

**PETROLOGICAL AND GEOCHEMICAL ASPECTS OF  
THE CARBONATE MEMBER-AMIJ  
FORMATION, WEST OF IRAQ**

**Abdul –Mutalib H. Al-Marsoumi**

**Mowafaq F. Al-Shahwan**

**College of Science, Basrah University, Basrah- Iraq**

**[abdmars@yahoo.com](mailto:abdmars@yahoo.com)**

**Abstract**

Amij Formation (Bajocian) crops out in the Western Desert of Iraq. The formation is composed of Lower Clastic and Upper Carbonate Members. The carbonate member shows facies changes from yellowish gray dolostone to in the Lower part to yellowish brown dolomitic limestone, in the upper part. This is attributed to slight change in Oxidation-Reduction Potential. The poor fossils preservation, consistent and almost uniform Ca/Mg ratio and the depletion of in Sr and Mn contents suggests that the dolomitization of Carbonate Member of Amij Formation is of early type and took place owing to Dorag Theory. The mean value of CaO and MgO together with XRD analysis showed that carbonate rocks are composed mainly of dolomite. On the other hand, the bioturbation structures and the low mean value of Sr/Ca ratio suggests a low energy tidal flat depositional environment for these rocks.