



M E M O R A N D U M

TEC. 85-137/02

February 28th, 1985

TO : CHIEF RESERVOIR ENGINEER *JMC*
FROM : JULIO MEGO C.
REF. : STATIC GRADIENT AT L06-16

Following please find the analysis of results of a static bottom hole pressure ran in well of the reference. The results are as follows:

Date	: Dec. 24, 1984
Perforated interval	: 6370'-4980'MD
Formation	: Rio Bravo
Wellhead pressure	: 623 psig
Pressure at bomb depth	: 1118 psig (4911'VD or 5675'VD)
Pressure at MPP	: 1118 psig (4911'VD)
Fluid levels	: Gas at surface Liquid at $\pm$ 3850'VD
Avg. fluid gradient	: 0.409 psi/ft (liquid)
Formation gradient	: 0.228 psi/ft

The BHP report from the service company does not give any information about SI time, but from the production records it appears that the well was SI in December 7. Therefore, this survey may correspond to a long shut down period of 17 days and as such could be representative of current down hole pressure at stabilized conditions.

This well has not produced since completion, but it also has a poor testing record.

This survey reveals a fluid level at about 4400'MD and a formation pressure gradient of 0.228 psi/ft, which indicate production potential on artificial lift that should at least provide information on well productivity and particularly on type of fluid (well could be a HGOR and/or produce some water, but no records exist thus far to verify these probable reasons for the poor well performance).

It is therefore recommended to regularly test and report the test results as well as insure adequate lifting conditions for proper well evaluation.

JMC/rmr.

JMC
ENG. JULIO MEGO C.

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

FLOPETROL

DIVISION : LAR|PCD

BASE : TALARA

REPORT N°: 001

L06-16

Well Testing Report Annexes —

PAP
WGR

Client : BELCO PETROLEUM CO. OF PERU

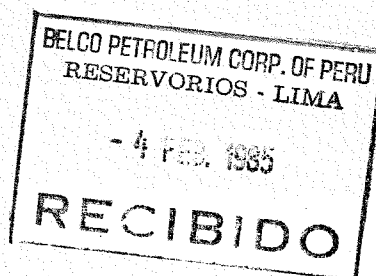
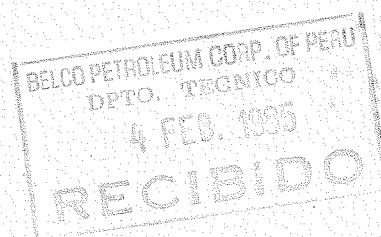
Field :

Well : NO. 16 - PLAT. L06

Zone : LOBITOS

Date : 24.12.84

WELL FILE



Base : LOBITOS

Field : LOBITOS

Well : L06 - 16

Page : 0002

Report N° : 0228

INDEX of ANNEXES

- ☒ 1 - BOTTOM HOLE PRESSURE AND TEMPERATURE MEASUREMENT -
 - ☒ 1.1 - B.H. gauge calibration -
 - ☒ 1.2 - B.H. pressure calculation -
 - ☐ 1.3 - B.H. temperature calculation -
- ☐ 2 - LIQUID PRODUCTION RATE MEASUREMENT -
 - ☐ 2.1 - Measurements with tank -
 - ☐ 2.2 - Measurements with meter -
- ☐ 3 - GAS PRODUCTION RATE MEASUREMENT -
- ☐ 4 - SAMPLING SHEETS -
 - ☐ 4.1 - Bottom hole sampling -
 - ☐ 4.2 - Surface sampling -
- ☒ 5 - CHARTS AND MISCELLANEOUS -

Base : LOBITOS

Field : LOBITOS

Page : 0003

Well : L06 - 16

Report N° : 0228

BOTTOM HOLE PRESSURE AND TEMPERATURE MEASUREMENTSA - PRESSURE -a) READING USING CALIBRATED CHART :

Chart is read using as reference line the base line drawn at atmospheric pressure.

$$P = KY + a + C$$

Y is the deflection for pressure P.

K, a and C (non linearity correction) are obtained from calibration by least square calculation.

b) READING USING REFERENCE LINE METHOD :

Chart is read using as reference line a line drawn at pressure P_R .

$$P = KY + P_{RC} + C$$

Y is the deflection for pressure P read from the reference line.

$P_{RC} = KY_R + a$: calculated pressure for reference line.

P_{RC} , K and C are obtained from calibration data.

B - TEMPERATURE -

Chart is read from zero at base line.

Bottom hole temperature is read from constructor's calibration tables at the point corresponding to the deflection

☐ Base line is drawn with adjusting knob held against the stop
Therefore $Y_0 = 0$

☐ Base line is drawn at temperature $T_0 =$ _____
From calibration tables the corresponding deflection $Y_0 =$ _____

C - GENERAL INFORMATION -

Reference depth : _____

Difference level between the two pressure elements : _____

SEQUENCE OF EVENTS

[illegible]

FLOPETROL

Client: BELCO PETROLEUM CO.

Field: LOBITOS

Well: LO6 - 16

Section: ANNEX

1

Base: TALARA

Page: 0005

Report N°: 0228

-BOTTOM HOLE PRESSURE AND TEMPERATURE MEASUREMENTS-**1. Basic Data**

Company BELCO PETROLEUM CO. OF PERU
Address NEGRITOS
Field LOBITOS
Type of test STATIC GRADIENT
Producing interval (CF) 4980 - 6370 FT. Perf. ☐ OH ☐
Elevation (CF) 33 FT. (KB) FT. (KB) to CF FT.
Pool Datum FT. (subsea)
Element serial N° 45278 Range 2000 Psi.
Calibration equation +1003.3208 PSI/INCH, 16.6453 PSI.

Well name LO6 - 16
Location LOBITOS
Status oil ☐ gas ☐ other specify
Date of test 24 12 84 to 24 12 84
Producing through 2 7/8 in tubing in casing ☐
Mid-point of producing (MPP) interval (CF) 5675 FT.
Datum depth of well (from CF) 6508 FT.
Clock range 3 h.s. ☒ d ☐ I.H.
Date of last calibration

2. Static Test

Pressure (gauge) tubing 623 Psi. gauge ☐ DWG ☐
casing Psi. gauge ☐ DWG ☐
Run depth (from CF) 5875 FT.
B.M. temp °C surface temp AMBT F
R.D. pressure (gauge) 1118 Psi. gradient 2204 Psi/FT.

Shut-in date at h
Date on bottom 24 12 84 at 11:30 h
Date off bottom 24 12 84 at 1118 Psi.
MPP pressure (gauge) Psi.
Datum pressure (gauge) Psi.

3. Build up or drawdown test

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 viass LBS/FT.

Compressibility UZ

Oil wells only

Gas wells only

Oil viscosity CC

Gas viscosity UZ

Bubble point pressure (gauge) Psi. Z at reservoir conditions

Vol. at Res. Cond.

B. = Relative density G

Vol. at ST. Cond.

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

REMARKS PROFUNDIDAD S.V.: 4934'

TVD PERFORACION : 4353' - 5461'

MPP = 4907'

DONE BY : M. BENITES

CHECKED BY : R. CASTILLO

Base : TALARA

Field - LOBITOS

Well : L06 = 16

Page : 0007

Report N°: 0228

_ BOTTOM HOLE PRESSURE CALCULATIONS _

Well producing through casing / tubing / drill pipe

Bottom hole temperature: _____ at depth _____ with _____

[illegible]

REMARKS :

* Only used if its value is significant compared to the accuracy of the gauge.

No. : DOP 115

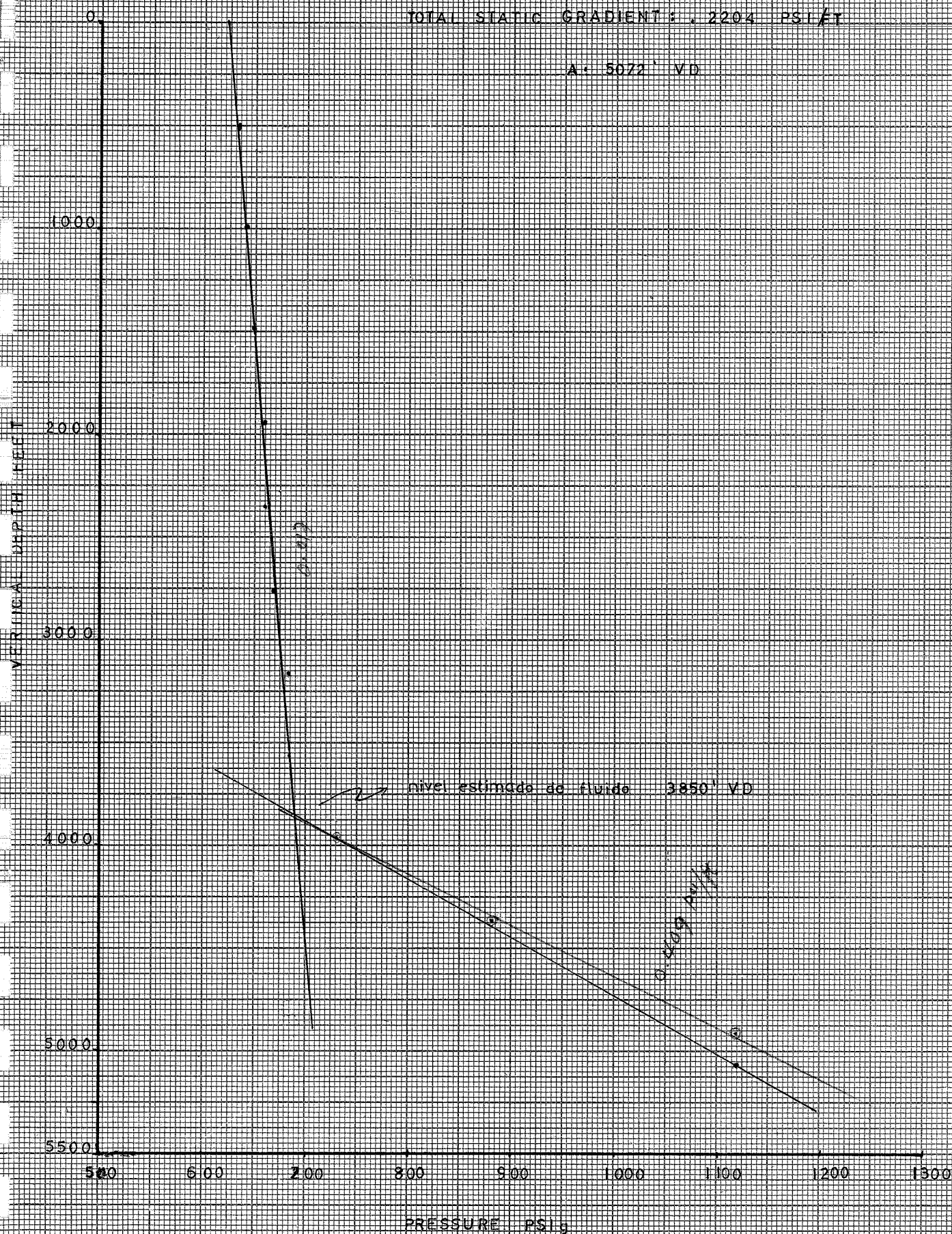
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Field : LOBITOS

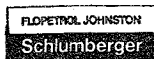
Page : 0008

Well : L06 - 16

Report N : 0228



DivisionLAR|PCD.....



Center:TALARA.....

Service order:

AMERADA CHART

Customer:BELCO PETROLEUM CO. OF PERU.....
Field:LOBITOS.....
Well:NO. 16 - PLAT. L06.....
Date:24.12.84.....

Remarks:STATIC GRADIENT.....
.....
.....
Pressure element/Temp. EL. 45278..... Of/psi N° 2000
Clock 10358..... hours N° 3.....