BELCO

M E M O R A N D U M

TEC. 84-1035/03 November 22nd, 1984

TO : CHIEF RESERVOIR ENGINEER

FROM : JULIO MEGO C.

REF. : INITIAL PRESSURE AT WELL LO6-22

Attached please find the results of the initial bottom hole pressure recorded in subject well after shooting the interval (5010'-3644'). The results are as follows:

Date	:	October 18, 1984
Interval	:	5608'-3644'MD
Formation	:	Rio Bravo Sds.
Wellhead pressure	:	0 psig
Pressure at bomb depth	:	2023 psig (4545'VD or 5322'MD)
Pressure at MPP	:	1754 psig (3940'VD or 4626'MD)
Fluid level	:	Liquid at surface
Average fluid gradient	:	0.445 psi/ft (liquid)
Formation gradient	:	0.445 psi/ft

The pressure recorded remained stabilized during 1 hour that the bomb was into the bottom hole, however, reservoir pressure may be lower than here reported since the wellhead pressure was zero.

Pressure recorded referred at MPP is equal to initial pressure measured in well LO6-21 and is within the expected range of the original pressure in the Rio Bravo formation in the area.

ENG. JULIO MEGO C.

JMC/rmr.

cc: Engg. Supt.
Prod. Supt.
Well File
GE-2201.89

LOBITOS OFFSHORE
LO6-22

STATIC GRADIENT

84-10-18

PMP
Initial

SUBSURFACE PRESSURE MEASUREMENTS

1. BASIC DATA

COMPANY: Belco Petroleum Corp. of Peru Inc.

ADDRESS: Negritos

FIELD and POOL: Lobitos

TYPE OF TEST: Static Gradient

PRODUCING INTERVAL (CF): 5307 - 5608 FT. PERF. [X] OH [ ]

ELEVATION (CF): ____ FT. (KB): ____ FT. (KB) to CF: ____ FT.

POOL DATUM: ____ FT. (subsea)

ELEMENT SERIAL NO.: 12782N RANGE: 0 - 3250 PSI.

CALIBRATION EQUATION: PC + 1626.15 D + (-2.91)

WELL NAME: Lobitos Offshore

LOCATION: LO6-22

STATUS: OIL [X] GAS [ ] OTHER SPECIFY: ____

DATE OF TEST: 84 10 18 TO [ ] [ ] [ ]

PRODUCING THROUGH: IN. TUBING [ ] 5.5 IN. CASING [X]

MID-POINT OF PRODUCING (MPP) INTERVAL (CF): 5322.50 FT.

DATUM DEPTH OF WELL (FROM CF): ____ FT.

CLOCK RANGE: 3 h S [X] D [ ] # 31881 I.H. #: 5862

DATE OF LAST CALIBRATION: 84 06 13

COMPANY: Belco Petroleum Corp. of Peru Inc.

2. STATIC TEST

PRESSURE (GAUGE): TUBING ____ PSI. GAUGE [ ] DWG [ ]

CASING 20 PSI. GAUGE [X] DWG [ ]

RUN DEPTH (FROM CF): 4546.60 (5322.50'MD) FT.

B.H. TEMP: ____ °C SURFACE TEMP: ____ F

R.D. PRESSURE (GAUGE): 2023 PSI. GRADIENT: 0.4449 PSI/FT.

SHUT-IN DATE [ ] [ ] [ ] @ New Well h

DATE ON BOTTOM 84 10 18 @ 13:34 h

DATE OFF BOTTOM 84 10 18 @ 14:34 PSI.

MPP PRESSURE (GAUGE): 2073 PSI.

DATUM PRESSURE (GAUGE): ____ PSI.

3. ACOUSTIC WELL SOUNDER TEST

DEPTH OF TUBING: ____ FT.

AVERAGE TUBING JOINT LENGTH: ____ FT.

NO. OF JOINTS TO LIQUID: ____

LENGTH OF GAS COLUMN: ____ FT.

LENGTH OF LIQUID COLUMN: ____ FT.

GAS GRAVITY: ____ GAS GRADIENT: ____ PSI/FT.

OIL GRAVITY: ____ OIL GRADIENT: ____ PSI/FT.

SHUT-IN DATE [ ] [ ] [ ] @ ____ h

CURRENT WATER CUT: ____ %

CASING PRESSURE (GAUGE): ____ PSI.

GAS COLUMN PRESSURE (GAUGE): ____ PSI.

LIQUID COLUMN PRESSURE (GAUGE): ____ PSI.

MPP PRESSURE (GAUGE): ____ PSI.

DATUM DEPTH PRESSURE (GAUGE): ____ PSI.

4. BUILD UP OR DRAWDOWN TEST (Attach Forms 0-12A)

RESERVOIR/WELL PARAMETERS: POROSITY ____ % WELL RADIUS ____ FT. THICKNESS ____ FT. WATER SATURATION ____ %

B.H. TEMP. ____ °F DATE AND DESCRIPTION OF LAST WELLBORE TREATMENT [ ] [ ] [ ] ____

CASING I.D. ____ IN. TUBING I.D. ____ IN. TUBING WEIGHT/MASS ____ LBS./FT.

COMPRESSIBILITY ____ μZ

OIL WELLS ONLY:

OIL VISCOSITY ____ CC

BUBBLE POINT PRESSURE (GAUGE) ____ PSI.

B_o = VOL. AT RES. COND. / VOL. AT ST. COND. ____

GAS WELLS ONLY:

GAS VISCOSITY ____ μZ

Z at RESERVOIR CONDITIONS ____

RELATIVE DENSITY G ____

WELL PRODUCING RATE DURING [ ] PRIOR TO [ ] TEST OIL ____ BBL/D GAS ____ MCF/D WATER ____ BBL/D

TOTAL PRODUCTION - DURING [ ] PRIOR TO [ ] TEST OIL ____ BBLS. GAS ____ MCF WATER ____ BBL.

WELL NAME & UNIQUE IDENTIFIER: Lobitos Offshore

5. CHART READINGS AND CALCULATIONS

DATE YR	DATE MO	DATE DAY	DEPTH BELOW CF FT.	ACC. TIME h	TIME h	DEFLECTION IN	CALCULATED PRESSURE PSIG	CORRECTION DEVIATION PSI	CORRECTED PRESSURE PSIG	GRADIENT PSI/FT.
84	10	18	Surface	Surface	12:23	0.0000			0	0.0000
			500	500.00	12:30	0.1270			206	0.4122
			999	1000.00	12:37	0.2660			432	0.4520
	1475		1464.30	1500.00	12:44	0.3980			645	0.4587
	1985		1891	2000.00	12:51	0.5140			832	0.4388
			2281.80	2500.00	12:58	0.6200			1003	0.4379
			2635.60	3000.00	13:05	0.7190			1164	0.4533
			3002.50	3500.00	13:12	0.8220			1331	0.4547
			3401.50	4000.00	13:19	0.9320			1509	0.4467
84	10	18	3832.20	4500.00	13:26	1.0510			1702	0.4493

REMARKS

T.V.D.Perf.: 4533.30 - 4791.40ft. MPP.: 4662.35 FT.T.V.D

SURVEY COMPANY Go Well Services TEST BY O.García COMPUTED BY ____ CHECKED BY ____

Ivan Rodrigues

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY Belco Petroleum Corp. of Peru WELL NAME Lobitos Offshore

DATE OF TEST 84 (YR.) 10 (MO.) 18 (DAY) TO ___ (YR.) ___ (MO.) ___ (DAY) LOCATION LO6-22

CHART READINGS AND CALCULATIONS

DATE			DEPTH BELOW CFFT.	ACC. TIME h	TIME h	DEFLECTION IN.	CALCULATED PRESSURE PSIG	CORRECTION DEVIATION PSI	CORRECTED PRESSURE PSIG	GRADIENT PSI/FT
YR	MO	DAY								
84	10	18	4267.60	5000.00	13:33	1.1740			1902	0.4593
			4546.60	5322.50	13:34	1.2480			2023	0.4319
			4546.60	5322.50	14:34	1.2480			2023	
			MPP.: 4662.35 FT.C.F. 115.75ft. x 0.4319psi/ft = 50 psi = 2073 psig.