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## Scientific Program and Abstracts

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of such structures in much more complex multi-fold hippuritids.

Right valves are conical, wide or narrow, and more or less eccentric in juveniles and cylindrical in adult shells. Ribs on the outer shell surface vary, in number and development, from juveniles to adults; radial furrows appear only in adult shells.

Infolds of the outer shell layer first appear, as slight inflexions, at the end of the conical growth stage and developing later as lamellar infolds. These may be straight, curved, sinuous, irregular in thickness, or even bifurcated, and new infolds may appear between them. The number and location of infolds is reflected at the outer surface by radial furrows.

Left valves are slightly convex, have a subcentral apex, and present a thin layer of small polygonal pores on their outer surface. The pattern of the canals is observed on abraded shells: at the central part, corresponding to the juvenile stage, canals are radial with new canals appearing with the increment of shell diameter; at the marginal part, corresponding to the adult stage, canals are directed both to the shell margin and to the infolds, producing a repetitive lobular herring-bone/fan pattern of shorter canals. In coincidence with the long ligament ridge, the long peduncles of the two pillars, and their heads, canals are directed as they do on infolds being still shorter.

As seen in tangential sections of articulated shells when cutting the marginal part of the left valve, this last also develops infolds in correspondence with those of the right valve, and canals continue from the outer shell surface to the inner surface through each of the infolds. As a consequence, a double alignment of holes (the canals transverse sections) is seen on the outer surface of abraded left valves in correspondence with each infold on the right valve, including the ligament ridge and the two pillars.

## TURONIAN RUDIST-RICH CARBONATES IN TUNISIA: SEDIMENTARY CHARACTERS AND RESERVOIR PROPERTIES

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*ORAL*

In Tunisia, Middle Turonian rudist-rich carbonates which constitute good reservoir rocks are producing oil and gas in many onshore and offshore fields located in South-East Tunisia: Rhemoura, Gremda, Guebiba (at the onshore of Sfax area) and Miskar field (Gulf of Gabes; [1]).

Considering the regional paleogeographic setting, Middle Turonian series constitute a carbonatic platform which preferentially occupies the central and south-eastern part of Tunisia. This "open marine" platform is developed along a trend crossing the Central Tunisia from the Kasserine area (in Jebel Bireno, for example; [2]) to the northern part of the Gulf of Gabes, through the Sfax area. This carbonatic belt consists of shallow marine limestones, partly dolomitised and locally including rudist-rich lithosomes [3], [4] showing joined entire rudists.

The used sedimentological approach which is based on petrographical analyses interesting cores and outcrops, lead to the identification of several rudist facies frequently transformed during diagenesis. Vertically, alternations of rudist-rich facies and other carbonatic facies, partly separated by discontinuities, illustrate the organisation of the platform carbonates into cycles and sequences. Laterally, from the SE (Gulf of Gabes) to the West (Kasserine area), facies stacking and carbonates composition are slightly different. Lateral facies changes deal with changes in deposition environments [5].

Our recent observations show that rudist-rich facies and cycles appear relatively more restricted toward the South East.

Concerning the reservoir properties, they appear linked to carbonates composition and textures and also to the diagenetic features. Most of pores (partly filled of oil) correspond to intra-rudist cavities such as Radiolitids cells. Diagenetic features which could be destructive such as cells cementation, could also enhance the reservoir potential. Dolomitisation processes which create secondary pores also insure, with fracturing, the connection between intraparticular pores.

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## ALBIAN RUDISTS FROM CHIHUAHUA, MEXICO

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*POSTER*

The Cretaceous beds of Cerro Alto succession ranges from early to late Albian in age. Within this succesion the rudists show a very important role in defining paleoenvironmental aspects.

These successions belong to Chihuahua Group [1] with five main formations: Glen Rose, Walnut, Edwards, Kiamichi and Georgetown [2], [3], [4]. Glen Rose, Edwards and Georgetown are well known for rudists limestones occurrence in Chihuahua State.

Chihuahua Group is mainly represented by grayish masive limestones and marls from Glen Rose Formation, which represents a regressive secuence during early Albian age. Walnut Formation not always crops out due to wicked constitution, but requieniids and caprinids are established [5], [6]. Edwards Formation consists of reefal carbonates with caprinids and monopleurids, bathymetrical changes existed due to tectonical causes during Albian time. Kiamichi Formation is represented by a deepening stage to the top with thin limestones and shales. Assemblages of gastropods, bivalves and coral, not rudists reported until now. Georgetown Formation is characterized by nodular limestones where rudists established the main taxa, bathymetrical changes occurred due to tectonical causes during Albian time.

*Kimbleia* sp. occurs in monospecific build-ups developed on siliciclastic sediment, forming recumbent colonies in life position. Specimens LV are missing. These colonies appear on the most upper level of the Kiamichi Formation just underneath the first limestone bed from Georgetown Formation.

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## CENOMANIAN-TURONIAN RUDISTS FROM NW JORDAN

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*ORAL*