

Microfacies, sedimentary environments and Planktonic foraminifera biostratigraphy of the Gurpi formation in Fars area (Zagros basin)

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Abstract

In order to study the biostratigraphy of the Gurpi Formation in Fars province and northwest of Nour Abad Mamasani, the Murgah stratigraphic section with 159 m thickness (in the most western part of the Paskuhak anticline) has been sampled. In this section, the Gurpi Formation with 140 m thickness predominantly consists of grey argillaceous limestones and shale. This formation rests disconformably upon thick layered limestones with hematite nodules of the Sravak Formation and also at the top, disconformably overlies on the Purple shale of the Pabdeh formation. In the biostratigraphic study of the Gurpi Formation, 46 species and 16 genera of planktonic foraminifera have been identified which is subdivided into 8 biozones. Based on the identified biozones the age of the Gurpi Formation in the Murgah section is Santonian-Late Maastrichtian. Due to the main hiatus which encompasses Late Maastrichtian to Selandian, the K/Pg boundary in this section is not recorded. Furthermore based on petrographic studies 3 microfacies have been deposited in the open marine parts of a carbonate platform.

Keywords: Paskuhak, Zagros, K/Pg, Gurpi, Maastrichtian