

# BELCO PETROLEUM

CORPORATION OF PERU  
(SUCURSAL DEL PERU)

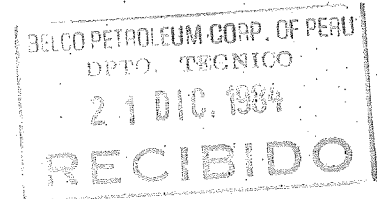
TELEF. - NEGRITOS  
863-804-805

## WELL FILE

APARTADO N° 1  
TALARA-PERU

December 13, 1984.-  
E- 162, 1984.-

To : Drilling Superintendent  
From : Engineering  
Ref : Drilling Prognosis for the well  
Z2A-21-599-D-L06 (L06-7)  
Lobitos Offshore



Attached you will find the Drilling Prognosis for the well L06-7 to be drilled by Rig III to 6150 TD.

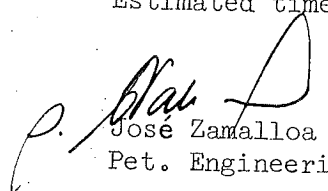
This well is an offset towards south-east of well L06-22, which is one of the best producers from L06 platform.

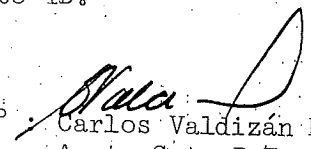
According to correlation wells from this area, there could be gas cut problems as in L06-22 well, where it was necessary to increase the mud weight to 11.5 ppg.

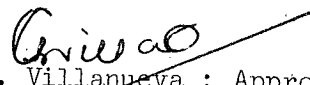
The proposed drilling program can be outlined as follows :

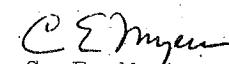
- Spud well with 17" bit and drill to 680' to set 13 3/8" casing at 650'.
- Drill 12 1/4" hole to 1530' to set 9 5/8" casing at 1500'.
- Drill 7 7/8" hole to TD. Run electric log (IES-GR, CCL-GR). Depending upon log evaluation, run 5 1/2" casing and complete well according to program to be submitted accordingly.

Estimated time to drill this well is 17 days from spud to TD.

  
Jose Zamalloa V.  
Pet. Engineering

  
V°B° Carlos Valdizan M  
Asst. Spt. P.E.

  
G. Villanueva : Approved  
Drlg. Spt.

  
Approved : C. E. Myers  
Eng. Supt.

VP/rzz

cc: O.M.

Lima Tech.

PetroPeru-Lima

Drlg. Spt (Neg)

Geology

S.M.D.Co.

Well file



# DRILLING PROGNOSIS

<b>WELL</b>	Z2A-21-599-D-L06 OFFICIAL NUMBER	L06-7 BELCO NUMBER	Lobitos Offshore AREA	Development TYPE OF WELL	AFE No.
<b>OBJETIVE</b>	PRIMARY Rio Bravo sds SECONDARY				
<b>RIG :</b>	National 55-A DRAWWORKS	Gardner Denver PY-7 PUMP No. 1		Gardner Denver PY-7 PUMP No. 2	
DIRECTION OF DEVIATED WELL S 09° W		ESTIMATED DEVIATION (MAX ANGLE) 45°		ELEVATIONS	K.B. 50'
CONDUCTOR SIZE AND ANGLE 15°		RECOMMENDED K. O. P. 800'			<input checked="" type="checkbox"/> WATER DEPTH 335
ESTIMATED TOTAL DEPTH 6150'		ESTIMATED TO REACH T.D. 17 days			<input type="checkbox"/> GROUND LEVEL
SURFACE HOLE PROGRAM			BIT SIZE 17"	CASING POINT 680	
<b>CASING</b> 13 3/8", K-55, 61.0 lb/ft ST&C at 650' <b>FLOATING EQUIPMENT</b> - Guide shoe - Insert float valve <b>CENTRALIZERS</b> One on each of the bottom four joints		<b>CEMENT</b> SLURRY 1 650 sx neat ce- ment with 2% CaCl <sub>2</sub> SLURRY 2 SLURRY-1 SLURRY-2 DENSITY (lb/gal) 15.6 YIELD (ft <sup>3</sup> /sx) 1.18 WAT. REQ. (gal/sx) 5.2 T.T. (hr. min) 2.0		<b>REMARKS</b>	
INTERMEDIATE HOLE PROGRAM			BIT SIZE 12 1/4"	CASING POINT 1530'	
<b>CASING</b> 9 5/8", J-55, 40 lb/ft, LT&C at 1500' <b>FLOATING EQUIPMENT</b> Guide shoe Insert float valve <b>CENTRALIZERS</b> One on each of the bottom six joints (6)		<b>CEMENT</b> SLURRY 1500 sx, 4% Gel SLURRY 2 300 sx neat cement SLURRY-1 SLURRY-2 DENSITY (lb/gal) 14.1 15.6 YIELD (ft <sup>3</sup> /sx) 1.55 1.18 WAT. REQ. (gal/sx) 7.8 5.2 T.T. (hr. min) 2:34 3:00		<b>REMARKS</b>	
PRODUCTION HOLE PROGRAM			BIT SIZE 7 7/8"	CASING POINT 6150'	
<b>CASING</b> 5 1/2", N-80 & J-55, 17 lb/ft LT&C <b>FLOATING EQUIPMENT</b> Guide shoe Diff fill float collar <b>CENTRALIZERS</b> As required accross the pay zone.		<b>CEMENT</b> SLURRY 1 4% Gel + additive SLURRY 2 Net cement + ad- ditive (across pay zone) SLURRY-1 SLURRY-2 DENSITY (lb/gal) YIELD (ft <sup>3</sup> /sx) WAT. REQ. (gal/sx) T.T. (hr. min)		<b>REMARKS</b> - Final casing and cement program will be prepared once electric logs are available.	
<b>WELLHEAD</b>	SIZE 13 3/8" x 9 5/8" x 5 1/2 x 2 7/8" WORKING PRESSURE ASSEMBLY 2000 x 3000 x 5000 psi				

## 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 <sup>2</sup> )	(cc)	(o/o)	(o/o)
0-680	9.0	45-50	No control				
680-1530	9.0-9.5	38-40	6-7	9-11	N/C	6-8	5-6
1530-3500	9.5-10.0	40-44	8-10	12-14	below 6	9-10	6-8
3500-6150	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

- REMARKS
- If the gas cut mud, circulate the well (+30') and increase the mud weight only if is strictly necessary, maximum mud weight was 11.5 ppg in the well L06-22.
  - The mud properties will be changed as well conditions required.

## HYDRAULIC PROGRAM

DEPTH	BIT SIZE	NOZZLESS CONVINATION	PUMP PRESS	PUMP LINER	PUMP RATE	ANN PRESS VEL	LOSS BIT
(ft)	(in)	(32 nd)	(psi)	(in)	(gpm)	(FPM)	(psi)
0-680	17"	14-14-14	800	6	600*	40	720
680-1530	12 1/4"	12-12-12	1100	6	400*	80	900
1530-3500	7 7/8"	10-10-10	1500	5 1/2	260	140	1000
3500-6150	7 7/8"	10-10-10	1500	5 1/2	280	140	1100

\* Use both rigs pumps in parallel.

REMARKS

## 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	680	295	8	10-15	120
2-3	12 1/4	1-1-1	1530	850	30	20-25	100-120
4-7	7 7/8	1-1-4	3500	1970	45	35-40	100
7-13	7 7/8	1-3-6	6150	2650	140	40	100
		4-3-7					

REMARKS

Dec. 13, 84

DATE

Victor Peralta

PETROLEUM ENGINEERING

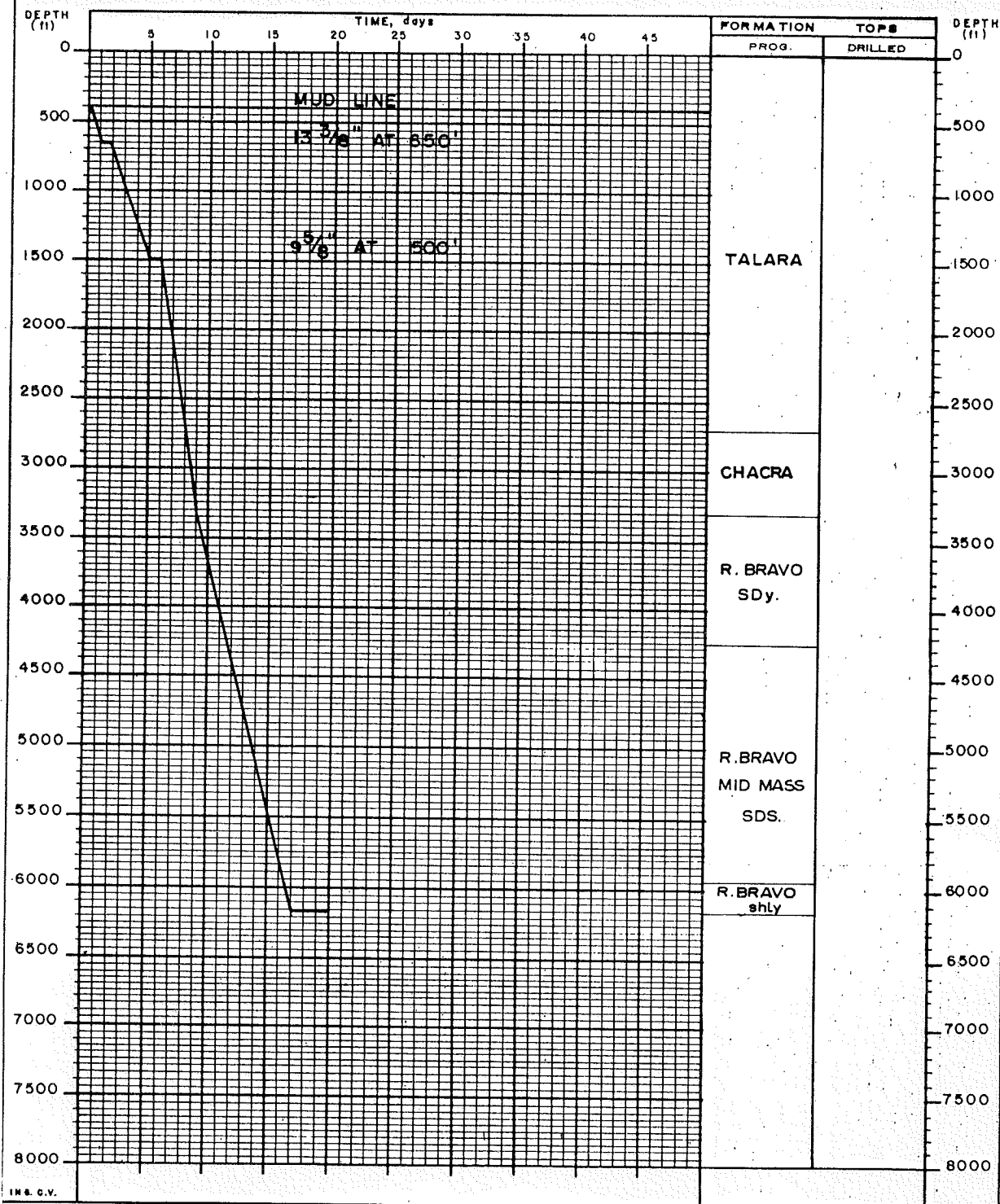
CHIEF ENGINEER

DRILLING SUPT



# DRILLING TIME PROGNOSIS

WELL	Z2A-21-559-D-LO6 OFFICIAL NUMBER	LO6-7 BELCO NUMBER	LOBITOS OFFSH. AREA	DEVELOPMENT TYPE OF WELL	AFE N°
OBJETIVE	PRIMARY RIO BRAVO SDS. SECONDARY				
RIG III	NATIONAL 55-A DRAWWORKS	GARDNER DENVER PY-7 PUMP N°1	GARDNER DENVER PY-7 PUMP N°2		



DATE: DEC. 13, 1984.

PREPARED BY: V. Peralta, G