

(FRONT PAGE)

ANALYSIS OF "DOLOMITIC LAYERS" FROM THE ALC-1 WELL (Cuttings' Samples)

FINAL REPORT for AUSTRALIS

Requested Tasks

Observation and characterization of cuttings from the ALC-1 well, from depths considered as "dolomitic layers" in the Mud-Log report.

Identification of eventual marine bioclasts and attempt to perform biostratigraphic analysis.

Materials

Access to cuttings from the ALC-1 well, each package representing around 2 meters.

From the selected packages, representing the "dolomitic" depths indicated by Australis, it has been allowed to collect (and keep for studies) around 10 g of sediment.

Four samples have been collected, representing the lower layer (depths 32337-3237 and 3237-32-39), the intermediate layer (3019-3021) and the upper layer (2955-2957). These 10 g have been divided into two parts, one for thin-section and another for XRD.

Methods

A) XRD analysis

Powder diffraction using a Philips PW 3710

Cu, 40 kv; 20 nA

Software: APD 3.6 J

25°-35° 2θ to detect carbonates (**dolomite e calcite**) and 10°- 15° 2θ to detect **gypsum**.

B) Thin sections

Mounting of cuttings particles into a solid and transparent Epoxy Resine.

Thin-section preparation from those mountings.

Observation in petrographic microscope

Observation of the remaining mountings with magnifying lens and attack with HCl (10%).