86
14:37:35	3.8333	1925.22	97.81

- CMR HORN 177 psi

Company : PETRO-TECH PERUANA S.A.

Well : 016-26

Area : LOBITOS OFFSHORE

Formation : Rio Bravo

Interval : 6833' - 6575'

Date : August 25th, 2002

HORAS	DTIME	Pressure (psi)	Temp (°F)
14:38:35	3.8500	1912.95	97.73
14:39:35	3.8667	1913.39	97.91
14:40:35	3.8833	1913.76	97.87
14:41:35	3.9000	1888.96	97.83
14:42:35	3.9167	1844.1	97.82
14:43:35	3.9333	1824.2	97.76
14:44:35	3.9500	1824.62	97.62
14:45:35	3.9667	1825.23	97.54
14:46:35	3.9833	1797.27	97.47
14:47:35	4.0000	1738.44	97.3
14:48:35	4.0167	1737.02	97.1
14:49:35	4.0333	1737.76	96.77
14:50:35	4.0500	1716.95	96.31
14:51:35	4.0667	1655.23	96.11
14:52:35	4.0833	1592.2	95.89
14:53:35	4.1000	1559	95.25
14:54:35	4.1167	1560.06	94.64
14:55:35	4.1333	1560.7	93.86
14:56:35	4.1500	1536.13	93.32
14:57:35	4.1667	1469.83	93.04
14:58:35	4.1833	1404.71	92.41
14:59:35	4.2000	1384.01	91.59
15:00:35	4.2167	1385.67	91.05
15:01:35	4.2333	1386.86	90.49
15:02:35	4.2500	1388.04	89.93
15:03:35	4.2667	1341.88	89.37
15:04:35	4.2833	1270.77	89.13
15:05:35	4.3000	1204.49	88.56
15:06:35	4.3167	1205.59	87.93
15:07:35	4.3333	1207	87.09
15:08:35	4.3500	1208.3	86.5
15:09:35	4.3667	1137.29	86.06
15:10:35	4.3833	1036.62	85.36
15:11:35	4.4000	968.24	84.55
15:12:35	4.4167	970.06	83.89
15:13:35	4.4333	971.45	83.21
15:14:35	4.4500	924.22	82.65
15:15:35	4.4667	771.88	82.35
15:16:35	4.4833	630.25	81.35
15:17:35	4.5000	608.67	79.31
15:18:35	4.5167	609.97	77.66
15:19:35	4.5333	611.41	76.14
15:20:35	4.5500	602.37	75.18
15:21:35	4.5667	602.87	74.38
15:22:35	4.5833	14.5	73.61
15:23:35	4.6000	14.5	72.91
15:24:35	4.6167	14.5	72.45
15:25:35	4.6333	14.5	72.1
15:26:35	4.6500	14.5	71.44
15:27:35	4.6667	14.5	71.27
15:28:35	4.6833	14.5	71.33