Microfacies analysis and depositional history of Sarvak Formation in one of the oil field in SW Iran

Abstract

Sarvak Formation (Albian-Thoronian) is one of the carbonate units of Bangestan Group that is one of the important hydrocarbon reservoirs in Zagros Basin. Sarvak Formation in the area under study is Cenomanian in age and is mainly composed of carbonate rocks. The purpose of this study is to know microfacies and interpretation the paleoenvironment of Sarvak Formation. In order to closely investigate the specifications of facies and determine its old paleoenvironment, stratigraphic section of this formation in well No. 6 in one of the oil fields in SW Iran with 637 meters thickness was studied. For the purpose of this study, more than 200 thin sections remaining from excavations were studied. This study shows that these sediments may have been deposited in homoclinal ramp that consists of 4 microfacies assemblages and 13 subfacies. These lithofacies indicate that sedimentation must have occurred in open marine, shoal, lagoon and tidal flat sub environments.

Key words: Sarvak formation- Middle cretaceous- microfacies- carbonate platform- sedimentary environment