

EVALUATION OF HOLOCENE SEDIMENTARY ENVIRONMENTS OF THE SOUTHERN PART OF IRAQ

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Abstract

This research is aimed to assess the sedimentary environments of the southern part of Iraq. Three boreholes were chosen, distributed around Basrah region. Sixty- eight samples were selected from these boreholes.

The grain size distribution analysis and fossils assemblages of these samples conducted to identify four sedimentary facies; from top to bottom, facies 1 of sandy mud, characterized by species of pelecypoda and gastropoda. The sedimentary environment of this facies is fluvatile. Facies 2 of clay texture, characterized by species of Ostracoda and Foraminifera of brackish environment. Facies 3 of mud texture, characterized by species of Foraminifera of marine origin in the bottom, then species of Foraminifera of brackish environment. Facies 4 of coarse fraction, characterized by the absence of fossils and the top of this facies marked by a layer contains gypsum grains.

The region was affected by isolation and evaporations period, resemble a lagoon environment, then a transgressive period during facies3, followed by regression period which gave local variations in sedimentary environment, brackish environment in the north, fluvatile near Shatt Al-Arab River and estuarine environment affected by marine water in the south.