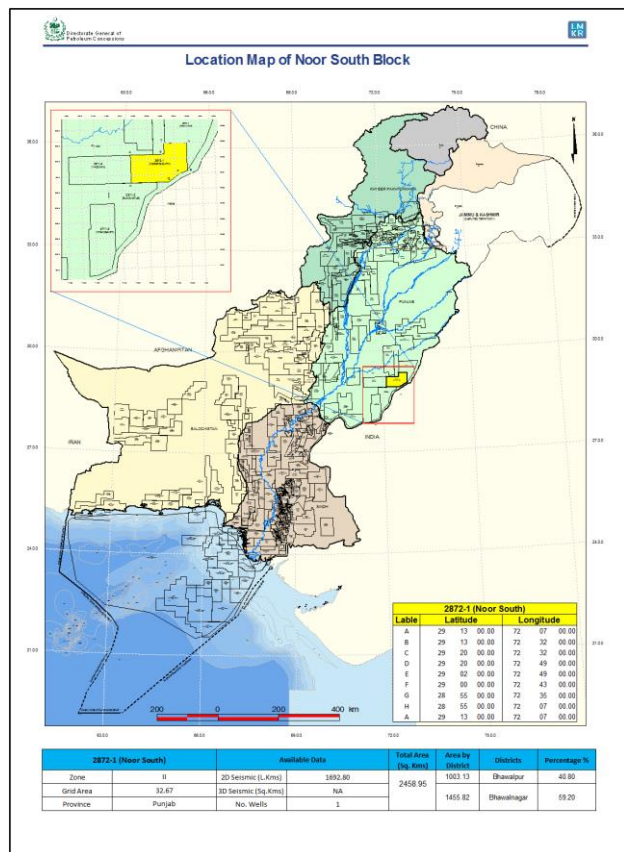


## NOOR SOUTH BLOCK (2872)

### Introduction

Noor South Block covers an area of 2458.95 sq km and is located in Bhawalpur and Bhawalnagar districts of Punjab Pakistan. Geologically, it lies in the Central Indus Platform Basin of Pakistan. The block falls in Prospectivity Zone II.



### Geological Map (Modified after Ahmed et al, 1994)



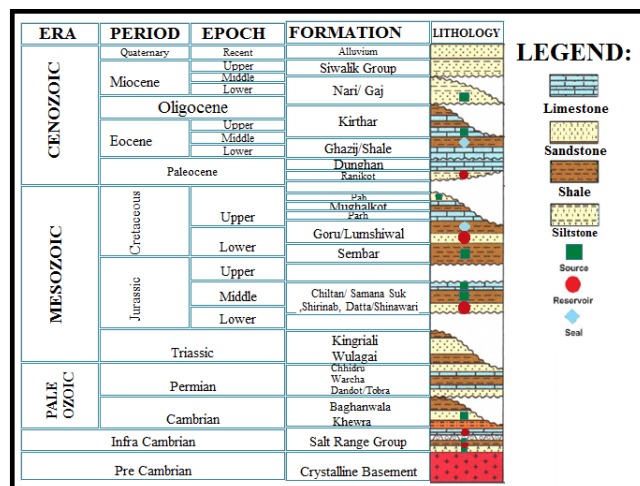
### Stratigraphic Sequence

The stratigraphic sequence in the area range from Infra-Cambrian to Miocene-Pliocene strata. The distinct unconformity lies at the base of Miocene because of which Miocene sediments directly overlies the Cretaceous strata. The clastics and carbonates represent the Infra-Cambrian while clastics and dolomites represent the Cambrian which are unconformably overlain by clastics, glacial tillites, and carbonates of Permian. Triassic and Jurassic rocks are composed of sandstones, shales, and carbonates while Cretaceous and Miocene sequence is characterized by shales and sandstones.

### Geology and Tectonics

The block is located in Central Indus Platform Basin (CIPB), which is a broad monocline dipping gently westward and merges in Sulaiman Foredeep. Tectonically, the effect of compression is minimum in this area. During the Precambrian, Late Jurassic and Cretaceous, an extensional activity occurred. The uplifts provide the evidence of this tectonism accompanying the fragmentation of Gondwana. The area is categorized by extensional faults, cutting Paleozoic strata.

### Generalized Stratigraphic Chart



## Petroleum Play

The block is located in the west of oil producing fields in India, which confirms that a dynamic petroleum system containing all the necessary elements for the generation and accumulation of hydrocarbons is present in the area.

## Source

The expected source rock having potential to generate hydrocarbons in this block includes Salt Range Formation (Infra-Cambrian), Tobra and Dandot Formations (Permian). These sediments have gas and oil generation characteristics with fair to good organic richness.

## Reservoir

Infra-Cambrian to Jurassic sequence have potential reservoirs. Carbonates of Shinwari and Samana Suk formations (Jurassic), and clastics of Lumshiwai Formation (Cretaceous) are proven reservoirs in the gas fields of this surrounding area. Salt Range Formation (Infra-Cambrian) is producing heavy oil in the east in India.

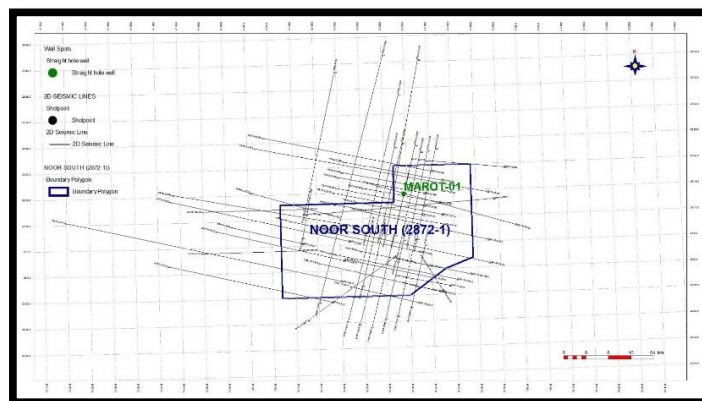
## Seal

The potential seals for underlying reservoirs include the intra-formational shales and mudstones of Infra-Cambrian, Paleozoic, and Mesozoic rocks.

## Trap

The block area consists of fault bounded three way dip structures. The important feature for trapping mechanism can be provided by the truncations of Jurassic to Eocene strata.

## Noor South Block Base Map



## Well Data

WELL NAME	SPUD DATE	OPERATOR	WELL TD (m)	TD FORMATION	PRIMARY TARGET
MAROT-01	22/02/1981	SHELL	2596	Precambrian (Basement)	Salt Range Formation

## Seismic Data

2D SEISMIC DATA	3D SEISMIC DATA
Line km = 1692.8	3D data is not available