

## Biostratigraphy, microfacies and sedimentary model of the Qom Formation in the Posht- Darband stratigraphic section, northwest of Hamedan

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### Abstract

In order to determine the biozones, facies types and sedimentary model, the Posht Darband stratigraphic section of the Qom Formation with a thickness of 330 meters located in the northwest of Hamedan (Sanandaj- Sirjan structural zone), has been considered. On the basis of field observations, Qom Formation is composed of medium to thick-bedded limestone (Member a) and alternation of sandy limestone, sandstone and green marl (Member b). According to paleontological study, seventeen genera and nine species of benthic foraminifera and other skeletal components are introduced from the Posht Darband section and consequently, *Lepidocyclina* - *Operculina* - *Ditrupa* Assemblage zone has been recognized in this formation. Facies analysis (variety in fauna features, fabrics, and sedimentary textures) has produced eight microfacies related to the three facies belts of tidal flat, reef, slope and open marine. Base on abundance in reef facies deposits including coral boundstone, algae and bryozoan, an open shelf is proposed for the Qom Formation in the studied section. The vertical distribution column of the facies types (without considering the possible erosion phenomenon) suggests that the facies changes in member "a" are gradual, but in member "b" a rapid change (as retrogradation and progradation systems) was recognized.

**Keywords:** Facies, Qom formation, Oligocene, Hamedan