

***TECTONIC ENVIRONMENT, STRUCTURAL
STYLES AND HYDROCARBON PROSPECTS OF
EASTERN POTWAR REGION, PAKISTAN***



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ABSTRACT

There are two major sedimentary basins of Pakistan with Balochistan basin in the west and Indus basin in the east. The rifting that took place in the late Proterozoic of Gondwanaland super continent, resulted in the deposition of the Infra – Cambrian sediments. The evidence of rifting is clearly visible on the seismic profiles of Punjab platform and Potwar Sub – basin of Pakistan. Rock units ranging in age from Infra-Cambrian to Cambrian are exposed in the Potwar Province of the Indus Basin. Some wells drilled up to basement on Punjab Platform, Pakistan reveal that Bilara Formation followed by Jodhpur Formation also pertaining to Infra – Cambrian age underlies the Salt Range Formation. Two different tectonic regimes have been proposed in the post for Potwar Sub – Basin by various researchers. These regimes are thin skinned and thick skinned.

To identify the tectonic environment and structural styles of Eastern Potwar the structural interpretation of approximately 97-kilometer 2D seismic lines have been integrated with surface geological information. The study indicates that the structural patterns of Eastern Potwar have been developed as a consequence of transpressional wrench movements.

Several productive and potential reservoir intervals from Infra – Cambrian to Eocene have been identified. The organic-rich shales of the Paleocene can be considered as the main contender for sourcing the Potwar oil fields.