PETRO - TECH PERUANA S.A.

INTEROFFICE MEMORANDO GEOSC - 235 - 02

To: 1/2 Pedro Alarcon

From: Hugo Cornejo, Victor Peralta

Proposed well LO16- (Rio Bravo, location B) (206-25)

Date: August 15, 2002

To continue with the development of the Rio Bravo formation from LO16 platform, it is recommended to drill the extended reach well LO16- (RB, loc B) in a faulted block of approximately 425 acres. The proposed well will be located 500 meters towards West of the well LO16-26 where it has been proved the presence of Rio Bravo formation with similar sand characteristics to that encountered in wells drilled from LO6 platform.

Total OOIP for this faulted block has been estimated in 14,9 MMSTB, assuming a 9% of recovery factor, estimated recoverable reserves would be 1.4 MMBO. The success of the proposed well will justify additional extended reach locations towards West and Southwest of LO16 Platform.

The objective Rio Bravo sandy is expected at 6700' MD (-3750' VSS). The estimated final total depth is 8400'; with a maximum vertical angle of 62 degrees and N 58.5° W as programmed direction (Figs. 1 & 2).

It is expected to find 250 feet of vertical net sand, with reservoir quality similar to that encountered in wells drilled towards South of Platform LO6 and proved by well LO16-26 (Fig. 3).

The production performance as of July of 2002 of the Rio Bravo around of proposed well ranges from 143 MBO (LO16-10) to 353 MBO (LO6-22) and depend of the total section and quality of sands completed.

Logging program includes DLL-MSFL-GR, FDC-CNL-GR. However due to well geometry, it is recommended to register the GR using MWD tool after setting intermediate casing.

According to present evaluation, it is expected 300 MBO of reserves and 450 BOPD of IPR.

ECONOMIC SUMMARY

Investment MU\$	1,422
Reserves, MBO	300
Present Worth, at 15% MU\$	2,140
AROR, %	>100
	0.77
P/I ratio, discounted \$/\$	1.50
Present Worth, at 15% MU\$ AROR, % Pay out, years P/I ratio, discounted \$/\$	>100 0.77

Cc.:

W. Kallop M. Chávez

L. Chan

O. Nieto

B. Bruce G. Ruesta

C. Valdizan

C. Montes

File

GEOSCIENCES Central File

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MCh.....D:Drilling recommendation/ LO16- (RB, loc B).doc

PERUANA S.A.					20-		LO16- (RB, loc B)	
	GEOL		GIC P	ROGN	-,			
AREA LOBITOS	OFFICIAL WELL NUMBER Z - 2B - 24 - 090 - D - LO16	ľ	PETRO-TECH N° TYPE OF WELL LO16 - DEVELO				IENT PEPESA - 48	
PRIMARY OBJECTIVE		-	SECONDARY OBJECT	rive .				
RIO BRAVO SANDY	/+\							
	SURFACE COORDINATES (WGS-84) (*) TARGET COORDINATES (WGS-84) 9'505,997.00 mN; 459,449.80 mE 9'506,790 mN; 458,150 mE							
E KB:	DIRECTION OF	7 0	DRILLED DEPTH			Т	ESTIMATED FINAL	
	DEVIATE WELL N 58.5° W	<u> </u>			6700FT	0	8400 FT	
	ANGLE CONDUCTOR FROM VERTICAL Vert.	R V	VERTICAL DEPTH		3800FT	D.	HORIZONTAL DRIFT 6450 FT	
	RECOMENDED DEPTH	{ ⊢	HORIZONTAL DRIFT			E	MAX. ANGLE	
T. FT	OF K.O.P. 500 FT.	ĬŢĻ	THE COLLECTION		5000FT	P.	62°	
	BUILD UP ANGLE AT 5.5 ° / 100 F.T.		IMITS (DIAMETER)	TOP:	200 FT.		BASE: 200 FT.	
FORMATION / MEMB	<u></u>	D	ORILLED TOP	VERT. TOP (VD/FT)	SUBSEATOP (SS/FT)		OBSERVATIONS	
s		\top		SEA BOT				
TALARA		+	Al	TOM				
CHACRA	Land Control of the C		3700	2450	-2400			
RIO BRAV	'O		6100	3550	-3500			
G Kilo Bioto		\top						
RIO BRAV	O SANDY	_	6700	3800	-3750		PAY ZONE	
TOTAL DE	TOTAL DEPTH		8400	4650	-4600			
н								
c		+				-		
s		-						
E								
Q U								
E		1						
C		\top						
C BIT SAMPLES	EVERY 30 FT.TROUGHOUT WELL F	FRO	M SEA BOTTOM	TO 6000'.	-		REMARKS	
O TO BE TAKEN N RECOMMENDED	EVERY 10' FROM 6000' TO TD. PALEONTOLOGY EVERY 120' FROM	A SUI	RFACE TO 3000'				(*) Coordinates referred to the	
T FOR	PALEONTOLOGY EVERY 60' FROM 3000' TO TOTAL DEPTH center of the platform.							
R. PALEO-PALYNOLOGY L RECOMMENDED	PALYNOLOGY AT A REQUEST OF L	AIVIL	OFFICE		**************************************		(**) Due to well geometry it is	
O OPEN HOLE	DLL-MSFL-GR, FDC-CNL-	-GR	(**)				recommended to register the	
G RECOMMENDED	GR-CCL						GR using MWD tool after setting intermediate casing.	
G AFTER CASING I NEARBY WELLS	GR-GGL						•	
N FOR	Keep the vertical angle according							
G CORRELATION E SIDEWALL	LO6-8, LO6-7, LO6-22, LO	-טוי	·10, LO16-26				geologic prognosis.	
V CORES	NOT CONSIDERED							
A CONVENTIONAL L CORES	NOT CONSIDERED							
U GAS A LOGGER	MUD LOGGING UNIT							
T. FORMATION TESTING	NOT CONSIDERED A							
RECOMMENDED BY	DATE: REVIEWED BY	1		DATE:	APPROVED BY		DATE:	
HILCO COBNETO	AUGUST 2002 WARIO CHA	CL4	ann J	HST 2002	PEDPO AT	\mathcal{L}_{Δ}	RCON AUGUST 2002	
HUGO CORNEJO AUGUST 2002 MARIO CHAVEZ AUGUST 2002 PEDRO ALARCON AUGUST 2002								

PETRO-TECH PERUANA S.A. RESERVOIR MANAGEMENT

ECONOMIC EVALUATION

PROJECT: WELL LO16 - (RB. Loc-B)

(IPR = 450 BOPD)

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YEAR	OIL PRODUCT	ION (BOPD) PETRO-TECH SHARE (1)	TOTAL INVESTMENT (US \$)	OPERATING COST	TOTAL REVENUE	AMORTIZ. INTANGIBLE	DEPREC. TANGIBLE	TAXABLE INCOME	TAXES	CASH CURRENT	FLOW DISCOUNTED
1 2 3 4 5 6 7 8 9	269 182 132 103 64 30 18 13 7	226 153 111 87 54 25 16 11 6	1422 0 0 0 0 0 0 0 0	25 25 25 25 25 25 25 25 25 25 25	2064 1395 1012 789 491 230 142 99 55	1422 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	617 1370 987 764 466 205 117 74 30 4	185 411 296 229 140 61 35 22 9	432 959 691 535 326 143 82 52 21 3	376 1101 1555 1861 2023 2085 2116 2133 2139 2140
TOTAL			1422	250	6306	1422	0	4204	1261	3244	

BASIC PARAMETERS:

OIL RESERVES, MSTB	300 1422
TOTAL INVESTMENT, MUS\$ OIL PRICE, \$/STB	25
PETRO-TECH RATE OF DISCOUNT,%	15
TAX RATE,%	30

ECONOMIC EVALUATION:

PRESENT WORTH AT 15%,MUS\$	2,140
AROR,%	> 100
PAY OUT,YEARS	0.77
P/I RATIO,DISCOUNTED,\$/\$	1.50

(1) 84 % OF TOTAL OIL PRODUCTION

VPG 16-Aug-02





