

**PETRO - TECH**  
**PERUANA S.A.**

**INTER OFFICE MEMORANDUM**

**TO:** Pedro Alarcón

**FROM:** Victor Peralta

**SUBJECT: TEMPERATURE SURVEY  
WELL LO16-22**

**GEOSC-124-99**

**DATE:** October 12, 1999

On September 26<sup>th</sup>, 1999, a temperature survey was run in Upper Basal Salina formation to identify gas entry intervals. The main intervals with gas breakthrough are:

7450' - 7444'  
7428' - 7418'  
7370' - 7360'  
7342' - 7328'

Based on these results, this Upper Bs.Salina was abandoned with a bridge plug at 5850'. In addition, with the purpose of improving the performance of LO16 Bs. Salina Gas Injection, we recommend the following jobs:

**LO13-20:** Set a bridge plug at 8135' to isolate lower interval: 8140'-8190' and optimize the oil production of the Upper sands. ELAN analysis shows that lower sands are wet. After first month of production take a build up of 72 hrs. in order to monitoring the gas injection project.

**LO16-20:** Take a build up pressure of 72 hrs.

- If the PBU shows damage then remove it with a stimulation job.
  - If not, shut in the well in order to improve gas sweep efficiency.
- Currently this well produces 11 bopd with 13,641 GOR.

**cc:** John Meyers  
Rigoberto Francia  
Alberto Agurto  
Jaime Cáceres  
Res-Eng fileWell file

FIELD REPORT

TO: John Meyers  
FROM: Alberto Agurto S.  
SUBJECT: Temperature logging in LO16-22 well.  
Basal Salina fm. Lobitos Offshore area.

① T. Cerezo ✓  
② - Activo for  
T. Alvarado  
OK ✓

DATE	TIME	DESCRIPTION
Sep-25-99	19:00	Arrived to location LO16-22 well. Present Operation : Installing Halliburton's lubricator and test with 1000 psi. Ok. <b>Note:</b> The well was shut in 3 hrs.
	19:00-20:00	Halliburton Co. calibrated Temperature-CCL log.
Sep-26-99	20:00-24:00	Wellhead static pressure 850 psi. Ran tool, place in depth with CCL and recorder static temperature gradient from 5400' to 7548'. Max Temperature: 123 F.
	00:00-02:00	Bled off the well to test separator with 3/8" beam and plate 4" * 2 1/2". Wellhead flowing pressure 750 psi. Rate: 2072Mscfd.
	02:00-03:30	Pull up recording flowing temperature gradient from 7548' to 5400'. Max. Temperature: 120 F. The well was closed.  <b>Note:</b> According results the intervals that showed a cooling zone were: 7451' - 7444'. 7426' - 7414'. 7370' - 7360' and 7355' - 7338'.
	03:30-04:30	Ran junk basket calibrate to 5950'.
	04:30-06:00	Ran Halliburton bridge plug and set @ 5850'.
	06:00-07:00	Lay down Halliburton's lubricator and return to Talara.
	07:00	Petrex 313 bled off the well and preparing to ran Chamber installation to produce from Mogollón.

Date: Sep.27.99 Supervised by: Alberto Agurto S.

Signature :

*[Signature]*

c.c.: J. Hagan / Res. Lima / Well File

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