

Calcareous nanofossils of the Turonian-Santonian sediments, Zagros Basin, Iran

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Due to the lack of any precise paleontological study, the sediments of the Surgah Formation from two well sections in the Tange Bijar Gas Field (Sites 7 and 10; see figure) were investigated for their calcareous nannoplankton content to obtain their exact age. Lithostratigraphically, the Surgah Formation consists of an alternating sequence of marls and shales with argillaceous limestone intercalations. Forty samples from Site 7 (with a sample spacing of 5 meters) and seventy samples from Site 10 (with a sample spacing of 2 meters) were collected, prepared and studied under the light microscope. These samples yielded a rich nanofloral assemblage of 56 species and 31 genera. The distribution of the nanofossil taxa reveals the presence of UC8-UC12 zones of Burnett (1998) equivalent to CC13-CC15 zones of Sissingh (1977), thus pointing to an early Late Turonian – Early Santonian age for the sediments. Based on the obtained data, the environmental conditions of the sedimentary basin of the Surgah Formation is presumed to correspond to a low-latitude, shallow sea, with warm surface waters rich in nutrients.

References

- Burnett, J.A. 1998. Upper Cretaceous. In: P.R. Bown (Ed.). *Calcareous Nannofossil Biostratigraphy*. Chapman & Hall/Kluwer Academic Publishing, London: 132-200.
- Sissingh, W. 1977. Biostratigraphy of Cretaceous calcareous nannoplankton. *Geol. Mijnbouw*, **56**: 37-65.



Tange Bijar Gas Field

