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**Study sequence stratigraphy of lower member of the Tagnana Formation of upper Serpukhovian in the Chebket-Mennouna-Djihani of basin of Béchar (Western of Algerian Sahara)**

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The basin of Béchar is the prolongation East of Tafilalt in Morocco. A new event appears during upper Serpukhovian; invasion of the carbonate shelf by apparent channels. In Chebket-Mennouna-Djihani (Western part of basin of Béchar), of West in East we've followed the lateral variations of an imbrication of channels facies and carbonates facies, in the first two members of the formation of Tagnana. The first member of this formation has been subdivided by Pareyn et. al (1980) in nine terms (Ta1A, Ta1B, Ta1C, Ta1D, Ta1E, Ta1F, Ta1G, Ta1H, Ta1I).

This succession of facies has laterally variable thickness of 70m to Zekaket of 95m to Mennouna-Reouïana and about 165m in the Guelb El Guemah.

A synthetic log has been divided into three patterns. They are formed of channels characterized by sandstones with flat to crossbedded character, and interpreted to have occurred during quick or slow fall of sea level. These stages are indicated by deposits of shoreface to dolomitic limestones and to ghosts of "lithostrotion". Sometimes offshore deposits characterized by bioclastic limestones and nodules with microfilaments are present. Facies of shelf are interrupted, sometimes by barrier facies to oolitic limestones to lithostrotion. Facies of shelf and facies of barrier record rather of transgressive systems tracts. The facies of member Tagnana 1 are more transgressive to West than to the East, then that those of member Tagnana 2 record lone transgressive system tract showing a tendency to the forcing in the terminal Serpukhovian .

Regressive and transgressive facies form stacking patterns of type 2 and sometimes of type 1, separated by a transgressive surface or maximum flooding surface, and also sequence boundary of type 1. These surfaces are often the evidenced by fossiliferous levels, materializing of discontinuities.

In the Chebket-Mennouna-Djihani, the upper Serpukhovian has a tendency to fill in its lower part. This indicates a deepening from East in those Chebka, whereas the West of basin suffer a thickening. The succession of these facies presents are placed in opposition by horsts and of grabens. These tectonic movements post-date deposition. Karstification of the upper Serpukhovian occurred and is an important marker of a sequence boundary, type 1. The end of Serpukhovian is marked in all the basin by a transgression underlined by a maximum flooding surface. In the Chebket, the carbonates are more developed from the East than the West. The invasion by channels is more stressed from west than to the East.