

ENVIRONMENTAL INTERPRETATION OF THE DEVONIAN SEQUENCE IN SOUTHEASTERN CASPIAN SEA.

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The Devonian sequence is well exposed in kuh-e-Ozom (238m) and Robate-Gharabil (152m) areas, approximately, 50km, southeastern the Caspian Sea.

The Devonian sequence has been divided into the khoshyeilagh and padeha Formations. Based on the paleontological data, these rock units have been assigned to the late Devonian. The Devonian strata disconformably lie on the Silurian deposits (Niur Formation) and it is disconformably overlain by the Carboniferous strata (Mobarak Formation).

Detailed field and petrographic studies were carried out and resulted in recognition of seven carbonate and three clastic facies. The carbonate facies include the laminated lime mudstone with evaporitic casts and peloid bioclast lime (wackstone – packestone), suggesting restricted marine environment and an open marine bioclastic grainstone – wackstone. These were deposited in a carbonate ramp condition which is similar to the present situation time of the Persian Gulf.

The clastic facies include dark - gray laminated mudstone, - siltstone and quartzarenite with lamination and bidirectional cross bedding, indicating a shallow marine to tidal flat environment.

As a result, based on sedimentary data , three major shallowing upward cycles can be recognized in the khoshyeilagh Formation that each cycle encompasses several subcycles.