BELCO PETROLEUM

CORPORATION OF PERU

(SUCURSAL DEL PERU)

Teléf - Negritos 863-864-865

G-115-84

Meritice AT

Apartado No. 1 Talara - Perú

October 17th, 1984

: E. Escobedo - Belco Coordinator

: R. Morante - Wellsite Geologist

: Logging Report Well Z2A-21-579-D-L06 (L06-22) REF

BELCO PETROLEUM CORP. OF PERU DPTO. TEGNICO 3 O OCT. 1984

October 14th, 1984

21:00 hrs.: Well ready to run logs.

21:30 hrs.: Rigging up Schlumberger equipments.

21:45 hrs.: Assembling and calibrating tools on surface.

22:00 hrs.: RIH w/DLL-MSFL-GR tool.

22:50 hrs.: Reached bottom hole at 6006'.

23:00 hrs.: Taking repeat section.

23:10 hrs.: Logging with DLL-MSFL-CR tool up to 5200'.

23:30 hrs.: RIH w/DIL-MSFL-GR to bottom, for check the curves resolution possible

wrong lectures.

23:48 hrs.: Reached bottom hole for new log.

23:49 hrs.: Logging w/DLL-MSFL-GR tool.

October 15th, 1984

00:45 hrs.: Problems with spooling cable on drum to 4970'.

01:45 hrs.: Continue with operation log, csg. shoe at 2318'.

03:27 hrs.: Finished log, GR up to 380'.

03:40 hrs.: Tool on surface.

04:15 hrs.: Assembling films and making 2 copies for Belco Office.

04:45 hrs.: Assembling and calibrating FDC-CNL-GR tool on surface.

05:15 hrs.: RIH w/FDC-CNL-GR tool.

06:00 hrs.: Reached depth at 5850'.

06:10 hrs.: Logging w/FDC-CNL-GR tool.

07:00 hrs.: Don't function OK the tools, curves resolution were no representatives.

07:50 hrs.: Tools on surface, for check the assembly.

08:30 hrs.: Assembling and calibrating FDC-CNL-GR tool on surface, after repair

the tool.

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09:00 hrs.: RIH w/FDC-CNL-GR tool. 09:40 hrs.: Reached the bottom hole.

09:45 hrs.: Logging w/FDC-CNL-GR tool and repeat section from 5850'.

10:15 hrs.: The density curves show incorrect readings for shales and sands, read a continue curve ± 15%.

10:55 hrs.: Tools on surface to change assembly.

11:00 hrs.: Assembling and calibrating FDC-CNL-GR tool on surface.

11:15 hrs.: RIH w/FDC-CNL-GR tool and calibrating. 11:40 hrs.: The density curve show intermitence.

12:00 hrs.: Tool on surface for change tool.

12:15 hrs.: Arrive new FDC tool from Schlumberger Talara Base.

12:30 hrs.: Assembling FDC-CNL-GR tool on surface and calibrating.

12:45 hrs.: RIH w/FDC-CNL-GR tool. 13:45 hrs.: Reached bottom hole.

13:46 hrs.: Logging w/FDC-CNL-GR tool and repeat section from 5850' to 3400' Rio Bravo Fm.

15:17 hrs.: Finished log until 3400'.

15:45 hrs.: Tool on surface.

16:00 hrs.: Rigging down Schlumberger tools.

16:15 hrs.: Well ready to condition and ran casing 5 1/2".

16:30 hrs.: Assembling films and making copies.

QUALITY LOGS

DLL-MSFL-GR: All calibrations were automatically in the computer.

The resistivity curves and GR are in the same depth on main log.

The repeat section is two feet off depth from the main log. The calibrations were checked before and after to run log.

The conductivity/resistivity ratio is OK. The logging velocity was 25'/min. approx.

The quality log is good.

FDC-CNL-GR : All calibrations were made automatically in the computer.

The calibrations were checked before and after to run log. The repeat section 1.5 feet off depth from main log due to tool sticking after repeat section. Main log is on depth with DLI_MSFL-

The Gamma Ray near bottom is slightly higher than Gamma Ray from

DLL-MSFL run due to formation activation.

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The curves $\emptyset N$, $\emptyset D$ and GR are in the same depth. The logging velocity was 25'/min. approx. The parametersused were :

Mtx: 2.65 for Rio Bravo Fm.

Mtx: Limestone for neutron curve.

Fluid: 1.1 gr/cc because salinity was C1-130,000 ppm.

The quality log is fair.

NOTE: Logging Company

TD Driller TD Logger

Logs programmed

Logs ran

: Schlumberger.

: 5987'

: 6006'

: DLL-MSFL-GR; FDC-CNL-GR

: DLL-MSFL-GR:

DLL-GR from 5991'-2318', net log: 3673' MSFL from 5991'-3500', net log: 2491' GR from 2318'-390', net log: 1928'

FDC-CNL-GR: from 5850'-3400': net log: 2450'

: LOG-13X, LOG-21, LOG-24 \(\)

Wells for correlation
Maximum vertical angle

: 46° to \$819'.

Ricardo Morante Wellsite Geologist

Approved by :

Alfredo Velasquez GEOPET Supervisor

RM/AV/elv cc: MAR - Lima

OK

Well file