

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



**GEOSC-285-02**  
**INTEROFFICE MEMORANDO**

**Well File**  
**GEOSCIENCES**

To : Carlos Valdizán  
From : Pedro Alarcón *PA*  
Subject : **LO16-25 Second By-pass**  
Date : October 11, 2002

Due to hole problems experienced while drilling the original and 1<sup>st</sup> by-pass hole of the LO16-25 well, we suggest to drop the vertical angle and drill through the Rio Bravo Sandy section with approximately 48 degrees.

This new well design will reduce the total depth to approximately 6500' MD, 4000' TVD (-3950' VSS), 4570' HD.

Objective coordinates and expected tops are as follows:

Coordinates: 9506,625.00NM, 458,440.00ME

	MD	TVD	TSS	HD
Rio Bravo Sandy Top	5730'	3470'	3420'	3980'

c.c.: B.Bruce  
G. Ruesta  
Well File

<b>GEOSCIENCES</b>
<b>Central File</b>
<i>Bruce</i>
<i>11/10/02</i>
<b>DATE</b>