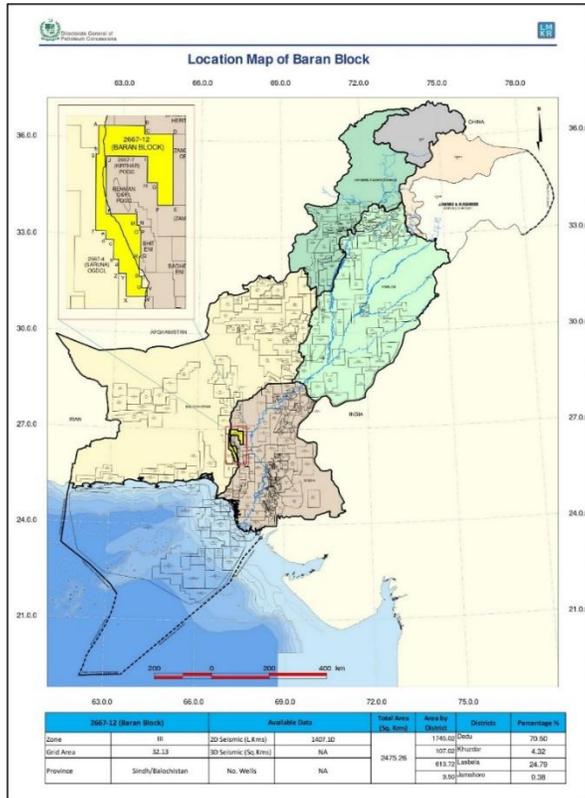


BARAN BLOCK (2667-12)

Introduction

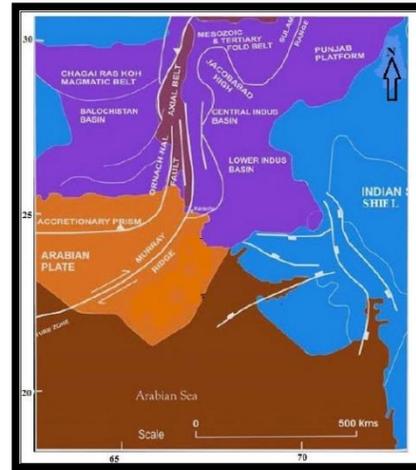
Baran Block covers an area of 2475.26sq km and is located in Dadu, Khuzdar, Lasbela and Jamshoro districts of Sindh and Balochistan Pakistan. Geologically, it lies in the Lower Indus Basin of Pakistan. The block falls in Prospectivity Zone III.



Geology and Tectonics

The Lower Indus Platform Basin is bounded by the Central Indus Basin to the north, by the Sulaiman Fold belt Basin to the northwest and to the Kirthar Fold Belt Basin in the west. The rifting of the Indian Plate from Gondwanaland (Jurassic or Early Cretaceous) is the main tectonic event controlling the structures and sedimentology of the Lower Indus Basin which perhaps caused eastwards tilting and uplift at the start of the Cretaceous. In the west of the Lower Indus Basin, sinistral transpression results in Himalayan collision, with fold-thrust structures overprinted by sinistral flower structures.

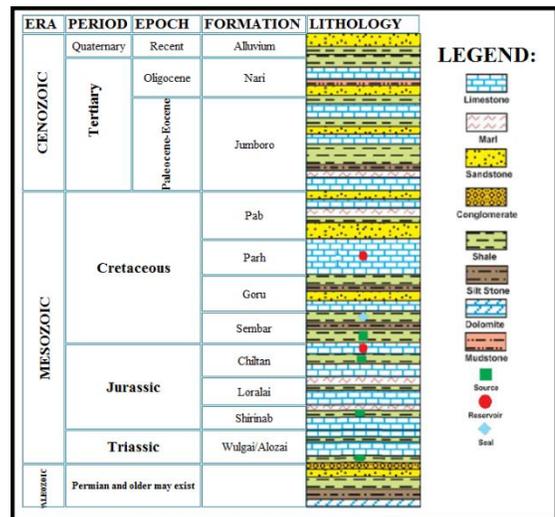
Geological map (modified after Kazmi and Rana, 1982)



Stratigraphic Sequence

This tectonic province is underlain by Infra Cambrian to Recent clastics and carbonates. It remained passive margin until the Late Cretaceous, then became part of the complex suture between the Indian Plate and the Afghan Block. The stratigraphic succession changes from east to west. Precambrian basement is exposed in the southeastern corner of the basin. The thickness of the sediments increases westward.

Generalized Stratigraphic Chart



Petroleum Play

The basin wise success rate has been the highest for Lower Indus Basin because of strings of discoveries in quick succession in relatively small tilted fault blocks in Lower Goru reservoir.

Source

Sembar has been identified as the primary source rock for much of the Greater Indus Basin, there are other known and potential source rocks. Rock units containing known or potential source rocks include the Salt Range Formation (Eocambrian) shale's, Dandot and Tredian Formations (Permian), Wulgai Formation (Triassic), Datta Formation (Jurassic), Patala Formation (Paleocene), Ghazij Formation (Eocene), and lower shales of Miocene.

Reservoir

Potential reservoirs in the basin include Limestone of the Habib Rahi and Pirkoh members of the Kirthar Formation (Eocene). The Pab sandstone along with sand horizons within the Mughal Kot Formation is the most potential reservoir in the area. Sembar and Lower Goru sandstone (Cretaceous) and Chiltan limestone (Jurassic) also have commercial quantities of hydrocarbons in surrounding fields. The principal reservoirs are deltaic and shallow marine sandstones in the lower part of the Goru in the Lower Indus Basin, the Lumshiwal Formation in the Middle Indus Basin, and limestones in the Eocene Ghazij and equivalent stratigraphic units. The Sui Upper Limestone Member and upper Eocene Habib Rahi Limestone are also productive.

Seal

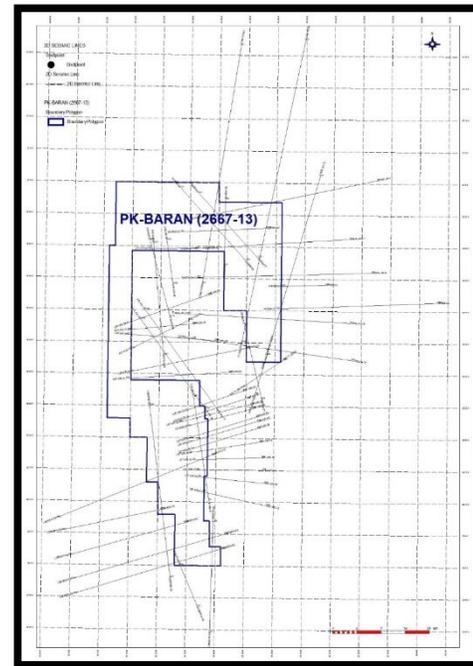
The known seals in the system are composed of shales that are interbedded with and overlying the reservoirs, especially intra-formational shale for Lower Cretaceous reservoirs. Additional seals that

may be effective include impermeable seals above truncation traps, faults, and undip facies changes.

Trap

The tilted fault traps in the Lower Indus Basin are a product of extension related to rifting and the formation of horst and graben structures.

Baran Block Base Map



Well Data

Wells are not drilled in this block.

Seismic Data

2D SEISMIC DATA	3D SEISMIC DATA
Line km= 1,407.10	3D data is not available