

## Palaeozoic and Mesozoic tectonic implications of Central Afghanistan

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The field and laboratory studies were carried out in Ghor Province situated in the central part of Afghanistan. It straddles juxtaposition of the Tajik (alternatively, North Afghanistan) and Farah Rod blocks separated by Band-e-Bayan zone. The recent studies indicate that Band-e-Bayan zone represents highly tectonised margin of the Tajik block (Motuza, Sliampa, 2016).

The Band-e-Bayan zone is the most representative in terms of sedimentary record. The subsidence trends and sediment lithologies suggest the passive margin setting during (Cambrian?) Ordovician to earliest Carboniferous times. A change to the foredeep setting is implied in middle Carboniferous through Early Permian; the large-thickness flysh-type sediments were derived from continental island arc provenance, as suggested by chemical composition of mudstones. This stage can be correlated to the amalgamation of the Gondwana supercontinent.

The new passive-margin stage can be inferred in the Band-e-Bayan zone and Tajik blocks in the Late Permian throughout the early Late Triassic that is likely related to breaking apart of Gondwana continent. A collisional event is suggested in latest Triassic, as seen in high-rate subsidence associating with dramatic change in lithologies, occurrence of volcanic rocks and granitoid intrusions. The continental volcanic island arc derived (based on geochemical indices) terrigenous prevail at the base of Jurassic that were gradually replaced by carbonate platform in the Middle Jurassic pointing to cessation of the tectonic activity. A new tectonic episode (no deposition; and folding?) took place in the Tajik and Band-e-Bayan zone in Late Jurassic.

The geological section of the Farah Rod block, situated to the south, is represented by Jurassic and Cretaceous sediments overlain by sporadic Cenozoic volcanic-sedimentary succession. The lower part of the Mesozoic succession is composed of terrigenous sediments giving way to upper Lower Cretaceous shallow water carbonates implying low tectonic regime. There was a break in sedimentation during the upper Cretaceous that is likely related to the Alpine orogenic event. It associated with some Upper Cretaceous magmatic activity (Debon et al., 1987). This event is reflected in the sedimentation pattern in the adjacent Band-e-Bayan zone and Tadjick block. The lower part of the Upper Cretaceous succession is composed of reddish terrigenous sediments. They are overlain by uppermost Cretaceous (and Danian) shallow marine sediments implying establishment of quiet tectonic conditions.