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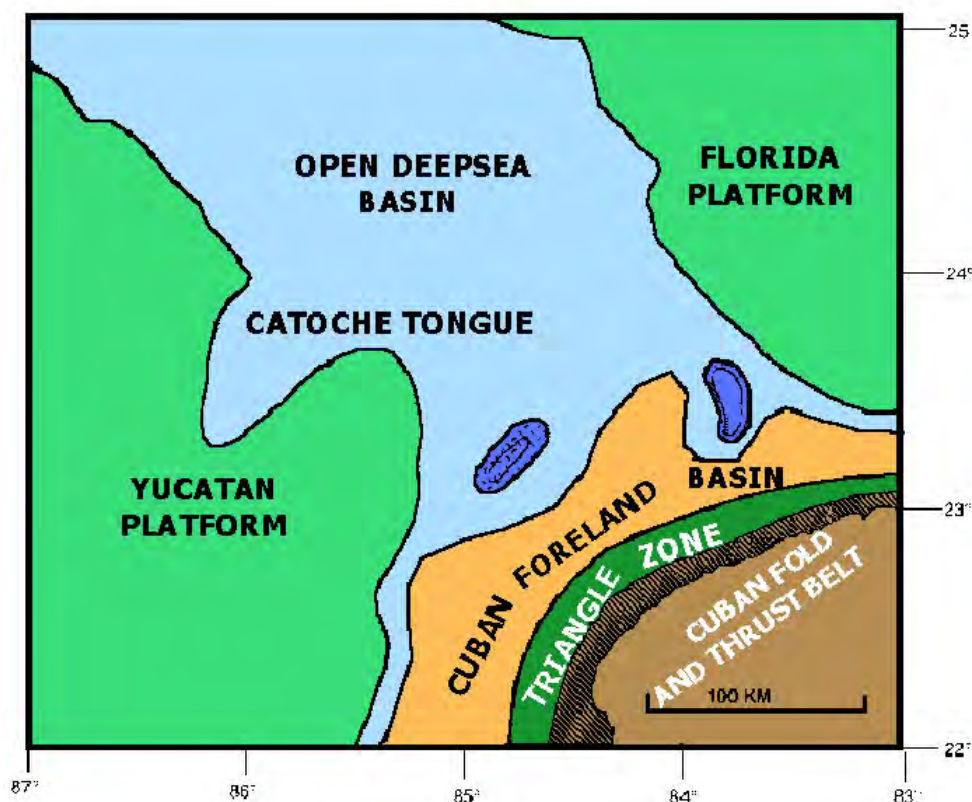
# **Seismic Stratigraphy and Sedimentology (Mesozoic-Cenozoic) in the Cuban Exclusive Economic Zone (CEEZ) of the Gulf of Mexico**

The studied area encompasses the Yucatan margin, the southeastern Gulf of Mexico and the Florida margin. (Fig. 1).

Seismic lines were provided from 7,330 Km of speculative seismic survey carried out by Compagnie Générale de Géophysique in 2000. (Fig. 2). For this study the seismic lines were processed using a Standard Graphic and as a result post-stack migration lines were obtained.

The characteristics of the configurations and terminations of the reflectors made possible to establish and describe 16 seismosequences of second and third order cycles. Several maps referred to the distribution of the seismosequences in space and time for the Mesozoic were prepared.

The geometry of the seismosequences and sedimentological studies in outcrops and deep wells in western and central Cuba onshore from deep marine and platform settings allowed to express the seismosequences in terms of



**Figure 1.**

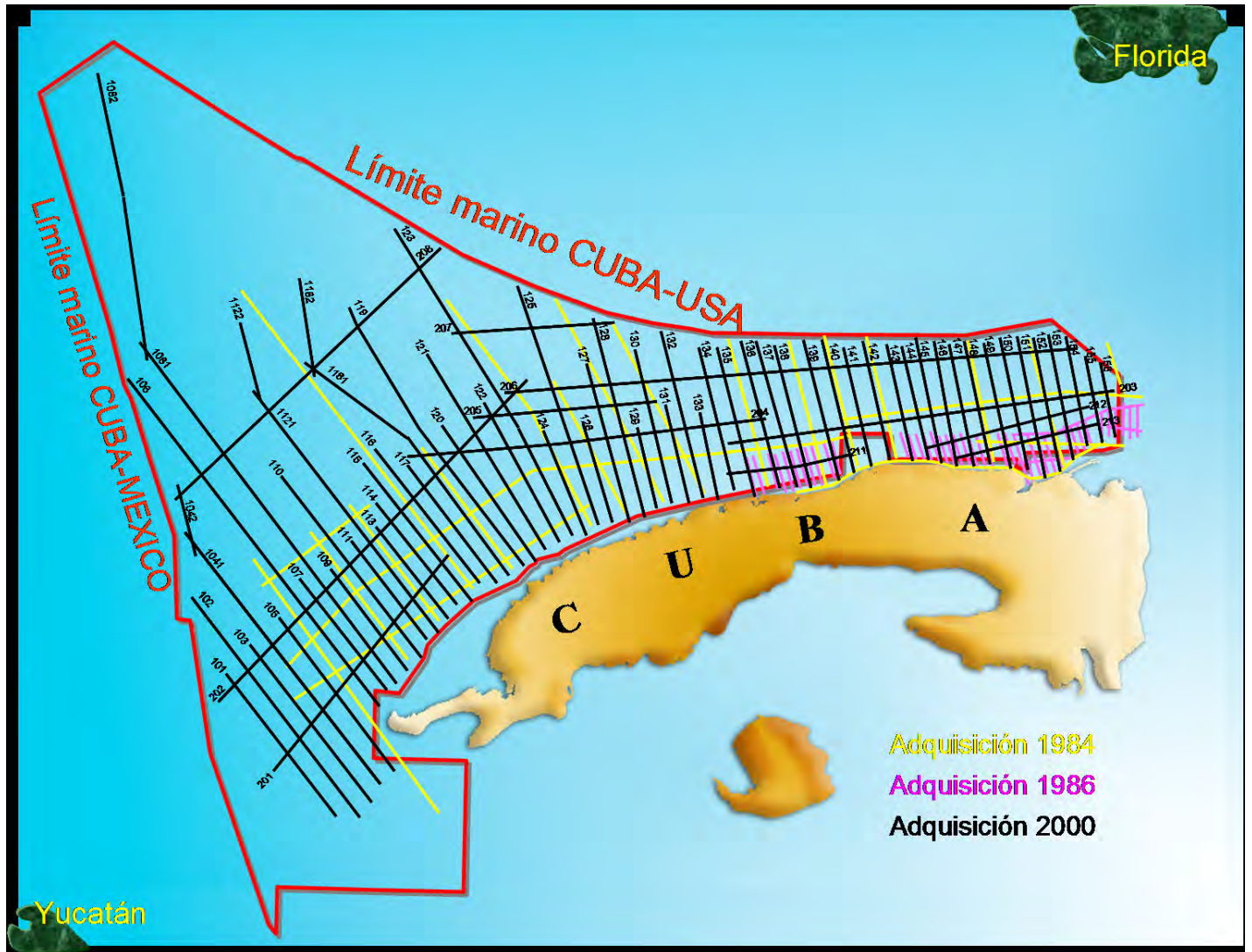


Figure 2.

depositional models. Important events such as unconformities, maximum flooding surfaces, condensed sections, contourite wedges and current scouring effects are highlighted. (Fig. 3).

Time attribution and facies-lithology calibration come from direct ties to DSDP Leg 77 sites. Indirect ties to ODP sites, selected industry offshore boreholes and Cuba Island wells and outcrops also increase the accuracy of the seismic stratigraphy framework. (Fig. 4).

On the base of the Seismic Stratigraphy and Sedimentology in a geodynamic context, a large amount of information was obtained. This allowed to integrate surface and subsurface data from Cuba onshore as well as the offshore holes from DSDP Leg 77.

Special reference is given to the Middle Cretaceous Sequence Boundary (MCSB), former the "MCU", which is defined as a strong and prominent seismic reflector. The MCSB expressed the superimposition of successive events - *i.e.* low deep water production rates, low redistribution of shallow water carbonates, sediment by-passing by current flows



The main petroleum perspectives throughout the studied area are based on the stratigraphic distribution of source rocks (Early Jurassic syn-rift clastics, Late Jurassic - Lower Cretaceous deep marine carbonates), reservoirs (folded and faulted deep marine carbonates, as well as shallow marine carbonate margins and build-ups), and seals (anhydrites and deep marine flysch deposits).

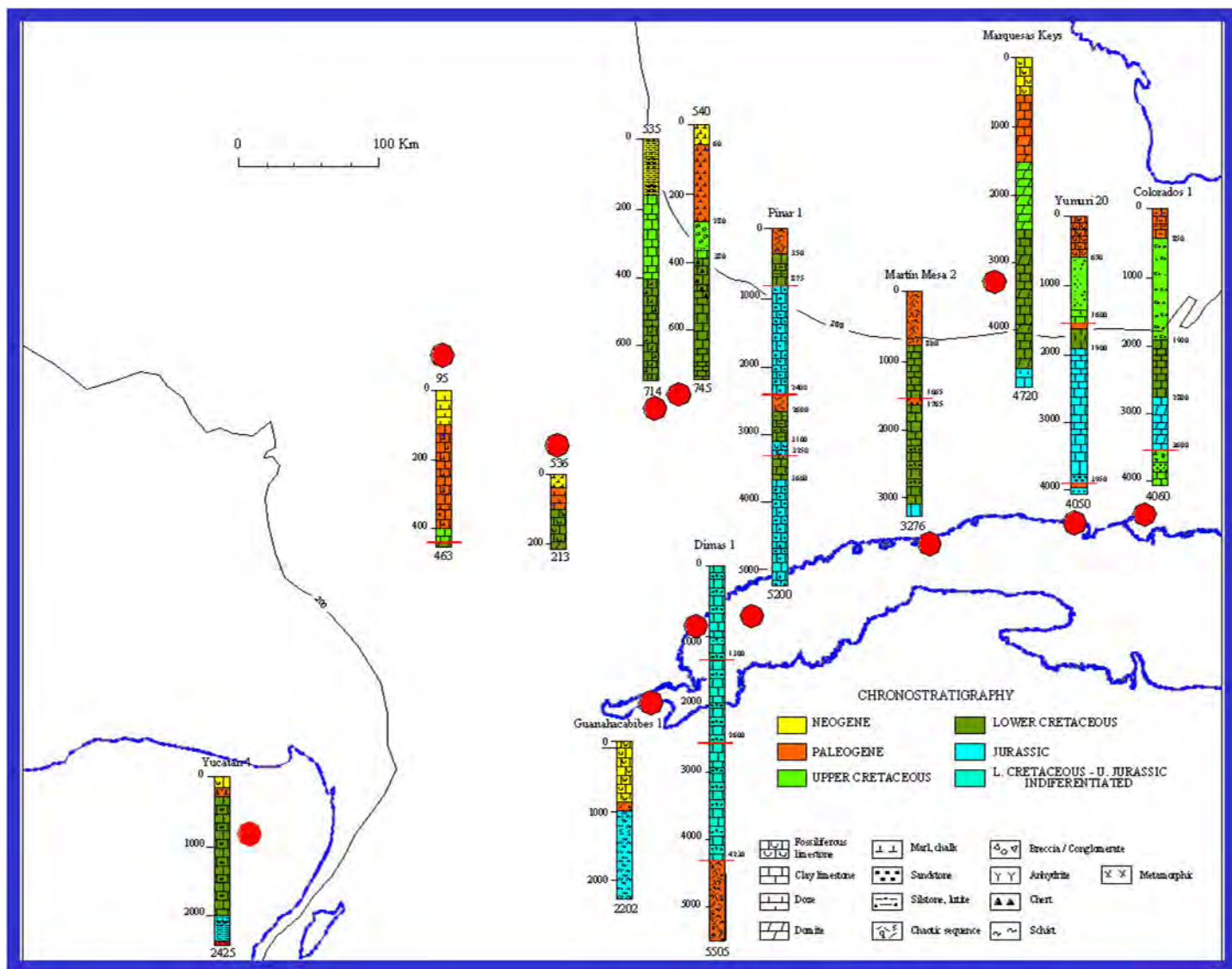


Figure 4.