

## Depositional Environment of the Shahbazan Formation: a tail of evolving ramp to shelf

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Received: 2017/7/23 Accepted: 2017/12/19

### Abstract

The middle-late Eocene Shahbazan Formation is extended in the Lurestan zone. It is underlain by Asmari Formation and overlaying the Kashkan Formation, however to the southwest of the Lurestan, it overlying the Pabdeh Formation with some interfingering lateral changes. Five surface sections and four well which are located in east of the Lurestan zone were sampled to investigate the depositional setting of the Shahbazan Formation. These sections were tentatively selected to survey across and normal to the basin as well. Petrographic examinations on 700 thin sections revealed 17 microfacies which are deposited in tidal flat (3 microfacies), lagoon (4 microfacies), shoal (4 microfacies), reef (1 microfacies) and shallow open marine (5 microfacies). Tidal flat and lagoon facies associations are extended in the north and east, whereas shoal and shallow open marine facies are more frequent in the south and west of the study area. Lack of barrier and also turbidite deposits suggest a NE-SW trending distally steepened ramp in studied area at middle-late Eocene. It is believed that the Shahbazan Formation in Dezful Embayment was deposited on a shelf type carbonate platform in middle Eocene and ramp in late Eocene. This variation could be explained as the consequence of activity of the Mountain Front Fault which was active since late Cretaceous.

**Keywords:** Depositional environment, microfacies analysis, The Shahbazan Formation, Eocene, Lurestan zone, Zagros fold-thrust belt