1-6

BELCO PETROLEUM CORPORATION OF PERU
GEOLOGICAL LOG
LITHOLOGICAL AND PALEONTOLOGICAL LOG
WELL Z2A-21-579-D-L06-(L06-22)

PRN✓

WORKING FILE
GEOSCIENCES

WORKING FILE
GEOSCIENCES

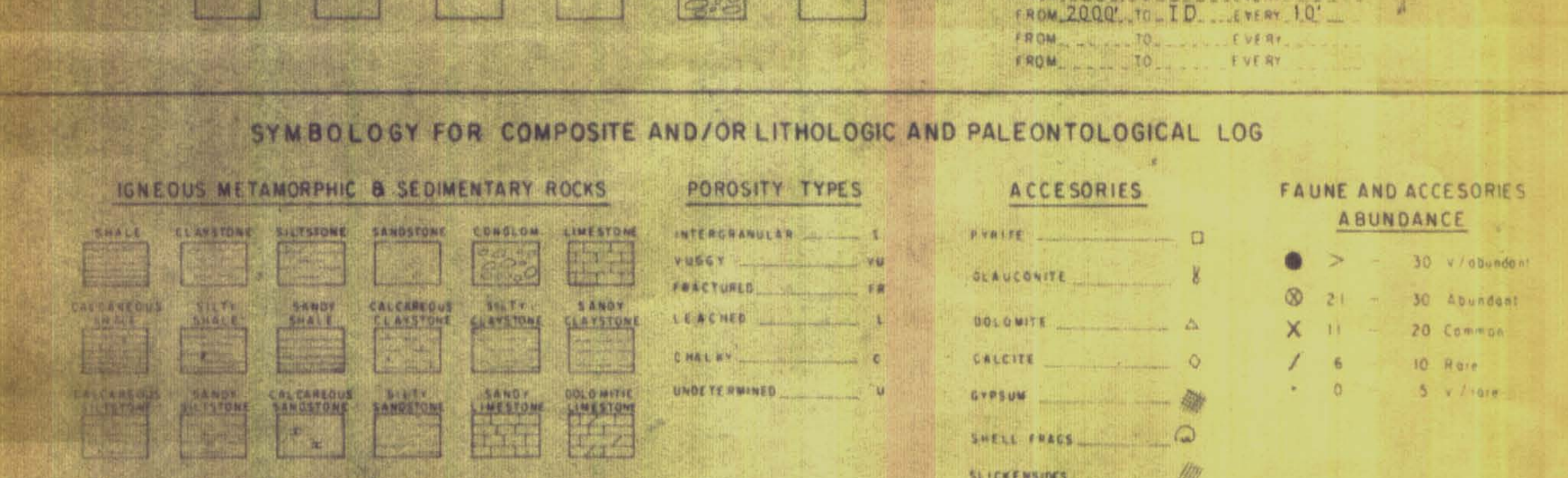
PETRO-TECH PERUANA S.A.
GEOLOGIST WELL FILE

SCANNED
By Peluso
Date 1-8-03

GEOLOGISTS: GEOPET JULIO ORTIZ N / ALFREDO VELASQUEZ V
EDUARDO BERENSON / R.MORANTE
PALEONTOLOGIST:
PALINOLOGYST:

AREA: LOBITOS OFFSHORE
BLOCK: Z2A PARCEL: 21
PLATFORM: "L06"
RIG CONTRACTOR: STORM DRILL III
TYPE OF WELL: DEVELOPMENT
SURFACE COORDINATES: N: 1'598,631.27 m E: 124,653.17 m
BOTTOM COORDINATES: N: 1'597,959.49 m E: 124,190.79 m
K.B.E: 50' G.L.E: WATER DEPTH: 335'
AVERAGE DIRECTION: S 34°32'21"W
AVERAGE OF VERTICAL ANGLE ON TARGET: 37°45'17"
TOTAL MEASURED DEPTH: 5991'
TOTAL VERTICAL DEPTH: 5121'
DRILLING COMMENCED: ON SEPTEMBER 27 1984
DRILLING FINISHED: ON OCTOBER 14 1984
SURFACE CASING: 13⅜ CSG. SHOE AT 497'
INTER CASING: 9⅝ CSG. SHOE AT 2321'
PRODUCTION CASING: 5½ CSG. SHOE AT
ELECTRICAL SURVEYS: DLL-MSFL-GR, FDC-CNL-GR
REMARKS:

DITCH SAMPLES
FROM surf TO 2000' EVERY 30'
FROM 2000' TO TD EVERY 10'
FROM TO EVERY
FROM TO EVERY


SHALE
SILTSTONE
SANDSTONE
SAND
CONGLOMERATE
CLAYSTONE
SYMBOLOGY FOR COMPOSITE AND/OR LITHOLOGIC AND PALEONTOLOGICAL LOG
IGNEOUS METAMORPHIC & SEDIMENTARY ROCKS
SHALE
CLAYSTONE
SILTSTONE
SANDSTONE
CONGLOM
LIMESTONE
CALCAREOUS SHALE
SILTY SHALE
SANDY SHALE
CALCAREOUS CLAYSTONE
SILTY CLAYSTONE
SANDY CLAYSTONE
CALCAREOUS SILTSTONE
SANDY SILTSTONE
CALCAREOUS SANDSTONE
SILTY SANDSTONE
SANDY LIMESTONE
DOLOMITIC LIMESTONE
CALCILUTITE
CALCARENITE
DOLOMITE
QUARTZITE
SCHIST
CHERT
SLATE
GNEISS
INTRUSIVE
EXTRUSIVE
TUFF
AGGLOMERATE/BRECCIA
NO SAMPLE
POROSITY TYPES
INTERGRANULAR I
VUGGY VU
FRACTURED FR
LEACHED L
CHALKY C
UNDETERMINED U
ACCESORIES
PYRITE
GLAUCONITE
DOLOMITE
CALCITE
GYPSUM
SHELL FRACS
SLICKENSIDES
COAL /LIGNITE
MICA
MICROFOSSILS
CAVING
FAUNE AND ACCESORIES ABUNDANCE
> 30 V/abundant
21 - 30 Abundant
11 - 20 Common
6 - 10 Rare
0 - 5 V/rare
CASING
LOST CIRC
D.S.T
CONV.CORE
8000' 8020'
7100' 7130'
REC 20' 66 %
S.W.C.
8025' RECOVERY (FILL THE CIRCLE FOR SHOWS)
8036' NO RECOVERY
HOLE DEVIATION
CEMENT PLUG
DRAFT JOB

DRILLING RATE MIN/FT · INTERPRETATIVE GRANULOMETRICAL CURVE	BIT · LOST CIRC · GAS CUT MUD · SURVEYS · TEST · CORES	POROSITY	DEPTH	LITHOLOGY	TENTATIVE FM TOPS	ACCESORIES	FLUORESCENCE · COLOR & CUT OF FLUOR	L06-22 LITHOLOGICAL DESCRIPTIONS 0'-500'	PALEONTOLOGICAL DETERMINATIONS	PALYNOLOGICAL DETERMINATION

DRILLING SPUDDED ON SEPTEMBER 27TH AT 9:00 HRS

NON SAMPLE RETURNS, DRILLING WITH SEA WATER.

* HELICO FM (505 TO 720 FEET).
SS: WH'SH, LTGY'SH, W/GN GRAINS F-M 30%, M 40%, M-C 20%, C 10%, SbANG, CALC CMT, SLTY TO SHY MTX IN PT, W/CARB MAT & OCC CALC INCL, P-VIS POR, P-FR SRT, SLHd - SLFRIAb.

SD: WH, MY, GN, QTZ GRAINS, W/SOME DK VOLC GRAINS, F-M 20%, M 60%, M-C 20%, SbANG FR SRT

SS: WHGY'SH, LTGY'SH, W/GN GRAINS, F-M 40%, M 40%, M-C 20%, C TRZ, SbANG, CALC CMT SLTY TO SHY MTX IN PT, P-VIS POR P-FR SRT, SLHd - SLFRIAb.

SLTST: LTGY'SH, VSLMICROMIC VSLMICROCARB, SLCALC, GRAD TO SS IN PT, W/GN GRAINS, CARB MAT & OCC MIC INCL SLHd

SH: BRN SH, GYBRN'SH, VSLMICROMIC, VSLMICROCARB, SLCALC, SL SLTY IN PT, SLROUGH SURF SL SFT, SbBLKY.

SLTST: LTGY'SH, SLMICROMIC, SLCALC, W/GN GRAINS & CARB MAT INCL, GRAD TO SS IN PT SLHd.

SH: GYBRN'SH, OCC BRN'SH, VSLMICROMIC, SLMICROCARB, SL CALC, SL SLTY, SL ROUGH SURF FRM, SbBLKY.

SLTST: LTGY'SH, VSLMICROMIC, SLMICROCARB, SLCALC, GRAD TO SS, W/GN GRAINS, CALC & OCC CARB MAT

SS: WHGY'SH, LTGY'SH, W/GN & OCC DK GRAINS, F 20%, F-M 30%, M 30%, M-C 20%, SbANG, CALC CMT, SHY MTX, P-VIS POR, P-FR SRT, Hd - SLHd.

SH: LTBRN'SH, GYBRN'SH, VSLMICROMIC, SLMICROCARB, VSL-NON CALC, SLTY IN PT, SMOOTH -SLROUGH SURF, SLFRM-SLSFT SbBLKY.

SLTST: GY'SH, LTGY'SH, VSLMICROMIC, SLMICROCARB, SLCALC, W/GN GRAINS & OCC DOL INCL SLFRM - FRM.

SH: BRN'SH, LTBRN'SH, GYBRN'SH SLMICROMIC, SLMICROCARB, VSLCALC SL SLTY - SLTY IN PT, SLROUGH SURF, SLFRM - SLSFT, SbBLKY.

SH: BRN'SH, GYBRN'SH, SLMICROMIC, SLMICROCARB, VSLCALC, SLSLTY, SLROUGH SURF, SLFRM - SL SFT, SbBLKY.

SH: BRN'SH, GYBRN'SH, SLMICROMIC, SLMICROCARB, SLCALC, SMOOTH - SLROUGH SURF, SL-MOD SFT, SbBLKY - SbPLTY IN PT.

SH: BRN'SH, GYBRN'SH, VSLMICROMIC, SLMICROCARB, VSLMICROPY, VSL-NON CALC, SMOOTH SURF, SFT, SbPLTY, OCC Sb BLKY.

SH: BRN'SH, GYBRN'SH, VSLMICROMIC, VSLMICROCARB, VSLMICROPY IN PT, VSL-NON CALC, SMOOTH SURF, SFT, SbPLTY - SbBLKY.

SLTST: GY'SH, LTGY'SH, VSLMICROMIC, SLMICROCARB, SLCALC, GRAD TO SS IN PT, W/GN GRAINS, CARB MAT & CALC INCL, SL FRM - SLFRIAb.

SH: BRN'SH, GYBRN'SH, VSLMICROMIC, SLMICROCARB, NON CALC, SL SLTY IN PT, SMOOTH-SLROUGH SURF, SL SFT, SbBLKY.

SH: BRN'SH, SLMICROMIC, SLMICROCARB, VSLCALC, SLSLTY IN PT, SLROUGH SURF SL-MOD SFT, SbBLKY.

SH: GY'SH, OCC BRN'SH, VSLMICROMIC, SLMICROCARB, NON CALC, SL SLTY, SLROUGH, MASS SLFRM, SbBLKY.

SH: GY'SH, OCC BRN'SH, VSLMICROMIC, SLMICROCARB, NON CALC, SMOOTH - SLROUGH SURF, SLSFT, Sb BLKY

SH: GY'SH, GYBRN'SH, SLMICROMIC, SLMICROCARB, NON CALC, SL SLTY IN PT, SLROUGH SURF, SLSFT, SbBLKY

SH: GY'SH, GYBRN'SH, SLMICROMIC, SLMICROCARB, NON CALC, SLSLTY - SLTY IN PT, SL MOD SFT, SbBLKY

SS: LTGY'SH, OCC WHGY'SH, W/GN GRAINS, F 70%, F-M 30%, SbANG, CALC CMT, SLTY TO SHY MTX IN PT, W/CARB MAT & CALC INCL P-VIS POR, FR SRT, SLHd - SLFRIAb

SLTST: LTGY'SH, GY'SH, SLMICROCARB, SLCALC, GRAD TO SS IN PT, W/OCC GN GRAINS & CARB MAT INCL, SLHd - SLFRIAb IN PT

SH: GY'SH, GYBRN'SH, BRN'SH VSLMICROMIC, SLMICROCARB, NON CALC, SLROUGH SURF, SL - MOD SFT, SbBLKY

SH: GY'SH, GYBRN'SH, VSLMICROMIC, SLMICROCARB, NON CALC, SMOOTH SURF, SLSFT, SbBLKY.

SH: GY'SH, GYBRN'SH, SLMICROMIC, SLMICROCARB, NON CALC, SL SLTY IN PT, SMOOTH - SL ROUGH SURF, SL-MOD SFT, SbBLKY - SbPLTY IN PT

SH: BRN'SH, GYBRN'SH, OCC GY'SH, VSLMICROMIC, VSLMICROCARB, VSL-NON CALC, SMOOTH SURF, SLSFT, SbBLKY

640'
SLTST: LTGY'SH, GY'SH, VSLMICROMIC, SLMICROCARB, SL CALC, W/OCC CARB MAT & CALC INCL, SLFRM
680'

SH: GY'SH, GYBRN'SH, BRN'SH VSLMICROMIC, SLMICROCARB VSL - NON CALC, SLTY, SL ROUGH SURF, SL-MOD SFT, SbBLKY.

SH: Gysh, micr mic, sl micr carb, w/ carb mat incl in pt, sl Lam.

SH: Gysh, micr mic, sl micr carb, firm, sl blky, brit

SLTST: Gysh, micr mic, calc w/carb mat incl, slhd.

SH: Gysh, micr mic, sl micr carb, firm, sl blky.

SLTST: Gysh, micr mic, w/carb mat incl, slhd, calc.

SH: Gysh, micr mic, sl micr carb, firm, sl blky.

SH: Gysh, micr mic, w/carb mat incl, firm, sl blky.
SD: wh, mky, hy, qz, subang, w/Dk grains, M-C.
yel dl vp cut
SLTST: Gysh, micr mic, micr carb, firm, calc.
SS: wh-gy, F, subang, qz, calc cmt, shy mtx, w/mic incl, Dk grains, sl hd, ppor.

yel dl vp cut.
SH: Gy, micr mic, micr carb, firm, sl Lam.
SS: Gysh, F, subang, w/dk grains, calc cmt, shy mtx hd, mic & carb mat incl in pt, vppor.
SD: wh, hy, qz, F, subang, w/ Dk grains.

3219

SH: Gy, micr mic, micr carb, firm, sl Lam.
SS: Gysh, F, subang, qz, w/dk grains, mic & carb mat incl calc cmt, shy mtx, vppor.
SLTST: Gysh, micr mic, w/carb mat incl, slhd.

SH: Gy, micr mic, sl micr carb, firm, sl Lam.
SS: wh-slgy, M, subang, w/dk & fw gn grains, mic incl, calc cmt, sl hd, fr por.
Yel bri, mod strmg cut yel-wh sl bri. fluor.
SD: wh, hy, qz, subang, w/DK grains M-C mostly.

SH: Gy, micr mic, micr carb, firm, sl Lam.
SS: wh-slgy, subang, calc cmt, mic incl, spor shell frag, incl, sl hd, fr por.
SD: wh, hy, mky, qz, subang, w/dk grains, M-C grains.
Yel sl bri mod strmg cut, pale yel sl bri floor on cut.

SS: WHITISH / WHGY FGR 30% MGR 40% CGR 30% Sub Ang / Sub Rd, mod calc. SRTED GRADING TO SLTST. FR-PR VIS POR, SL FRI / HD

SD: AS ABOVE

SD: WHITISH TO MLKY WH TO WHHY, FGR 30%, MGR 40%, CGR 30%, VCGR 10% SUBANG / SUBRD PRSRTED

SLTST: GY'ISH, MICROMIC, MICRO CARB, BLKY, SL CALC GRADING TO SS MOD HD.

WH yel to pale yel sl bri mod cut
SH: GY, MICROMIC, MICRO CARB, NON CALC, BLKY W/ OCC PYR, dol shell frag incl SFT / SLHD.

Mlky wh
a/a
SD: WHITISH, WHHY, MLKY WH QTZ GR W/ DK GR F GR 20%, M GR 40%, C GR 80%, SUBANG / SUBRD SRTED

Pale yel to wh yel bri - weak slow cut
SD AS ABOVE

Mlky wh
a/a
SS: WHITISH / WHGY QTZ GR W/ DK GR, SUBANG / SUBRD, GRADING TO SLTST, SL FRI / MOD HD, PR SRTED.
Pale yel weak slow cut
FR-PR VIS POR.

a/a
SLTST: GY, MICROMIC, MICRO CARB, BLKY, NON CALC W/ OCC COAL, PYR and OCC GRADING TO S.S. FRM

Lt yel pale yel weak slow cut
SH: GY, MICROMIC, MICRO CARB, BLKY, NON CALC, W/ OCC COAL, PYR, INCL SFT OCC GRADING TO SLTST

SS: AS ABOVE

a/a
SD: WHITISH, WHHY, WHGY SUBANG / SUBRD, F-M GR 60%, M-C GR 40% SRTED
Lt yel dull slow cut
SS: WHGY / GY'ISH, W/ WHHY, DK GR FGR 30%, MGR 40%, CGR 30%, SUBANG / SUBRD, calc CMT, SRTED, SL FRI / HD FR VIS POR, GRADES TO SLT.
Mlky wh

a/a
SH: GY'ISH, MICRO MIC, MICRO CARB, BLKY / SUB BLKY, NON calc, SFT, GRADING TO SLTST

Lt yel to pale yel weak slow cut
SD: WHITISH / SMOKY WH / WHHY, SUBANG / SUBRD, F GR 30%, M GR 40% C GR 30% SRTED.

a/a
SS AS ABOVE

SH: GY, MICROMIC, MICRO CARB, BLKY, NON CALC W/ OCC COAL, PYR incl SFT OCC GRADING TO SLTST

SLT ST: GY, MICROMIC, MICRO CARB, BLKY, NON calc. OCC GRADES TO SS, HD

Lt yell to pale yell dull, weak slow cut
SD: WHHY / SMOKY WH / MLKY WH, MOSTLY QTZ, FGR 30% MGR 40%, CGR 30% Sub Ang / Sub Rd Fr srted.

a/a

Lt yell pale yel weak slow cut
SS: WHITISH / WHGY / GY'ISH OCC W/ WHHY, DK GR FGR 30% MGR 40%, CGR 30% Sub Ang / Sub Rd. Mod calc. FRI / SLHD. DRTY, SRTED. PR VIS POR.

a/a
SH: AS ABOVE.

SS: WHITISH / WHGY MOSTLY QTZ W/ WHHY, DK GR, FGR 10% MGR 40%, CGR 30% Sub Ang / Sub Rd, mod calc cmt, DRTY SL FRI / HD FR VIS POR

Lt yel to pale yell faint slow cut
SD: WHHY / SMOKY WH / MLKY WH, OCC WHGY, DK GR, VF-F GR 30% MGR 40%, CGR 30% Sub Ang / Sub Rd, FR SRTED

a/a

Lt yell to pale yell faint slow cut
SH: GY, MICROMIC, MICRO CARB in pt, SL MICRO PYR BLKY / Sub BLKY OCC SL PLTY NON calc, GRADES TO SLTST W/ OCC PYR, dol, incl FRM

Mlky wh
SS: WHITISH / SL WHGY W/ MLKY WH, WHHY & DK GR, FGR 40%, MGR 40%, CGR 20%. Sub Ang / Sub Rd, mod calc FRI / SL FRM, SRTED, W/ OCC [illegible] POR

SLST: Lt Gy, Wh-Gysh in pt, frm / sl fri, VF grs, grd to ss, w/ coal mat incls, drty, rough on surf, blky / sb-blky.

SH: DK Gy, Gy, sft / sl frm in pt, mod. mic-mic, occ mic-pyr diss, non calc, sb-fis, sb-blky / sb-plty.

SLST: Lt Gy, frm / fri, occ mic-carb diss, calc, drty, sl rough on surf, blky.

SH: DK Gy, Gy in pt, sft / frm in pt, v. mic-mic, sl mic carb diss, w/ pyr incls, occ calc, sb-blky / sb-plty.
RUN SCHLUMBERGER.

PETRO-TECH PERUANA S.A.
GEOLOGIST WELL FILE