Biostratigraphy of Cretaceous Volcanic Arc in Western and Central Cuba in Base of Deep Wells´ Data

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These studies are based mainly on deep oil wells drilled in western and central Cuba, but also are considered outcrop determinations.

The authors secure that it is correct, from a genetical point of view, to distinguish the volcanic island arc association from the ophiolitic association, as two separated geotectonic units. But often occurs the tectonic mixing phenomena of both units, mainly developed during the principal cuban orogeny, which is notably registered in surface and also in subsurface. This tectonic mixing is known as Zaza Terrain.

In the development stage of Cretaceous island arc are distinguished to major complexes: the effusive one and the volcano-sedimentary one.

The effusive complex is represented by basalts and basaltic andesites, tuffs, limestones and claystones, which constitute the oldest rocks of the arc, with Aptian-Lower Albian age, identified by Ticinella roberte, Hedbergella aff bizonae, Ticinella spp, of outer neritic deposition environment.

Overlying the former it is the volcanic-sedimentary complex, represented by different tuff types, mainly coarse grained, with tuffites and limestones interbedded of Upper Albian-Turonian age, defined by Praeglobotruncana spp., Rolatipora spp.,Rotatipora spp., Globigerinoides spp, with bathyal deposition enviroment. The uppermost part is composed by andesitic and dacitic fine grained tuffs, interbedded with mails, claystones and greywacke sandstones. In this sequence was determined Globotruncana calcarata, which defines the volcanic activity ending of central Cuba in Upper Campanian. This sequence uncoformable overlies the lower one. The´deposition environment is bathyal.

The definition of different stratigraphic levels keeps great importance for cuban oil prospecting.