

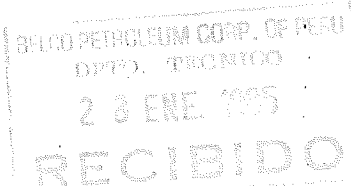
BELCO PETROLEUM

CORPORATION OF PERU
(SUCURSAL DEL PERU)

WELL FILE

MCH ✓

TELEF. — NEGRITOS
863-864-865



APARTADO N° 1
TALARA-PERU

29/5/85

January 18, 1985.-
P.E.- 16, 1985.-

To : Drilling Superintendent
From : Petroleum Engineering
Ref : Drilling Prognosis for the well
Z2A-21-606-D-L06 (L06-5)
Lobitos Offshore

Attached you will find the Drilling Prognosis for well L06-5 to be drilled by Rig III to 5800' TD.

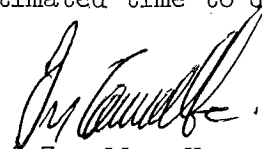
This well is in the same block of well L06-21 which was faulted out in the mid massive sand and for this reason it is bad producer.

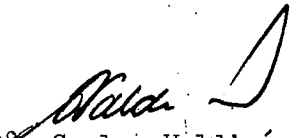
The proposed drilling program can be outlined as follows :

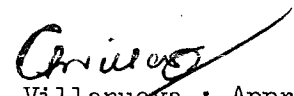
- Spud well with 17" bit and drill to 730' to set 13 3/8" casing at 700'.
- Drill 12 1/4" hole to 1830' to set 9 5/8" casing at 1800'.
- Drill 7 7/8" hole to T.D. run electric log (IES-GR, GR-CCL).

Depending upon evaluation, run 5 1/2" casing and complete well according to program to be submitted accordingly.

Estimated time to drill this well is 16 days from spud to T.D.


José Zamalloa V.
Pet. Engineering


V°B : Carlos Valdizán M
Asst. Spt. P.E.


G. Villanueva : Approved
Drlg. Supt.


Approved : C. E. Myers
Eng. Supt.

IR/rzz

cc: O.M.

Lima Tech.
Petro-Peru-Lima
Drlg. Spt.
Geology
Finance
S.M.D.Co.
Well file

BELCO

ENGINEERING

DRILLING PROGNOSIS

WELL	Z2A-21-6-6-D-L06 OFFICIAL NUMBER	L06-5 BELCO NUMBER	Lobitos Offsh AREA	Development TYPE OF WELL	AFE No.
OBJETIVE	PRIMARY Rio Bravo sdy SECONDARY				
RIG : III	National 55-A DRAWWORKS	Gardner Denver PY-7 PUMP No. 1		Gardner Denver PY-7 PUMP No. 2	
DIRECTION OF DEVIATED WELL S 65° E		ESTIMATED DEVIATION (MAX ANGLE) 56°		ELEVATIONS	K.B 50'
CONDUCTOR SIZE AND ANGLE 15°		RECOMMENDED K. O. P. 1200'			☒ WATER DEPTH 335
ESTIMATED TOTAL DEPTH 5800		ESTIMATED TO REACH T.D. 16 days			☐ GROUND LEVEL
SURFACE HOLE PROGRAM			BIT SIZE 17"	CASING POINT 730	
CASING 13 3/8", K-55, 61.0 lb/ft at 700'. FLOATING EQUIPMENT - Guide shoe - Insert float valve CENTRALIZERS One on each of the bottom four joints.		CEMENT SLURRY 1 700 sx neat ce- ment with 2% CaCl ₂ . SLURRY 2 SLURRY-1 SLURRY-2 DENSITY (lb/gal) 15.6 YIELD (ft ³ /sx) 1.18 WAT. REQ (gal/sx) 5.2 T.T. (hr. min) 2.0		REMARKS	
INTERMEDIATE HOLE PROGRAM			BIT SIZE 12 1/4"	CASING POINT 1830'	
CASING 9 5/8", J-55, 36 lbs/ft at 1800'. FLOATING EQUIPMENT Guide shoe Insert float valve One on each of the bottom six joints (6) CENTRALIZERS		CEMENT SLURRY 1 500 sx 4% Gel SLURRY 2 300 sx neat cement. SLURRY-1 SLURRY-2 DENSITY (lb/gal) 14.1 15.6 YIELD (ft ³ /sx) 1.55 1.18 WAT. REQ. (gal/sx) 7.0 5.2 T.T. (hr. min) 2:34 3:00		REMARKS	
PRODUCTION HOLE PROGRAM			BIT SIZE	CASING POINT	
CASING 5 1/2", J-55, 17#/ft LT&C and N-80, 17#/ft LT&C. FLOATING EQUIPMENT Guide shoe Insert float valve. CENTRALIZERS On pay zone.		CEMENT SLURRY 1 * SLURRY 2 SLURRY-1 SLURRY-2 DENSITY (lb/gal) YIELD (ft ³ /sx) WAT. REQ. (gal/sx) T.T. (hr. min)		REMARKS * Casing and cement program will be provided after open hole log.	
WELLHEAD	SIZE : 13 3/8" x 9 5/8" x 5 1/2" WORKING PRESSURE : 2000 x 3000 x 5000 psi. ASSEMBLY :				

MUD PROGRAM

High Salinity-Low Lime

MUD TYPE

DEPTH	MUD WEIGHT	FUNNEL VISCOSITY	PLAST VISC.	YIELD POINT	FLUID LOSS	SOLIDS	OIL
(ft.)	(lb/ft)	(sec)	(CP)	(lb/100ft ²)	(cc)	(o/o)	(o/o)
0-730	9	38-40	No control.				
730-1830	9 - 9.5	40-46	6-7	9-11	N/C	6-8	5-6
1830-3400	9.5-10.0	40-44	8-10	12-14	below 6	9-10	6-8
3400-5800	10.0-11.0	44-48	10-14	14-18	below 5	10-12	6-8

PH : 11.5

Free lime 1.0 - 2.0 ppb.

- If the gas cut mud, circulate the well (+30") and increase the mud weight only if is strictly necessary.

- The mud properties will be changed as well conditions required.

REMARKS

HYDRAULIC PROGRAM

DEPTH	BIT SIZE	NOZZLESS CONVINATION	PUMP PRESS	PUMP LINER	PUMP RATE	ANN VEL	PRESS LOSS BIT
(ft)	(in)	(32 nd)	(psi)	(in)	(gpm)	(FPM)	(psi)
0-730	17"	14-14-14	800	6	600*	55	1450
730-1830	12 1/4"	12-12-12	1000	6	300*	57	720
1830-3400	7 7/8"	11-11-11	1500	5 1/2	260	155	800
3400-5800	7 7/8"	11-11-11	1500	5 1/2	300	175	1170

REMARKS

* Use both rigs pumps in parallel.

BIT PROGRAM

BIT No.	BIT SIZE	BIT TYPE	DEPTH OUT	FEET	ROT. TIME	WEIGHT ON BIT	ROTARY SPEED
	(in)	(1 ADC Code)	(ft)	(ft)	(hrs)	(1000 lbs)	(RPM)
1	17	1-1-1	730	345	13	10-15	110
2-3	12 1/4	1-1-1	1830	1100	17	20-25	100-120
4-7	7 7/8	1-1-4	3400	1570	34	35-40	100
8-13	7 7/8	1-3-6	5800	2400	120	40	100

REMARKS

Jan/16/85

DATE

Ivan Rodriguez M.

PETROLEUM ENGINEERING

CHIEF ENGINEER

DRILLING SUPT

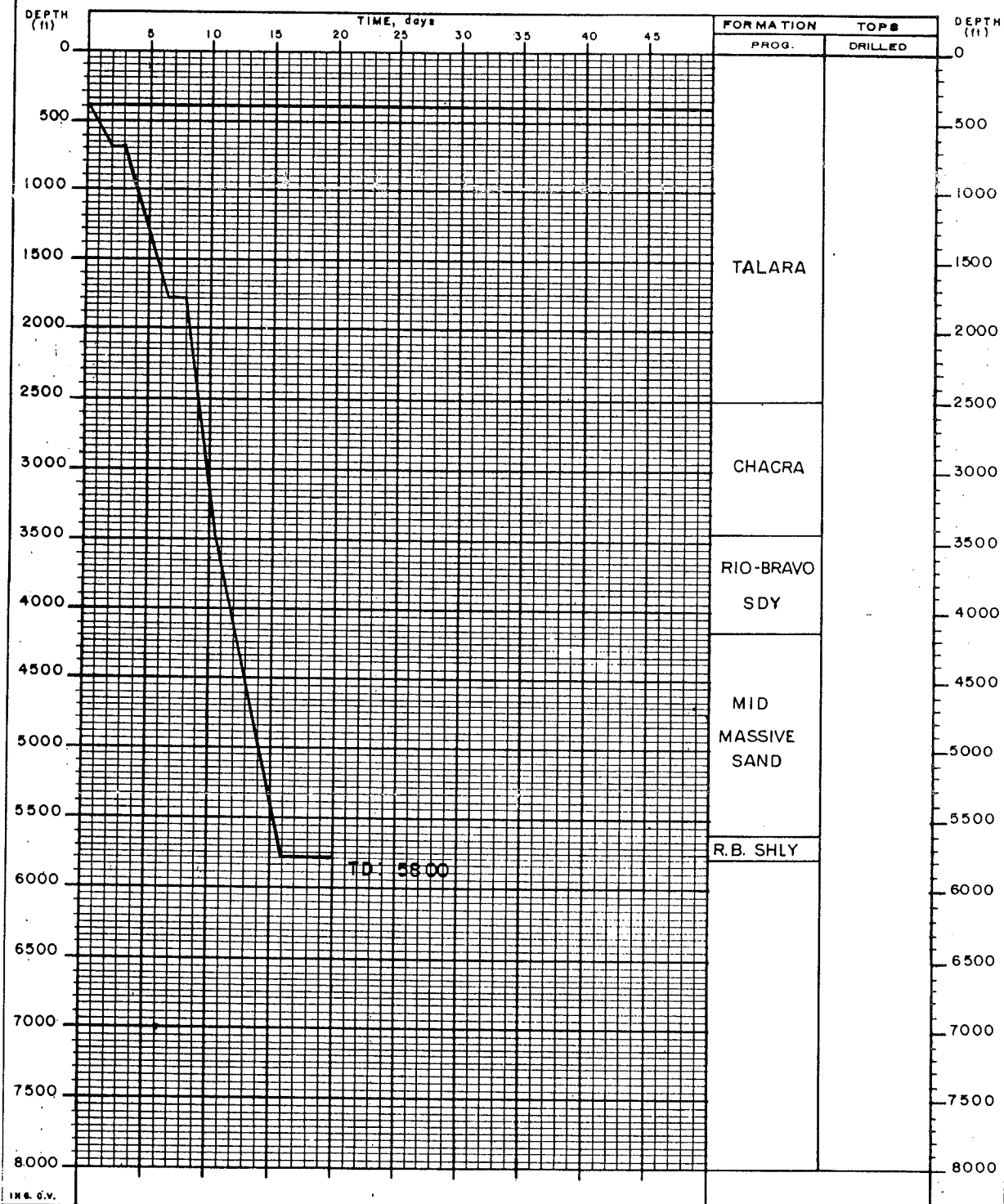


DRILLING TIME PROGNOSIS

WELL	Z2A-21-606-D- L06 OFFICIAL NUMBER	LOG - 5 BELCO NUMBER	LOBITOS OFFSH AREA	DEVELOPMENT TYPE OF WELL	AFE N°
OBJETIVE	PRIMARY RIO-BRAVO SDY SECONDARY				
RIG III	NATIONAL 55-A DRAWWORKS	GARDNER DENVER PY-7 PUMP N°1	GARDNER DENVER PY-7 PUMP N°2		

K-55
61 #/Ft
13 3/8"
AT. 700'

J-55
36 #/Ft
9 5/8"
AT. 1800'



DATE: JAN 16 - 85

PREPARED BY: IVAN RODRIGUEZ