STRATIGRAPHIC LOG

PETRO-TECH PERUANA S.A.
BLOCK 31-B, PERU

SERVICIOS PETROGEOLOGICOS

WELL: PETCAL-1, Z-28-PLOT-LOT-126
PETRO-TECH ___LOG-2R

PROGNOSIS TOPS
BY: ___

GENERAL DATA

AREA: LOBITOS OFFSHORE
WELL: PETCAL-1, Z-28-PLOT-LOT-126
DATUM: KB 3.0 m ABOVE MSL
REMARKS: MAX ANGLE: 6.0°, 1.5°, 1.0°
DIRECTION OF DEVIATED WELL: S0.4°E

PALEONTOLOGIST: R. LEVAGGI A.
PALYNOLOGIST: F. GADEA T.
WELL SITE GEOLOGIST: ___

PALEOREDA	5,100'-4,750'
MALCOCIDON	5,400'-5,150'
SAN CRISTOBAL	6,000'-5,450'
BASAL SALINA	7,200'-6,080'
BALCONES	8,300'-6,600'
TD	8,500'-6,750'

WORKING FILE GEOSCIENCES

EQ: PETREX 114

SYMBOLS

SWEET, WEATHERED ZONE
PALYNOLOGICALCOLOR MAP
RUN WELL LOGS
SHALE
DOLOMITE
LIMESTONE
BITUMEN
SANDSTONE
MICROPERIC PYRITE
SAND
BLOCKERODES
CONGLOMERATE
CALCITE
CARBONATE
NO SAMPLES
SHELL FRAGMENTS
CHERT
GYPSUM
LIGNITE
CARBON
CAVING

FLUORESCENCE

TRACES
VERY DULL
DULL
BRIGHT
VERY BRIGHT
DULL
BRIGHT
VERY BRIGHT

PALEO ABUNDANCE

30 VERY ABUND.
30 ABUNDANT
30 COMMON
10 RARE
10 RARE
VERY RARE

PETRO-TECH PERUANA S.A.
GEOLOGIST WELL FILE

FINAL STRATIGRAPHY

PALEONTOLOGY BY ___ PALYNOLOGY BY ___

DATE APRIL 1996

ACCESSORIES

CALCITE, PYRITE, SHELL FRAGS, DOLOMITE, CARBON, GLAUCONITE, SLICKENSIDES

LITHOLOGICAL DESCRIPTION	DEPTH	LITHOLOGY	CALCITE	PYRITE	SHELL FRAGS	DOLOMITE	CARBON	GLAUCONITE	SLICKENSIDES	FORAMS	PALYNOLOGY
Sh: bn gysh, frm, sl mic mic, sl mic carb, sb bky & gy, frm, v mic mic, sb pty (40%)	5510		X							Trochammina globigeriniformis	
Sh: bn gysh, frm, sl mic mic, sl mic carb, sb bky & gy, frm, v mic mic, sb pty (40%)	50		X							Trochammina globigeriniformis	
Sh: 50% of bn gysh, frm, sh bky & gy, frm, v mic mic, sb pty.			/							Cyclammina simiensis / Trochammina globigeriniformis / Globigerina sp	
Sh: 50% of bn gysh, frm, sh bky & gy, frm, v mic mic, sb pty	5600		/							Allomorphina sp / Cyclammina simiensis / Robulus youngquisti / Trochammina globigeriniformis / Bulimina debilis	Globigerina sp / Valvulineria palegredensis
Sh: bn frm to hd, sl mic carb, sl dol in pt & gy, v mic mic, sb pty			/							Nodosaria affinis / Robulus youngquisti / Allomorphina sp (py)	Globigerina sp / Trochammina globigeriniformis / Cyclammina simiensis
Sh: bn frm to hd, sl mic carb, sl dol in pt & gy, v mic mic, sb pty	50		/							Allomorphina sp (py) / Robulus youngquisti / Pseudoglandulina manifesta / Bulimina debilis (py) / Trochammina globigeriniformis /	Haplophragmoides sp / Cyclammina simiensis /
Sh: bn frm to hd, sl mic carb, sl dol in pt & gy, v mic mic, sb pty			/							Chilostomella polsoni (py) / Haplophragmoides sp / Allomorphina sp / Trochammina globigeriniformis / Bulimina schencki	Cyclammina simiensis
Sh: bn, sl bn gysh, frm, sl mic carb, sb bky & gy, frm, v mic mic, sb pty	5700		/							Cyclammina simiensis / Allomorphina (py) / Bulimina debilis (py) / Haplophragmoides sp / Trochammina globigeriniformis /	
Sh: bn, sl bn gysh, frm, sl mic carb, sb bky & gy, frm, v mic mic, sb pty	50		/	/						Robulus youngquisti / Chilostomella polsoni (py) / Bulimina debilis (py) / Globigerina sp	Trochammina globigeriniformis / Cyclammina Simiensis
Sh: bn, sl bn gysh, frm, sl mic carb, sb bky & gy, frm, v mic mic, sb pty.			/							Cyclammina simiensis / Trochammina globigeriniformis / Bulimina debilis (py) / Bulima schendki (py) / Chilostomella polsoni (py)	
Sh: bn msty, frm, sl mic carb, sl bky & gy, frm, v mic mic, sb pty	5800		/							Bulimina debilis / Robulus youngquisti / Globigerina sp	Trochammina globigeriniformis
Sh: bn msty, frm, sl mic carb, sb bky & gy, frm, v mic mic, sb pty.			/							Cyclammina simiensis / Allomorphina sp (py) / Chilostomella polsoni	
Sh: bn msty, frm, sl mic carb, sb bky & gy, frm, v mic mic, sb pty.	50		/							Trochammina globigeriniformis / Globigerina sp / Chilostomella polsoni	
Sh: bn msty, frm, sl mic carb, sb bky & gy, frm, v mic mic, sb pty.			/							Chilostomella polsoni (py) / Robulus youngquisti	
Sh: bn gysh, frm, sl mic carb, sb bky & gy, frm, v mic mic, sb pty	5900		/	/						Virgulina dorreenii (py) / Trochammina globigeriniformis / Pseudoglandulina manifesta / Globigerina sp / Robulus youngquisti	Chilostomella polsoni (py)
Sh: bn gysh, frm, sl mic carb, sb bky & gy, frm, v mic mic, sb pty	50		/							Chilostomella polsoni (py) / Bulimina debilis (py) / Trochammina globigeriniformis / Globigerina sp / Spiroplectammina rossae	
Sh: bn gysh, frm, sl mic carb, sb bky & gy, frm, v mic mic, sb pty			X							Valvulineria palegredensis / Trochammina globigeriniformis / Globigerina sp / Robulus youngquisti	
Sh: bn gysh, frm, sb bky & gy soft to frm, v mic mic, sb pty	6000									Trochammina globigeriniformis / Robulus youngquisti / Chilostomella polsoni (py)	
Sh: bn gysh, frm, sb bky & gy soft to frm, v mic mic, sb pty	50									Trochammina globigeriniformis / Robulus youngquisti	
Sh: bn gysh, frm, sb bky & gy soft to frm, v mic mic, sb pty										Trochammina globigeriniformis / Chilostomella polsoni (py)	
Sh: bn gysh, frm, sl mic carb, sb bky	6100									Microgastropod sp / Trochammina globigeriniformis / Chilostomella polsoni (py) / Globigerina sp	
Sh: bn gysh, frm, sl mic carb, sb bky	50									Chilostomella polsoni / Robulus youngquisti / Trochammina globigeriniformis	
Sh: bn gysh, frm, sl mic carb, sb bky										Trochammina globigeriniformis	
Sh: bn gysh, frm to hd, sl mic mic, sl mic carb, sb bky & gy, frm, v mic mic, sb pty	6200									Trochammina globigeriniformis / Globigerina sp	6200 6220 Very Poor Ho Diagn.
Sh: bn gysh, frm to hd, sl mic, sl mic carb, sb bky & gy, frm, v mic mic, sb pty										Pseudoglandulina manifesta / Chilostomella polsoni (py) / Trochammina globigeriniformis X	SAN CRISTOBAL FM.
Sh: bn gysh, frm to hd, sl mic, sl mic carb, sb bky & gy, frm v v mic mic, sb pty	50									Trochammina globigeriniformis / Robulus youngquisti / Cyclammina simiensis / Lagena sp / Bulimina debilis (py) / Chilostomella polsoni (py) /	
Sh: bn gysh, frm to hd, sl mic, sl mic carb, sb bky & gy, frm, v mic mic, sb pty										Globigerina sp	
Sh: bn gysh, frm to hd, sl mic, sl mic carb, sb bky & gy, frm, v mic mic, sb pty (30%)	6300									Robulus youngquisti / Cyclammina simiensis / Bulimina debilis (py) / Chilostomella polsoni (py) /	Globigerina sp / Trochammina globigeriniformis
Sh: bn gysh, frm, sl mic carb, sb bky & gy, frm, v mic mic, sb pty (30%)										Robulus youngquisti / Trochammina globigeriniformis X / Cyclammina simiensis / Marsonella oxycona / Allomorphina sp (py) X	Bulimina debilis (py) X / Bolivina eocenica black / Globigerina sp / Allomorphina sp (py) / Quinqueloculina sp /
Sh: bn gysh, frm, sl mic carb, sb bky & gy, frm, v mic mic, sb pty (30%)	50		X							Valvulineria palegredensis / Robulus navarronsis / Virgulina dorreeni (py) X / Chilostomella polsoni (py) X / Pseudoglandulina manifesta / Schenckiella stainfothi /	Balcones Fm Rwked. / Trochammina ondergardol / Gyroidina nitida /
Sh: bn gysh, frm, sl mic carb, sb bky & gy, frm, v mic mic, sb pty (30%)			X							Bolivina debilis (py) X / Globigerina sp / Trochammina globigeriniformis /	Balcones Fm Rwked. / Virgulina dorreenii (py) / Balcones Fm Rwked. / Peloina complanata / Haplophragmoides stahulsipai /
Sh: bn gysh, frm, sl mic carb, sb bky & gy, frm, v mic mic, sb pty (30%)	6400		/	/						Virgulina dorreenii / Cyclammina simiensis / Bolivina debilis (py) / Chilostomella polsoni (py) X / Trochammina globigeriniformis /	Globigerina sp / Allomorphina sp (py) / Virgulina dorreenii / Pseudoglandulina manifesta /
Sh: bn gysh, frm to hd, sb bky & gy, frm, v mic mic, sb pty (50%)	50		/	/						Valvulineria palegredensis / Robulus youngquisti / Chilostomella polsoni (py) X / Bulimina debilis (py) /	Balcones Fm Rwked. / Peloina complanata / Haplophragmoides stahulsipai /
Sh: bn gysh, frm to hd, sb bky & gy, frm, v mic mic, sb pty (50%)			/	/						Gumbelina trinitatensis / Virgulina dorreenii / Spiroplectammina rossae / Robulus youngquisti / Bulimina debilis (py) /	Virgulina dorreenii (py) / Spiroplectammina rossae / Chilostomella polsoni / Balcones Fm Rwked. /
Sh: bn gysh, frm to hd, sb bky & gy, frm, v mic mic, sb pty (50%)	6500		/	/						Pseudoglandulina manifesta / Cyclammina simiensis / Trochammina globigeriniformis X / Balsiphon bk / Robulus youngquisti / Bulimina debilis (py) /	Peloina complanata / Trochammina ondergardol / Haplophragmoides stahulsipai X / Gumbelina trinitatensis / Globigerina sp / Quinqueloculina sp /
Sh: bn gysh, frm to hd, sb bky & gy, frm, v mic mic, sb pty (50%)			/							Cyclammina simiensis / Trochammina globigeriniformis / Verneulina polistropha /	Balcones Fm Rwked. / Trochammina ondergardol X / Haplophragmoides stahulsipai X /
Sh: bn gysh, frm to hd, sb bky & gy, frm, v mic mic, sb pty msty.	50		/							Globigerina sp / Pseudoglandulina manifesta / Virgulina dorreenii (py) / Robulus youngquisti / Quinqueloculina sp /	Balsiphon taurinensis / Cyclammina simiensis / Bulimina debilis (py) X / Globigerina sp / Balsiphon taurinensis /
Sh: bn gysh, frm to hd, sb bky & gy, frm, v mic mic, sb pty msty.			/							Chilostomella polsoni (py) X / Gumbelina trinitatensis / Mulinia sp (py) / Trochammina globigeriniformis X / Ostracod rough / Allomorphina (py) /	Balcones Fm Rwked. / Peloina complanata / Trochammina ondergardol X / Haplophragmoides stahulsipai X / Lagena malpasoensis /
Sh: bn gysh, frm to hd, sl mic carb, sb bky & gy, frm, v mic mic, sb pty (50%)	6600		/							Pseudoglandulina manifesta / Virgulina dorreenii (py) / Robulus youngquisti / Globigerina sp /	Chilostomella polsoni (py) / Peloina complanata / Haplophragmoides stahulsipai / Balcones Fm Rwked. /
Sh: bn gysh, frm to hd, sl mic carb, sb bky & gy, frm, v mic mic, sb pty (50%)			/							Gumbelina trinitatensis / Cyclammina simiensis / Trochammina globigeriniformis X / Bulimina schencki (py) / Bulimina debilis (py) /	Balsiphon taurinensis / Trochammina ondergardol X / Haplophragmoides stahulsipai X / Globigerina sp / Balcones Fm Rwked. /
Sh: bn, hd, sl mic carb, sb bky & gy, frm, v mic mic, sb pty	50		/							Trochammina globigeriniformis / Bulimina debilis (py) /	Robulus discrepans / Peloina complanata / Trochammina ondergardol X / Haplophragmoides stahulsipai X /
Sh: bn, hd, sl mic carb, sb bky & gy, frm, v mic mic, sb pty	6700		/	X						Trochammina globigeriniformis X / Bulimina debilis (py) / Chilostomella polsoni (py) /	Balcones Fm Rwked. / Marsonella oxycona / Trochammina ondergardol X / Peloina complanata / Haplophragmoides stahulsipai /
Sh: bn, hd, sl mic carb, sb bky & gy, frm, v mic mic, sb pty	50		/	/						Globigerina sp / Bulimina schencki (py) / Trochammina globigeriniformis X / Bulimina debilis (py) / Chilostomella polsoni (py) /	Balcones Fm Rwked. / Marsonella oxycona / Cibides sp / Balsiphon carapitanus / Haplophragmoides stahulsipai /
Sh: dk gy, hd, sl mic mic, sb bky, bn, frm, sl mic carb, sb bky & gy, frm, v mic mic, sb pty.			/	/						Lagena sp / Spiroplectamina rossae / Robulus alabamensis /	Nodosaria pozoensis / Trochammina ondergardol /
Sh: dk gy, hd, sl mic mic, sb bky, bn, frm, sl mic carb, sb bky & gy, frm, v mic mic, sb pty.	6800		/	/						Bulimina fissura / Cyclammina simiensis / Allomorphina sp (py) / Chilostomella polsoni (py) / Allomorphina sp (py) /	Pseudoglandulina marginulinif / Spiroplecyammina rossae / Balcones Fm Rwked. / Nodosaria distana / Nodosaria pozoensis /
Sd: hywh, f, fm, sa, qtz grains smky in pt	50		/							Robulus alabamensis / Bulimina schencki (py) / Trochammina globigeriniformis / Ostracod rough / Globigerina sp / Lagena sp /	Marginulina bullata / Peloina complanata / Balsiphon carapitanus / Trochammina ondergardol / Haplophragmoides stahulsipai / Balsiphon taurinensis /
Sd: hywh, f, f.m, sa qtz, grains smky in pt			/							Lagena sp / Cyclammina simiensis / Marginulina adunca / Bulimina schencki (py) / Marginulina ct texanis /	Balcones Fm Rwked. / Haplopragmoides stahulsipai / Balsiphon taurinensis / Nodosaria pozoensis /
Sd: dk gy, hd, sl mic mic, sb bky, bn, frm, sb bky & gy, soft to frm, v mic mic, sb pty.			/							Valvulineria palegredensis / Bulimina debilis (py) / Chilostomella polsoni (py) / Trochammina globigeriniformis / BASAL SALINA FM	Balcones Fm Rwked. / Peloina complanata / Gyroidina nitida / Haplopragmoides stahulsipai /
Sd: hywh msty, mky wh, f-m msty, m, sa qtz.	6900		X	X							
	6920									BARREN	

PETRO-TECH PERUANA S.A.
GEOLOGIST WELL FILE