



Biozonation and biofacies analyses of Sarvak formation in the Southwest of Iran

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The Zagros basin is very considerable because of its reservoirs and special economical importance. Sarvak Formation is one of the significant carbonate reservoirs of Bangestan group in Zagros basin in Southwest of Iran which composed of shallow and deep-water carbonates that overlies transitionally Kazhdumi formation. Sarvak is the second reservoir after Asmari carbonate reservoir.

The aims of this work are: (1) biozonation of studied section, Sarvak and Kazhdumi formations, which is very important during hydrocarbons production and (2) investigation of facieses and reconstruct the paleoenvironment. The identified biozones in studied sequence from base to top are as below:

- 1-Hemicyclammina- Orbitolina assemblage zone, belongs to Kazhdumi formation
- 2-Oligostegina facies & Globigerina washitensis occurrences, belongs to both Kazhdumi and Sarvak formations
- 3-Nezzazata- Alveolinid assemblage zone, belongs to Sarvak formation
- 4-Rudist debris, belongs to Sarvak formation
- 5-Nezzazata- Alveolinid assemblage zone, belongs to Sarvak formation

These assemblages indicate the Albian-Cenomanian for the studied section. The study of deposits represents transitional boundary between Oligosteginid-bearing limestones from Kazhdumi formation into Sarvak sediments. Also there is disconformity at the top of the Sarvak formation which is overlaid by deposition of Gurpi shales with a disconformable boundary.

According to facies analysis: Oligosteginid facies indicates deep marine environment with poor reservoir characteristics, Rudist facies as a good reservoir and benthonic foraminifera facies.