

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



EPPM-090-95

**TO:** Carlos Valdizán  
Operations Manager

**FROM:** Exploration-Production Planning Manager

**SUBJECT:** GEOLOGIC PROGNOSIS - LO16 PLATFORM (LO16-20)

**DATE:** April 20, 1995

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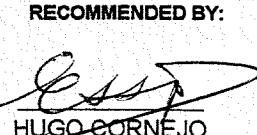
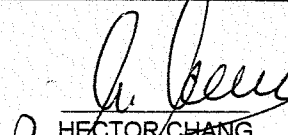
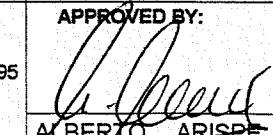
Enclosed please find the formal Geologic Prognosis of next Well to be drilled from LO16 Platform, Lobitos Area.

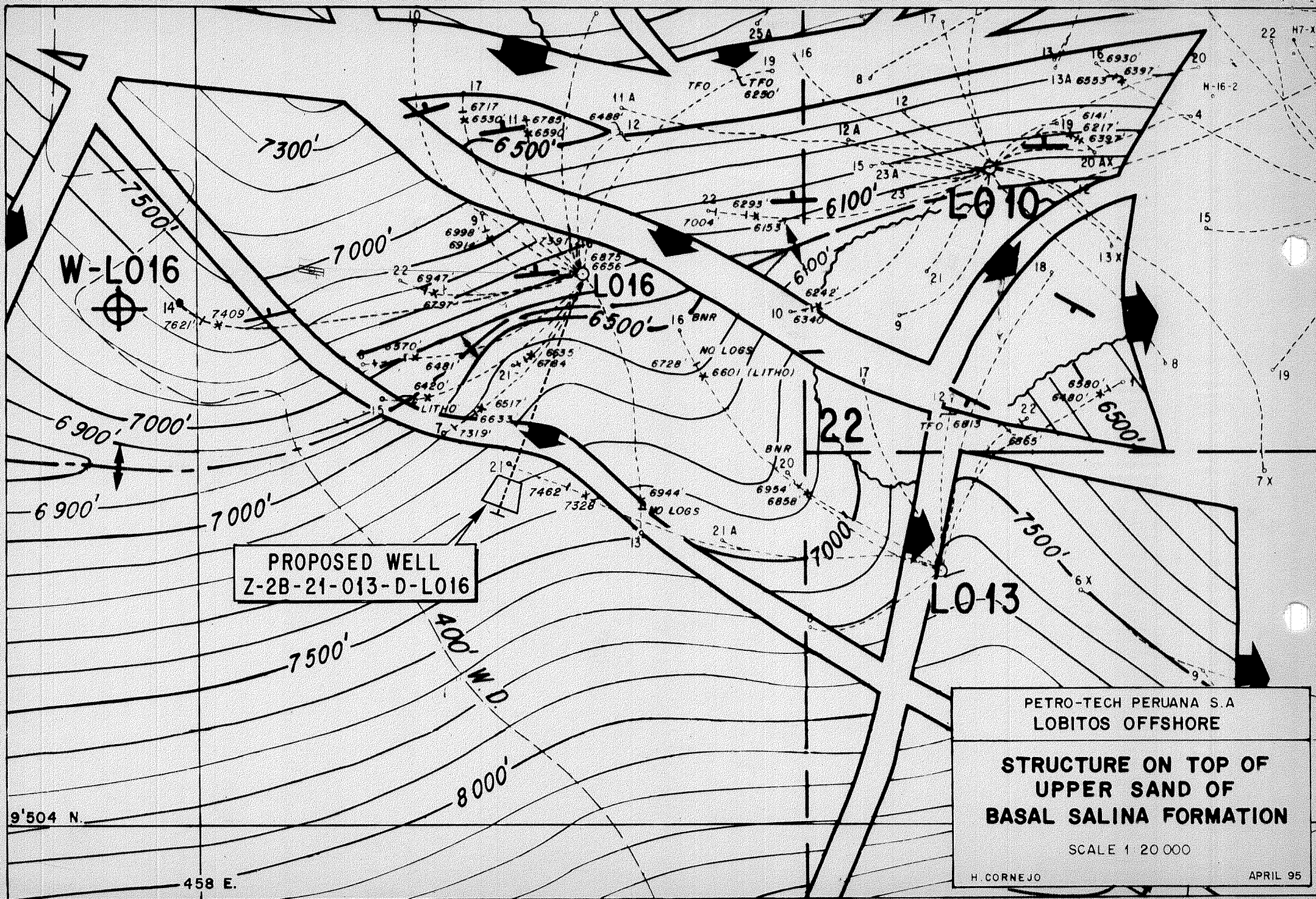
Should you have any question, do not hesitate to contact us.

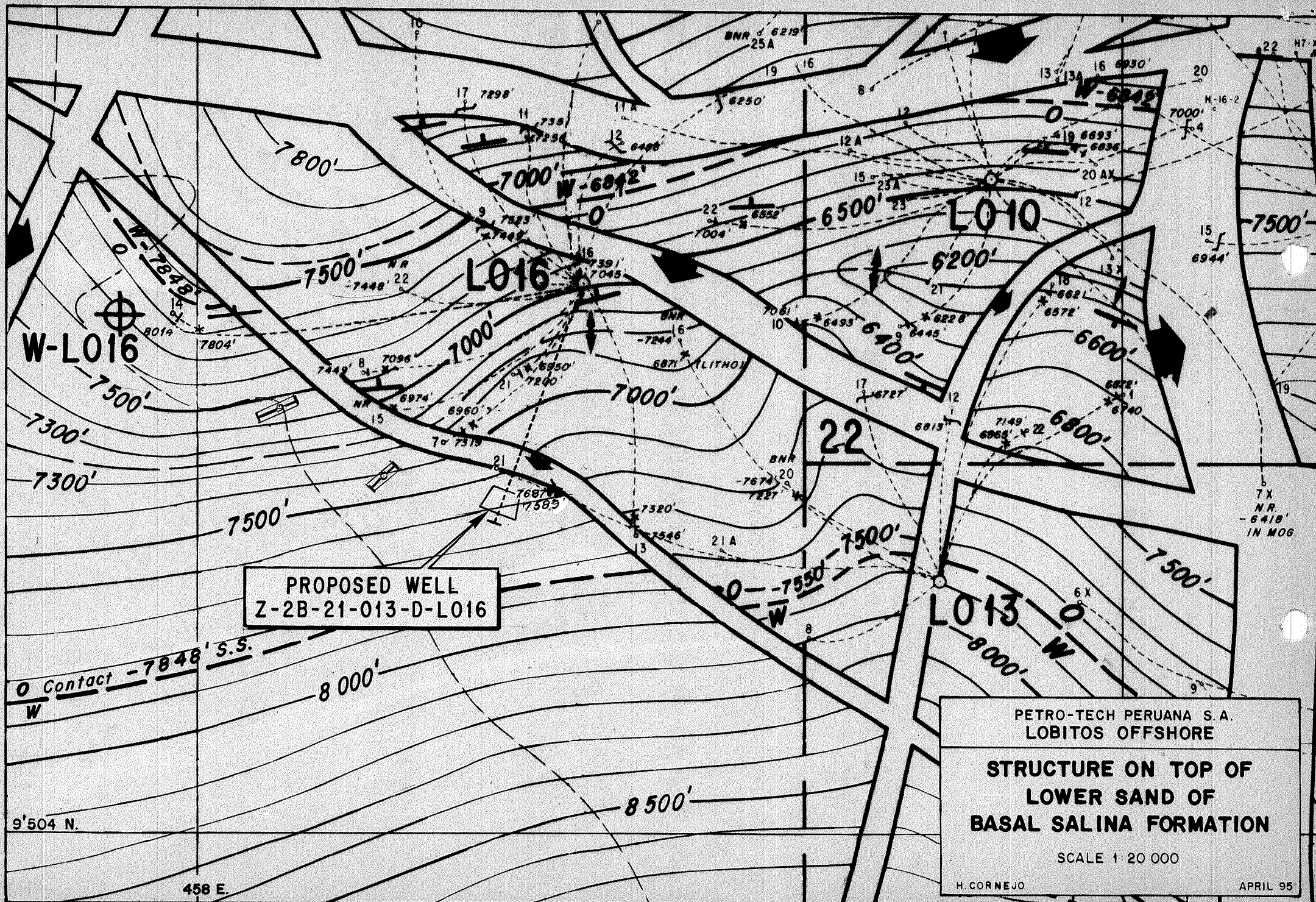
  
Alberto Arispe  
Manager

HCG/mts  
Enc.

cc: R. Samaniego  
R. Francia  
J. Mego  
A. Erazo  
Well File  
200.2. 2

| PETRO-TECH PERUANA S.A.                                                                            |                                                                             |                                                                                                     |                              | GEOLOGIC PROGNOSIS                                                                                     |                                  |              |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------------------|----------------------------------|--------------|
| AREA                                                                                               | OFFICIAL WELL NUMBER                                                        | PETRO-TECH N°                                                                                       | TYPE OF WELL                 | RIG N°                                                                                                 |                                  |              |
| LOBITOS OFFSHORE                                                                                   | Z-2B-21-013-D-LO16                                                          | LO16-20                                                                                             | DEVELOPMENT                  | P-40                                                                                                   |                                  |              |
| OBJECTIVE                                                                                          |                                                                             | PRIMARY: BASAL SALINA                                                                               |                              | SECONDARY: -----                                                                                       |                                  |              |
| SURFACE COORDINATES (UTM)                                                                          |                                                                             |                                                                                                     | TARGET COORDINATES (UTM)     |                                                                                                        |                                  |              |
| 9°506,368.69mN; 459,710.25mE                                                                       |                                                                             |                                                                                                     | 9°505,490.00mN; 459,370.00mE |                                                                                                        |                                  |              |
| ELEVATION                                                                                          | KB:                                                                         | DIRECTION OF DEVIATED WELL                                                                          | TARE                         | DRILLED DEPTH:                                                                                         | ESTIMATED FINAL DRILLED DEPTH:   |              |
|                                                                                                    | 50 FT.                                                                      | S 20° W                                                                                             |                              | 8,000 FT.                                                                                              | 9,000 FT.                        |              |
|                                                                                                    | WATER DEPTH                                                                 | (INITIAL) CONDUCTOR ANGLE FROM VERTICAL                                                             |                              | VERTICAL DEPTH:                                                                                        | HORIZONTAL DRIFT TO TOTAL DEPTH: |              |
|                                                                                                    | 309 FT.                                                                     | VERTICAL                                                                                            |                              | 7,350 FT.                                                                                              | 3,600 FT.                        |              |
|                                                                                                    | GROUND LEVEL                                                                | RECOMMENDED DEPTH OF K.O.P.                                                                         |                              | HORIZONTAL DRIFT:                                                                                      | MAX. ANGLE:                      |              |
|                                                                                                    |                                                                             | 600 FT.                                                                                             |                              | 3,150 FT.                                                                                              | 27 DEG.                          |              |
| ESTIMATED DRILLING TIME TO T. D.                                                                   |                                                                             | BUILD UP ANGLE AT 3 DEGREES/ 100 FT.                                                                |                              | TARGET LIMITS (DIAMETER):                                                                              |                                  |              |
|                                                                                                    |                                                                             |                                                                                                     |                              | TOP: 400 FT. BASE: 600 FT.                                                                             |                                  |              |
| STRATIGRAPHIC SEQUENCE                                                                             | FM/MEMBER                                                                   | DRILLED TOP                                                                                         | SUBSEA TOP                   | OBSERVATIONS                                                                                           |                                  |              |
|                                                                                                    | TALARA                                                                      | FROM SEA                                                                                            | BOTTOM                       |                                                                                                        |                                  |              |
|                                                                                                    | CHACRA                                                                      | 2,800                                                                                               | 2,650                        |                                                                                                        |                                  |              |
|                                                                                                    | PARIÑAS                                                                     | 3,850                                                                                               | 3,600                        |                                                                                                        |                                  |              |
|                                                                                                    | PALEGREDA                                                                   | 4,000                                                                                               | 3,750                        |                                                                                                        |                                  |              |
|                                                                                                    | MOGOLLON                                                                    | 5,800                                                                                               | 5,300                        |                                                                                                        |                                  |              |
|                                                                                                    | SAN CRISTOBAL                                                               | 6,700                                                                                               | 6,100                        |                                                                                                        |                                  |              |
|                                                                                                    | BASAL SALINA                                                                | 8,000                                                                                               | 7,300                        | OBJECTIVE                                                                                              |                                  |              |
|                                                                                                    | BALCONES                                                                    | 8,800                                                                                               | 8,000                        |                                                                                                        |                                  |              |
|                                                                                                    | TD                                                                          | 9,000                                                                                               | 8,100                        |                                                                                                        |                                  |              |
| LOGGING EVALUATION                                                                                 | BIT SAMPLES TO BE TAKEN                                                     |                                                                                                     | REMARKS                      |                                                                                                        |                                  |              |
|                                                                                                    | EVERY 30 FT. FROM SURF. TO 3000' AND EVERY 10 FT. FROM 3000' TO TOTAL DEPTH |                                                                                                     |                              |                                                                                                        |                                  |              |
|                                                                                                    | RECOMMENDED FOR PALEO-PALYNOLOGY                                            |                                                                                                     |                              |                                                                                                        |                                  |              |
|                                                                                                    | THROUGHOUT THE WELL                                                         |                                                                                                     |                              |                                                                                                        |                                  |              |
|                                                                                                    | RECOMMENDED OPEN HOLE                                                       |                                                                                                     |                              |                                                                                                        |                                  |              |
|                                                                                                    | DLL-MSFL-GR, LDT-CNL-GR                                                     |                                                                                                     |                              |                                                                                                        |                                  |              |
|                                                                                                    | RECOMMENDED AFTER CASING                                                    |                                                                                                     |                              |                                                                                                        |                                  |              |
|                                                                                                    | GR-CCL                                                                      |                                                                                                     |                              |                                                                                                        |                                  |              |
|                                                                                                    | NEARBY WELLS FOR CORRELATION                                                |                                                                                                     |                              |                                                                                                        |                                  |              |
|                                                                                                    | LO16-14, LO16-16, LO16-7, LO16-21, LO16-8, LO13-21                          |                                                                                                     |                              |                                                                                                        |                                  |              |
| EVALUATION                                                                                         | SIDEWALL CORES                                                              | SWC                                                                                                 | HRCT                         |                                                                                                        |                                  |              |
|                                                                                                    |                                                                             | NOT CONSIDERED                                                                                      |                              |                                                                                                        |                                  |              |
|                                                                                                    | CONVENTIONAL CORES                                                          | NOT CONSIDERED                                                                                      |                              |                                                                                                        |                                  |              |
|                                                                                                    | GAS LOGGER                                                                  | NOT CONSIDERED                                                                                      |                              |                                                                                                        |                                  |              |
|                                                                                                    | FORMATION TESTING                                                           | NOT CONSIDERED                                                                                      |                              |                                                                                                        |                                  |              |
| RECOMMENDED BY:                                                                                    |                                                                             | DATE                                                                                                | APPROVED BY:                 |                                                                                                        | DATE                             |              |
| <br>HUGO CORNEJO |                                                                             | <br>HECTOR CHANG | APRIL 20, 95                 | <br>ALBERTO ARISPE |                                  | APRIL 20, 95 |





PROPOSED WELL  
Z-2B-21-013-D-L016

PETRO-TECH PERUANA S.A.  
LOBITOS OFFSHORE

**STRUCTURE ON TOP OF  
LOWER SAND OF  
BASAL SALINA FORMATION**

SCALE 1:20 000

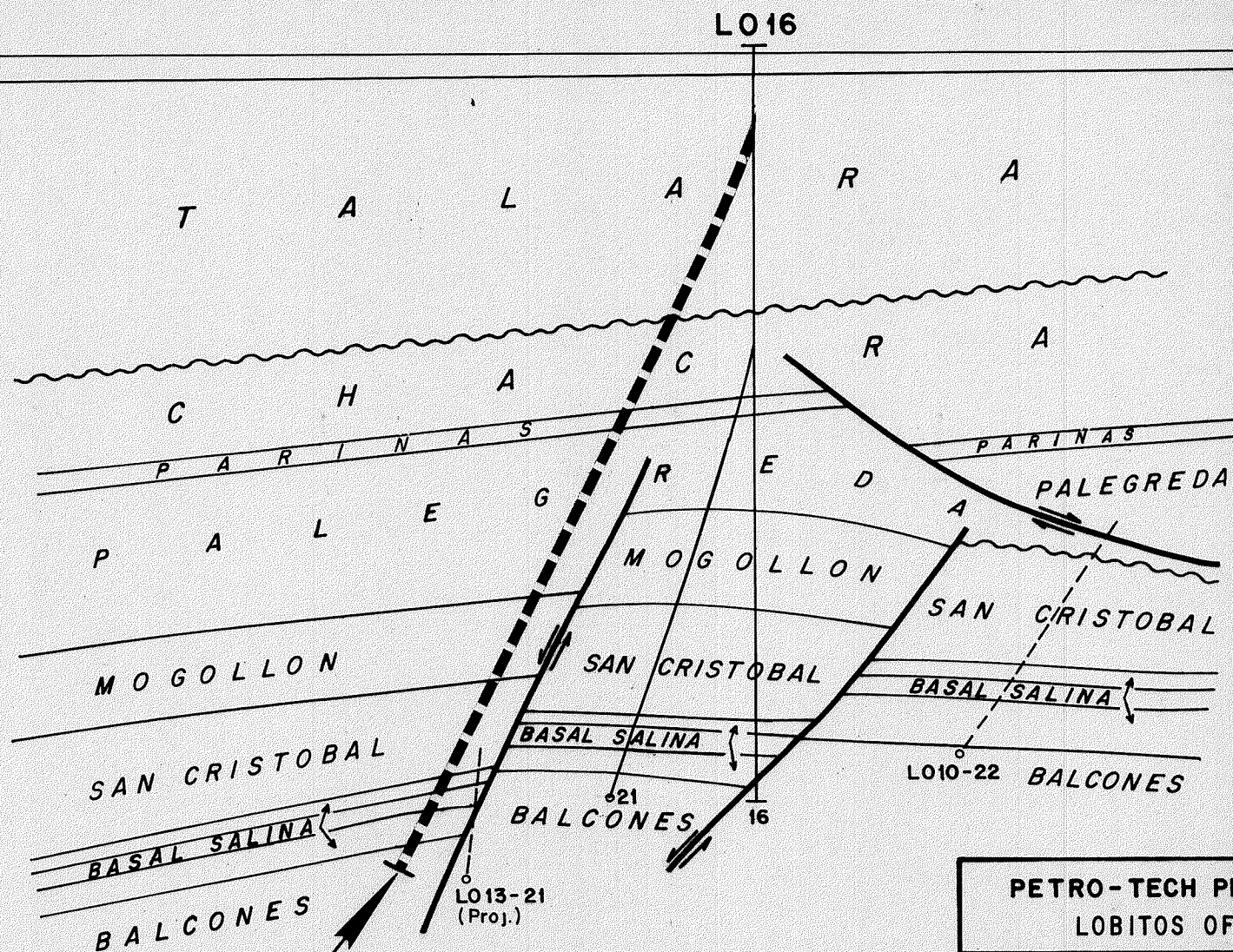
H. CORNEJO

APRIL 95

SW

Sea Level  
Sea Bottom

NE



**PROPOSED WELL**  
**Z-2B-21-013-D-L016**

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

**NE-SW STRUCTURAL SECTION**  
**FOR PROPOSED WELL**  
**Z-2B-21-013-D-L016**

SCALES: VERTICAL 1/20,000  
HORIZONTAL 1/20,000

H. CORNEJO

APRIL 95