

FINAL GEOLOGICAL REPORT

Z-2B-24-089-D-LO16
LO16-26

1. Summary:

Based on 3D seismic interpretation and well control, it was recommended to drill the **LO16-26** well in order to continue the development of the Rio Bravo reservoir in an isolated faulted block of approximately 320 acres located towards northwest of LO16 platform.

The well was drilled between July 23 and August 15, 2002 towards N 43° W, with a maximum vertical angle of 61 degrees and a total depth of 8095' MD (-4661' VSS).

The Rio Bravo objective was reached at 5850' MD (-3461' VSS), 539' higher than expected top by prognosis, with good oil shows and high gas readings from C1 through C5. The measured gross thickness is 2079' MD (1104' TVD), and the vertical net sand thickness is 213'.

Due to bad hole conditions, the open hole electrical logs were canceled. According to GR curve, ditch sample analysis and gas readings; the production casing was setting at 8095'. The Power log evaluation was prepared based cased hole logs (GR- Neutron).

The well LO16-26 was completed in Rio Bravo Formation and tested in three stages, presently is producing from the last two stages, yielding an IPR of:

1244 BO x 87 BW x 7/16" choke x 550 psig x 735 GOR x CF

2.- Stratigraphy:

According to ditch samples and GR registered with MWD tool, the formational tops are as follows:

FORMATION	MD	TVD	VSS	NORTH	WEST
Helico	From sea bottom				
Lobitos	1680'	1498'	-1448'	416'	255'
Chacra	3420'	2350'	-2300'	1531'	1282'
Rio Bravo	5850'	3511'	-3461'	3085'	2746'
Rio Bravo Shaly	7966'	4633'	-4583'	4333'	4028'
Total Depth	8095'	4711'	-4661'	4399'	4105'

The Power Log evaluation was prepared with the GR- Neutron logs recorded in cased hole, which indicates a total of 369 feet MD (193' VD) with 6.9% of average porosity and 38.3% of average water saturation as petrophysical parameters.

3.- Sedimentary aspects:

According to ditch sample description and stratigraphic correlation with wells drilled from LO6 platform, the main producer sands of the Rio Bravo formation are composed by fine to medium, well sorted, friable sandstones with fair to good oil shows and gas readings from C1 to C5, which indicates a good reservoir characteristics.

4.- Structure:

The Rio Bravo formation was encountered 539 feet higher than prognoses in faulted block reservoir of approximately 425 acres, isolated of LO16-10 well.

5.- Production data:

According to Power Log, the Rio Bravo reservoir had a total of 193 feet of vertical net oil sand, based on that, it was perforated and fraced at following intervals:

- 7963' – 7680' with 19 shots and 639 barrels of crude oil. Tested 58 BO x 2 hrs. Set RBP plug at 7111 feet.
- 6833' – 6575' with 258 shots and 506 barrels of gelled water. Tested 300 BO of net production, cleaning sand from 4486' to 6575'.
- 6514' – 6200' with 288 shots and 617 barrels of gelled water.

The well LO16-26 presently is producing from the last two stages, yielding an IPR of:

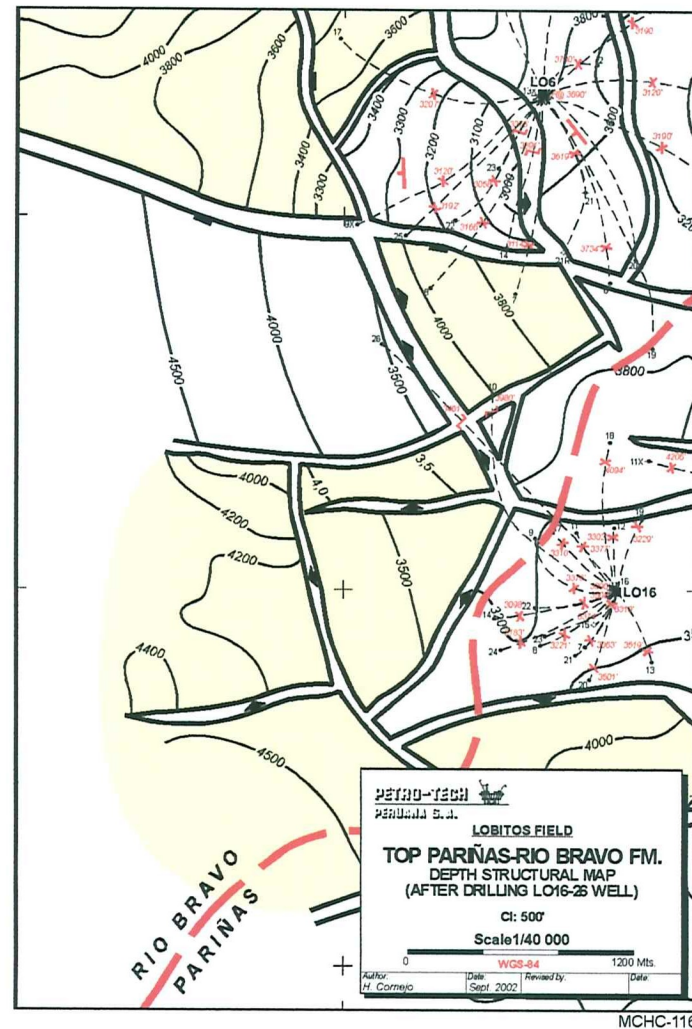
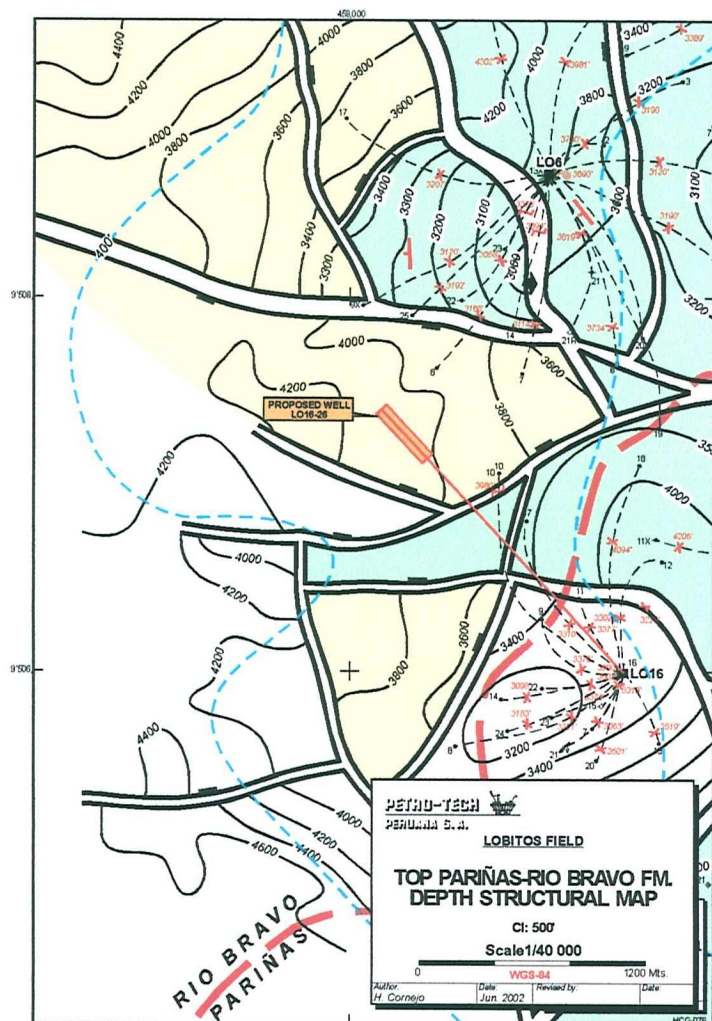
1244 BO x 87 BW x 7/16" choke x 550 psig x 735 GOR x CF

A summary of production is as follows:

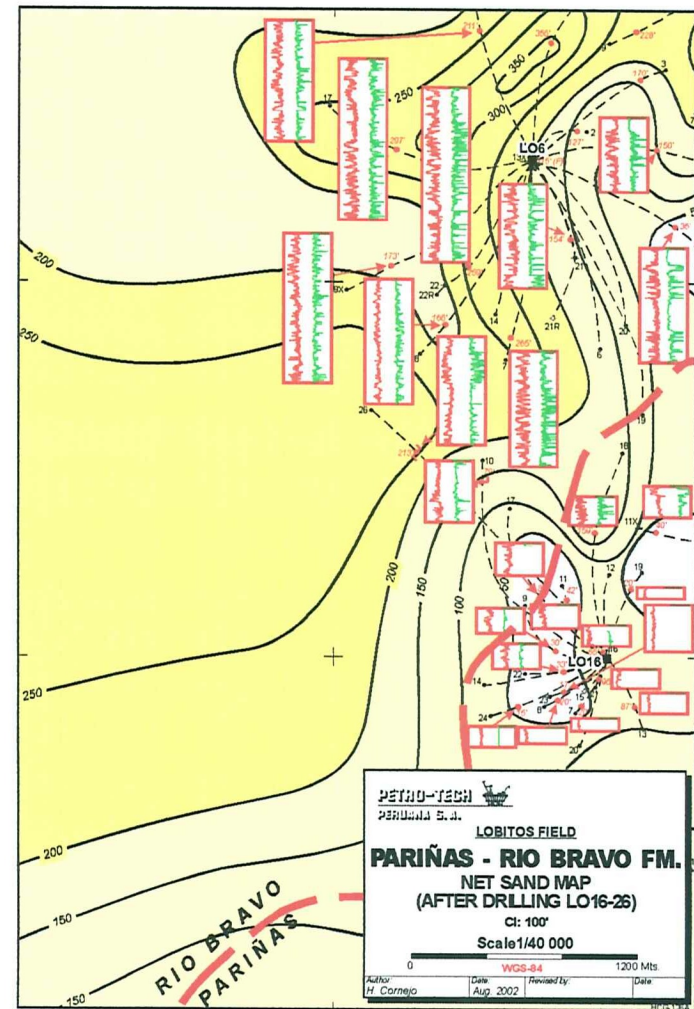
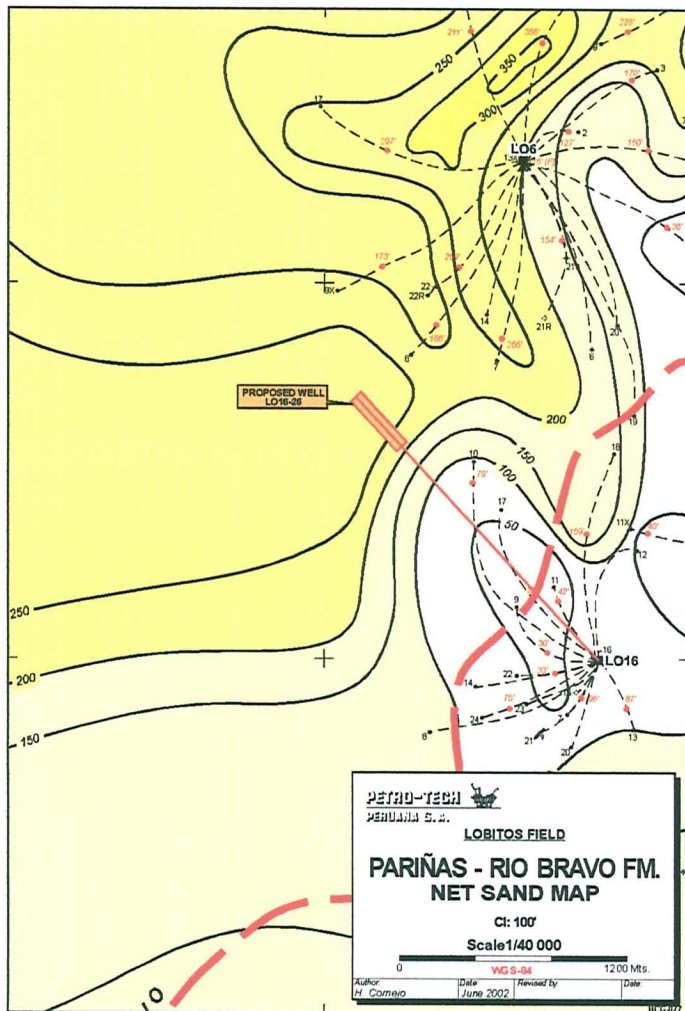
Bbls. Oil	Bbls. Water	Choke	Pressure	GOR	Status	Date
1244	87	7/16"	550 psig	735	CF	Aug. 30, 2002
951	51	7/16"	530 psig	655	CF	Aug. 31, 2002
777	42	13/32"	520 psig	721	CF	Sep. 01, 2002

6.- Results:

Main Objective: <i>Rio Bravo</i>	Compl. Fm.	Top (Ft.)		Gross Int. (Ft.)	Net Sand (Ft.)	Net Pay (Ft.)	Exp. IPR (BOPD)	Actual IPR (BOPD)	AFE Cost (M\$)	Actual Cost (M\$)
		MD	VSS	VSS	VSS	VSS				
Expected	Rio Bravo	6900	-4000	750	250	--	450	1244	1411	1067
Results		5850	-3461	1104	213	--				



MCHC-116



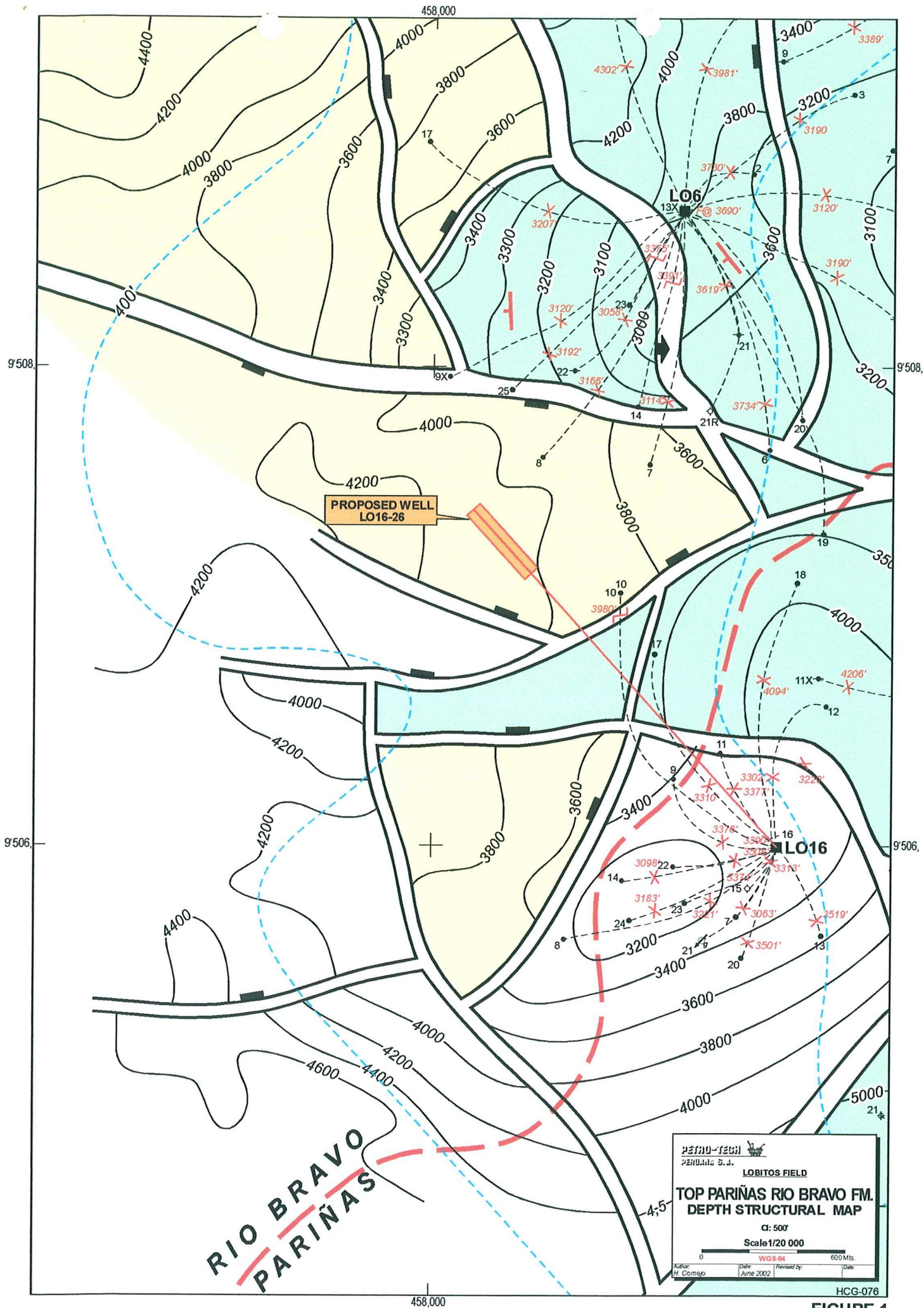


FIGURE 1

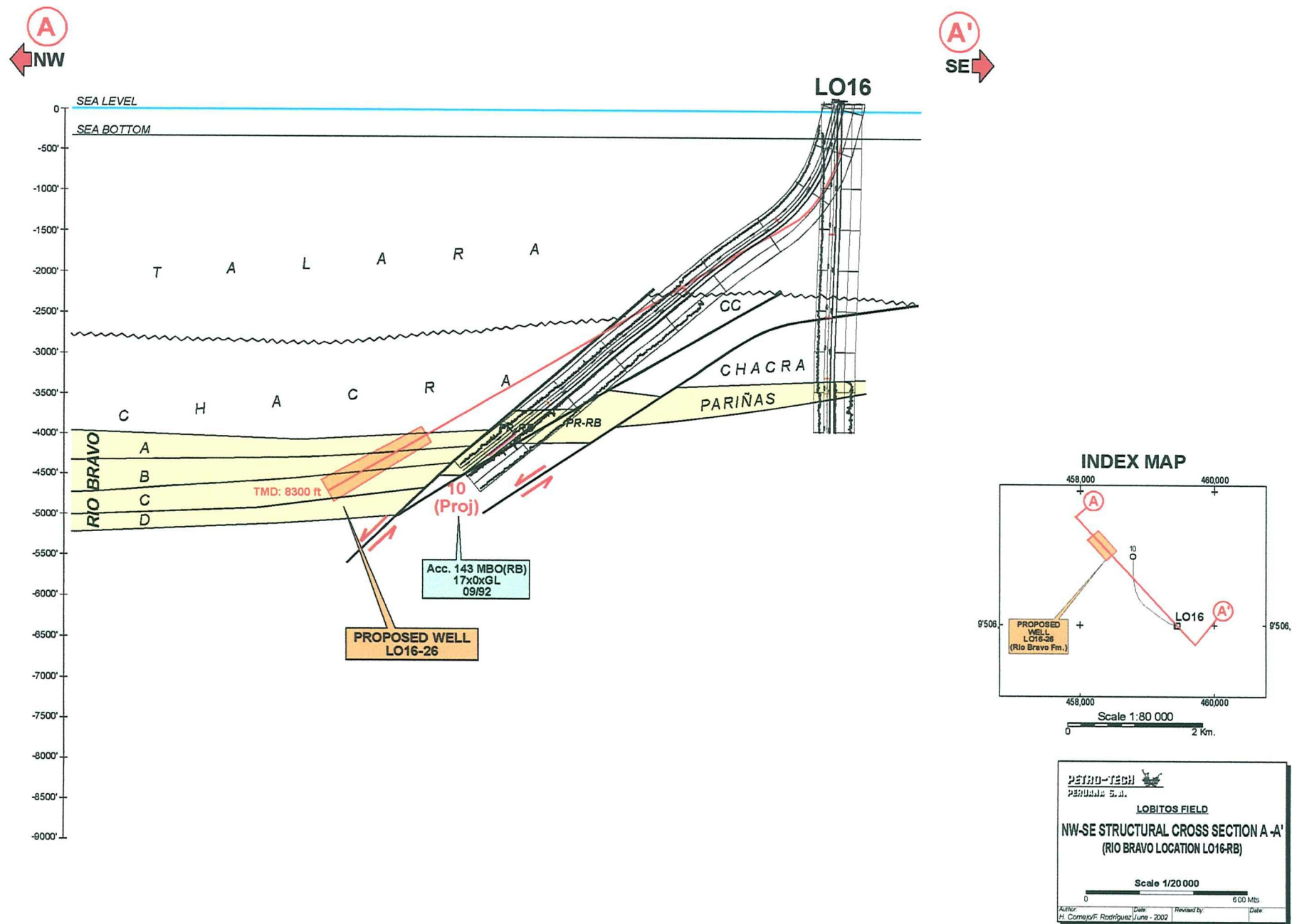
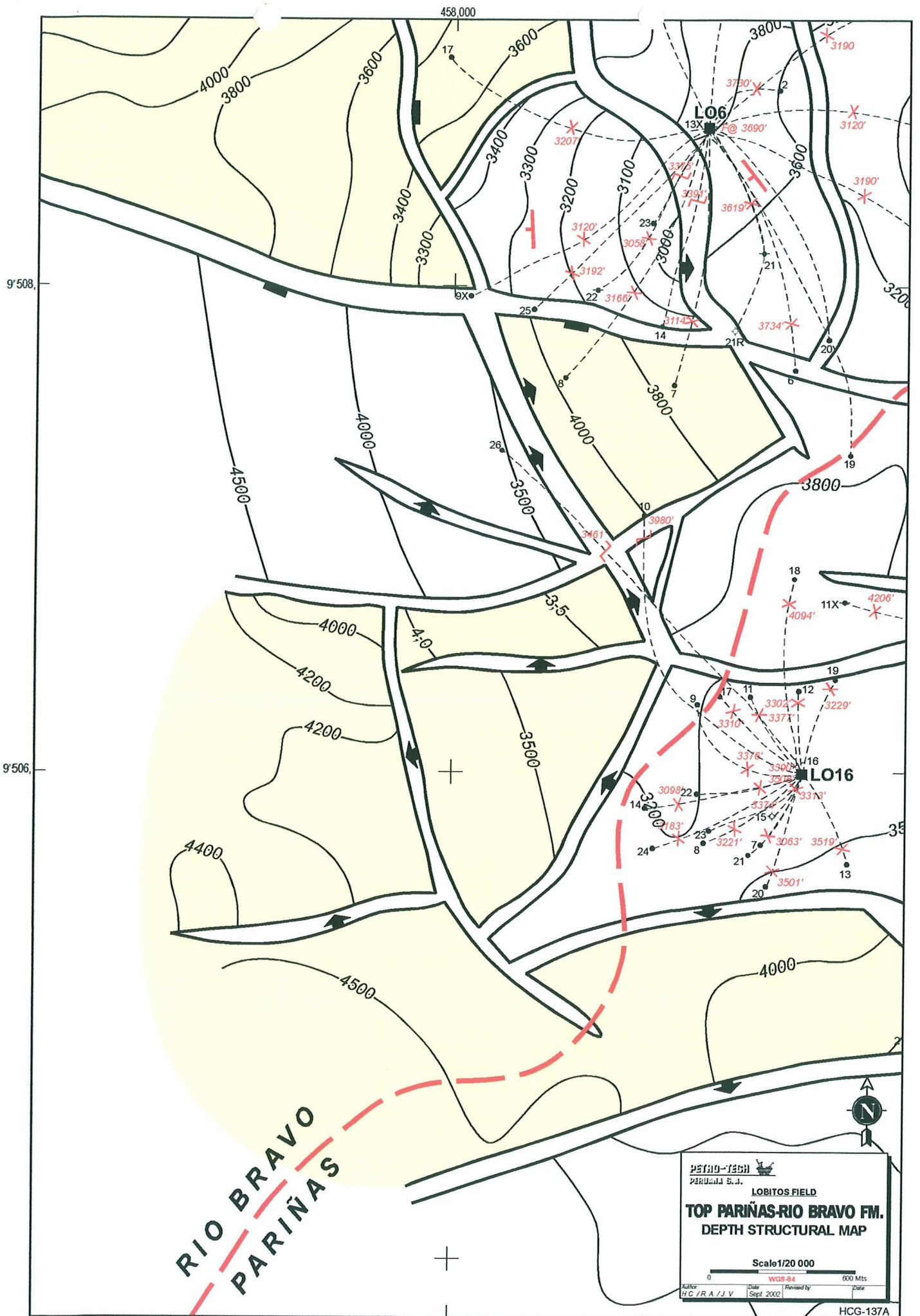


FIGURE 2



HCG-137A
FIGURE 1

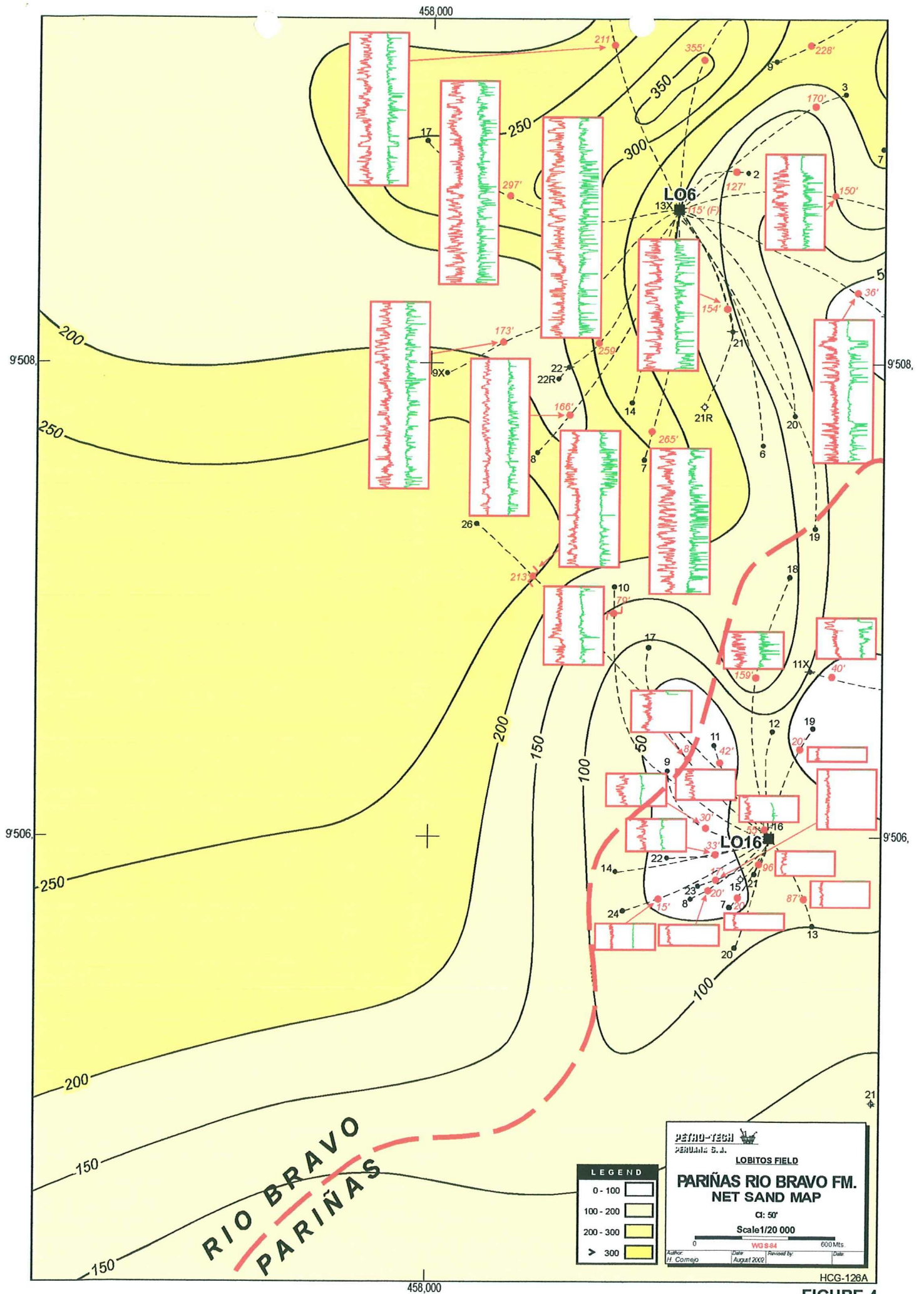
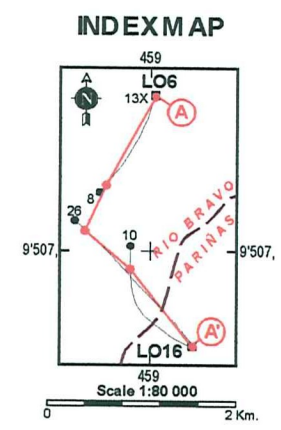
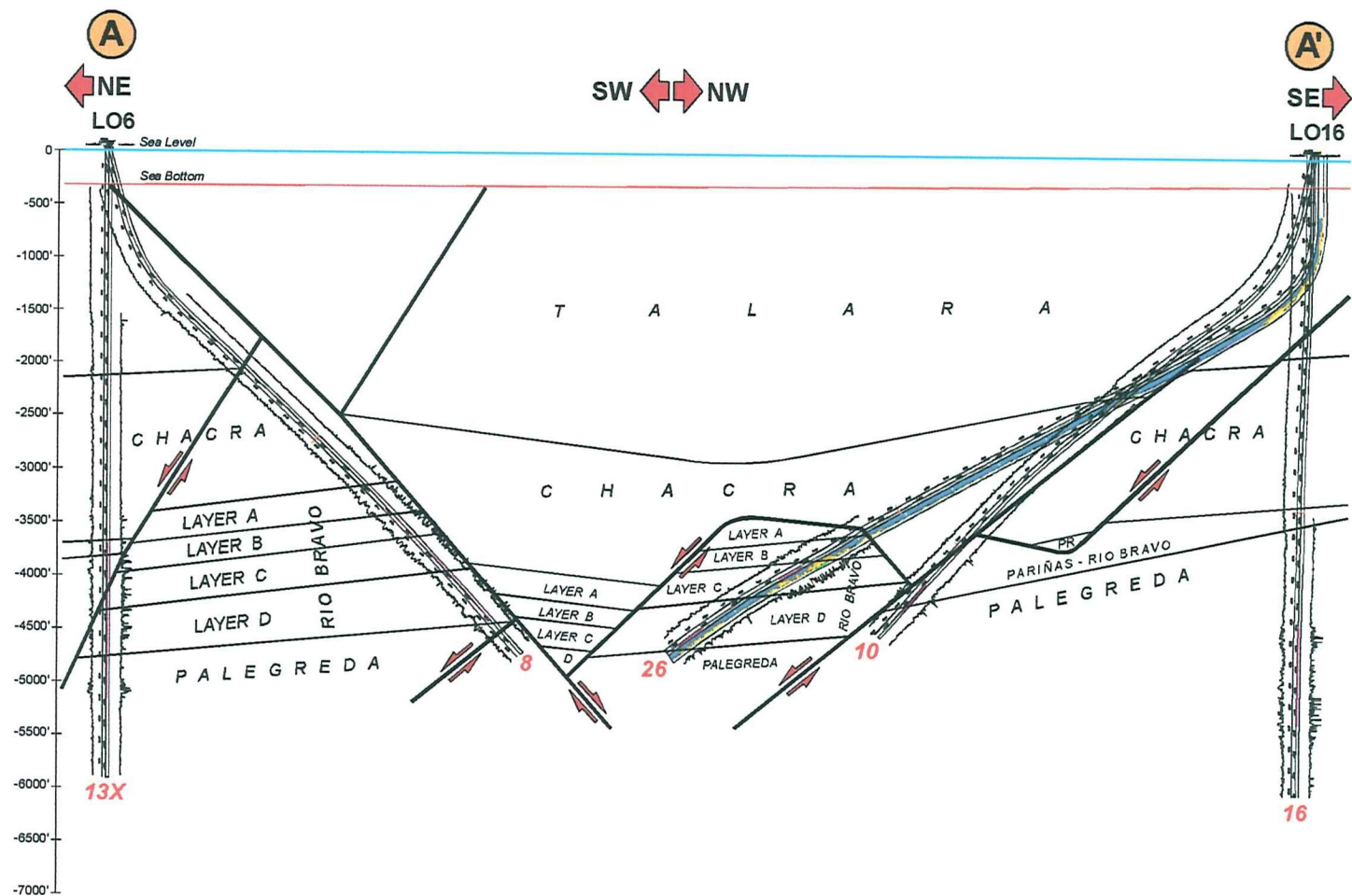


FIGURE 4



PETRO-TECH
PERUANA S.A.

LOBITOS FIELD

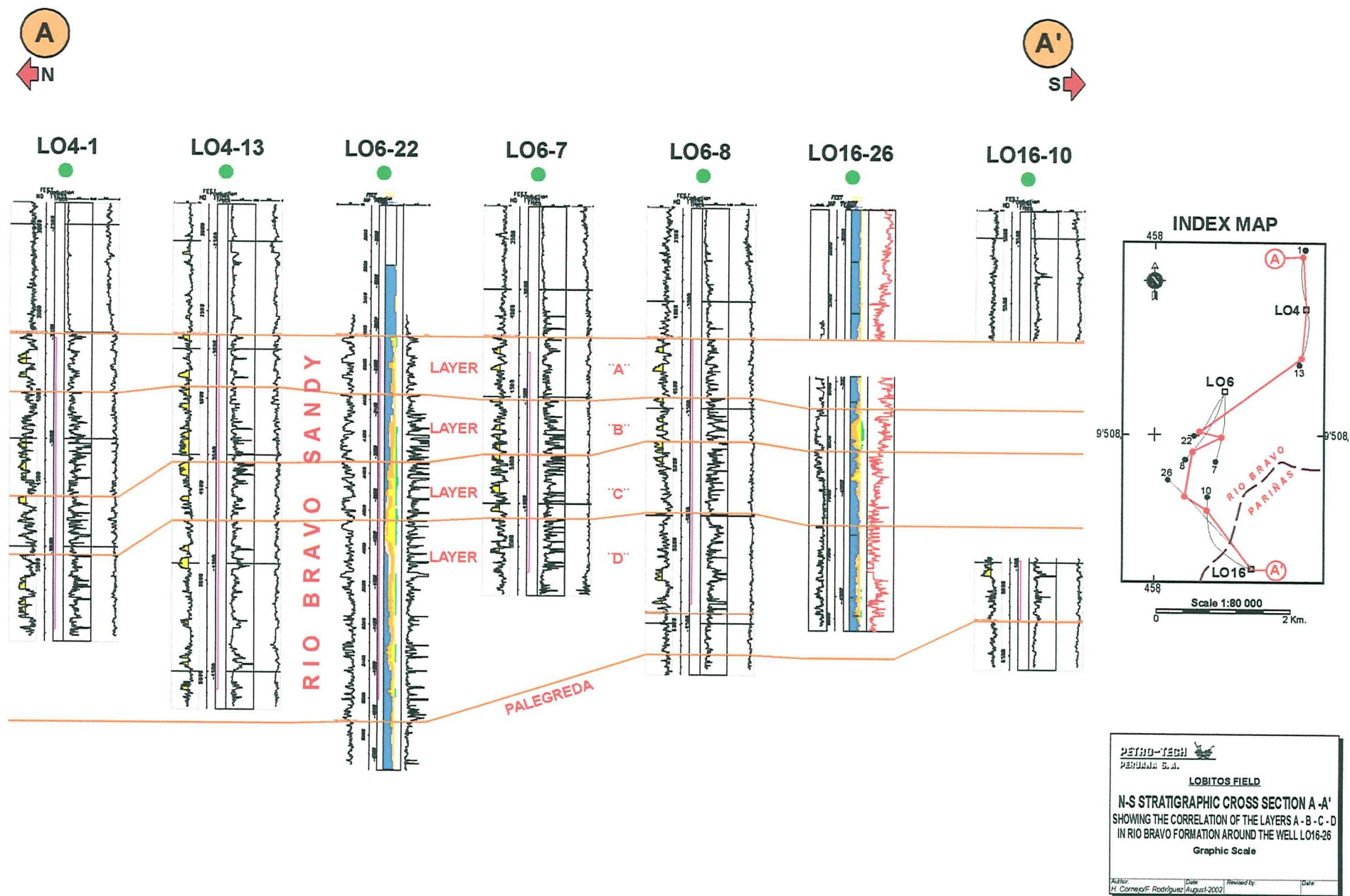
NE-SE STRUCTURAL CROSS SECTION A-A'

Scale 1/20 000

Author: H. Cornejo F. Rodríguez (August 2002) | Date: | Revised by: | Date: |

FIGURE 2

FIGURE 4



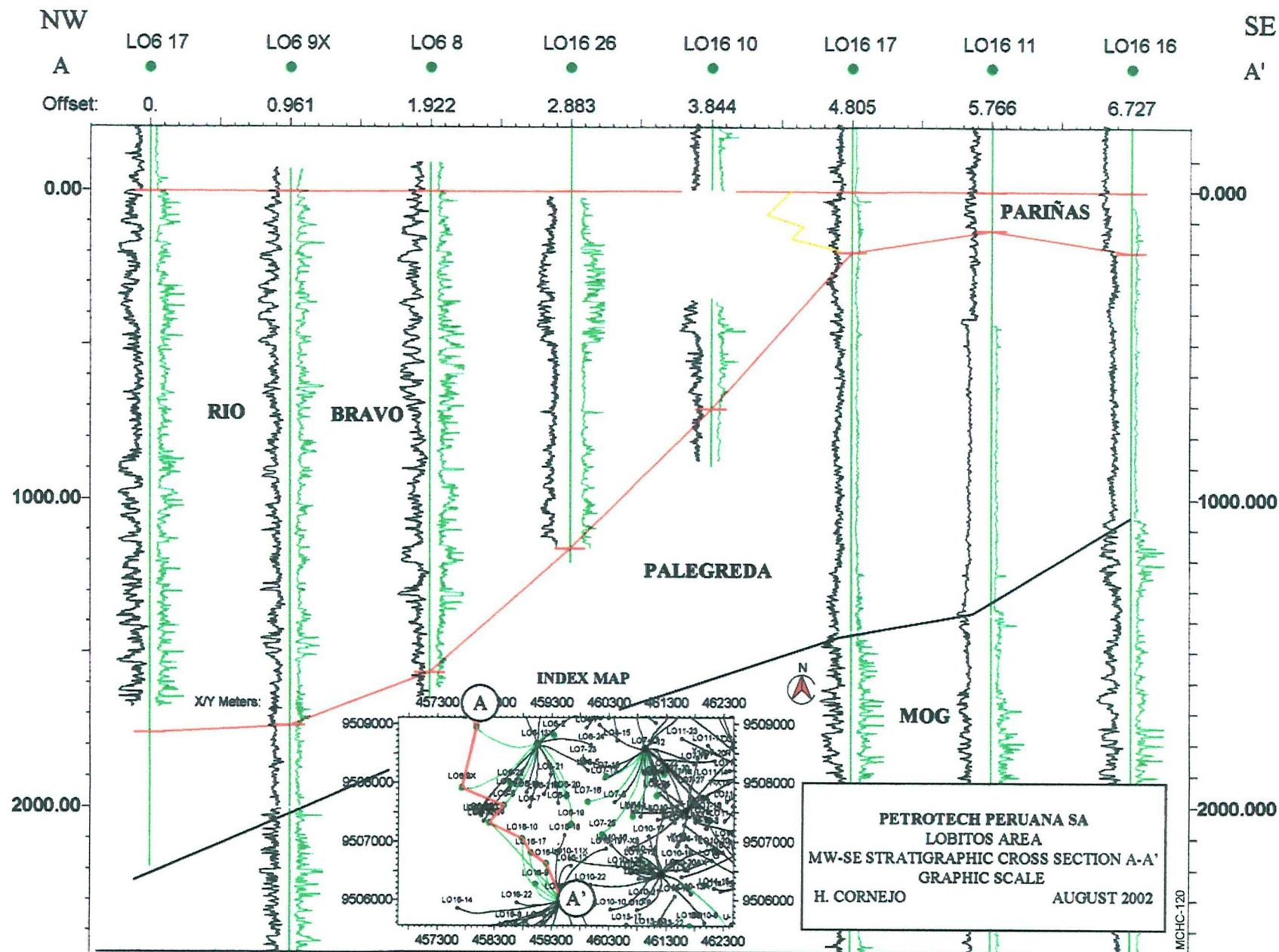


FIGURE 5