

# MIRAN BLOCK

## Introduction

Extending to an approximate area of about 1064.3 Sq. km, the block spreads to Kurram Agency and North Waziristan, Pakistan. Its presence in the Kohat-Bannu basin and successful exploration discoveries in the surrounding regions such as Chanda, Nashpa, Mamikhel and Maramzal make it a fruitful prospect for exploration and production activities.

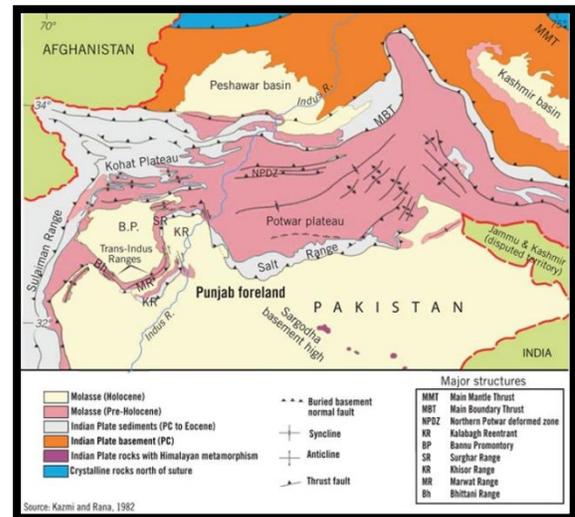
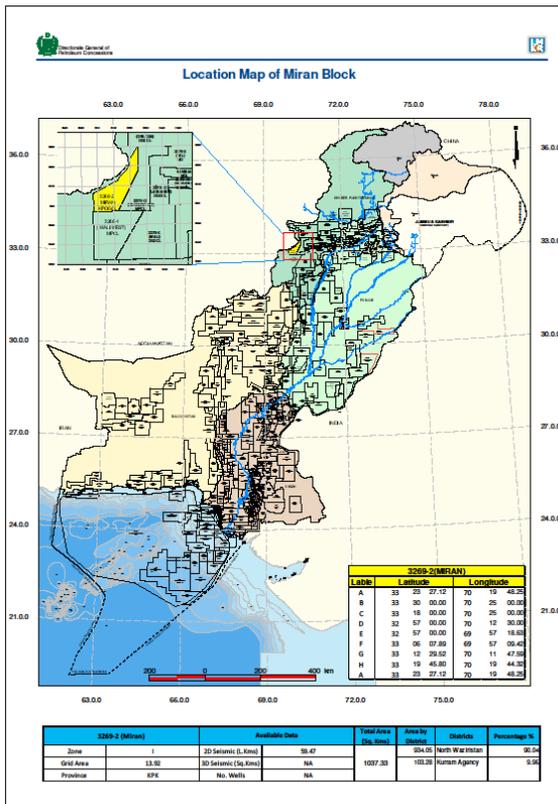
Located southeast at a distance of about 270 km from Peshawar, the block is easily approachable using highways and roads from the main city. The exploration activities have also contributed in the development of the region. (Courtesy KPOGCL)

## Geology and Tectonics

The Kohat Fold and Thrust Belt (KFTB) at the western extremity of the lesser Himalayas represent the south-western part of Himalayan foreland fold and thrust belt in Pakistan. It extends to about 70 km from north to south, although narrow and very much deformed, it's elevated higher than the neighboring Potwar Plateau.

Faulting in the region constitutes of Simple and translational faults which also contribute in the creation of traps in the region. Anticlines are a prominent part of the region and are also contribute towards the creation of trap. (Ghani et al. 2015)

## Geological Map

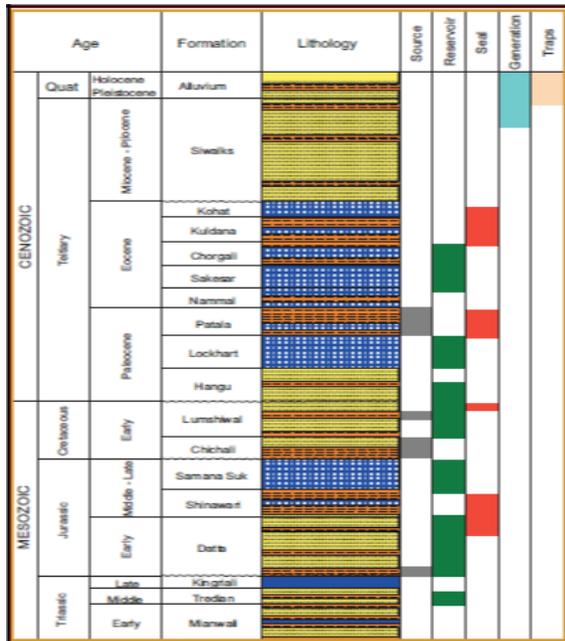


## Stratigraphic Sequence

In the southern part, the plateau consists of evaporites. In the northern part, the Evaporite sequence is missing or reduced and is concentrated in the central one. The stratigraphic column shows data from the field area in southern Kohat from Eocene to Pliocene. (Hamid Hussain and Zhang Shuangxi, 2018)

## Generalized Stratigraphic Chart

(Courtesy KPOGCL)



## Petroleum Geology

The Kohat–Potwar depression is ideal for the accumulation of hydrocarbons due to the thick sediment deposits which make it an ideal source and cap rock. Proven reservoir lithologies include rocks of Permian, and Jurassic etc. Majority of the reservoirs producing in the region are Eocene carbonates. The Petroleum system of Miran Block is based on Manzalai, Maramzai and Mamikhel Wells. (Courtesy KPOGCL)

## Source Rock

Shaly formations such as Patala, Hangu (Paleocene), Datta (Jurassic) and Chichali (Cretaceous) are viable source rocks in the Miran block.

## Reservoirs

Limestones in the region make up the reservoir. Lockhart limestone (Paleocene), Samanasuk (Jurassic) and Lumshiwai formations (Cretaceous) also make up the

reservoir rocks in the petroleum play of region.

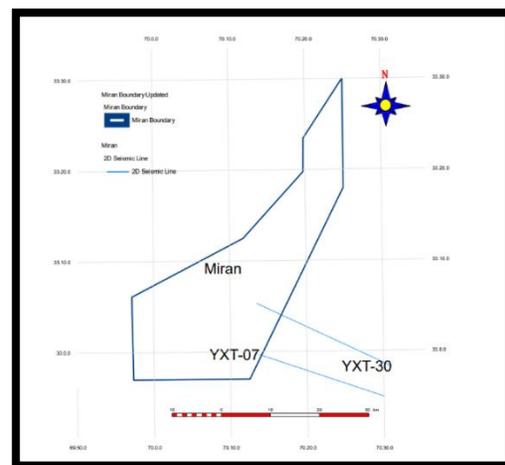
## Seal

Regionally, shales make up seals for the petroleum play in the Kohat–Bannu Basin. Following the general trend Panoba (Eocene) and Patala (Paleocene) shales make up viable seals for the hydrocarbons.

## Traps

Structural traps are a dominant part of petroleum plays in the region. Fault bound anticlines contribute towards trapping mechanism for the hydrocarbons in the region. Fault truncations along with interbedded rather thick shales and clays of Miocene and Pliocene Siwalik group provide the right seals. Prevalent anticlines and faults are major sources of structural traps in the region.

## Block Base Map



## Well Data

Well data is not available

## Seismic Data

2D SEISMIC DATA	3D SEISMIC DATA
Line Km= 59.4713	Not available

