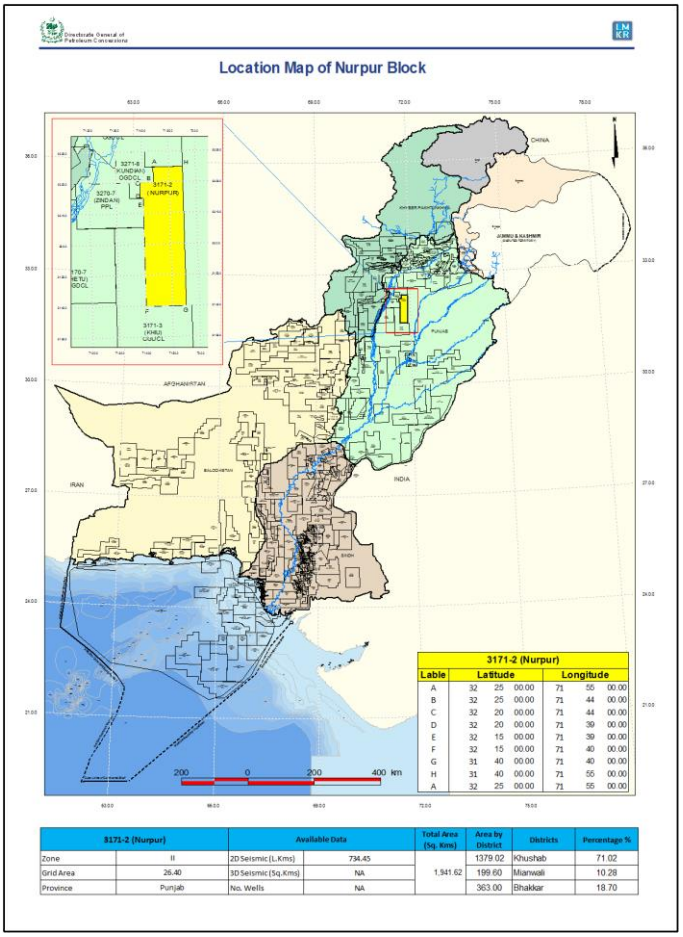
NURPUR BLOCK (3171-2)

Introduction

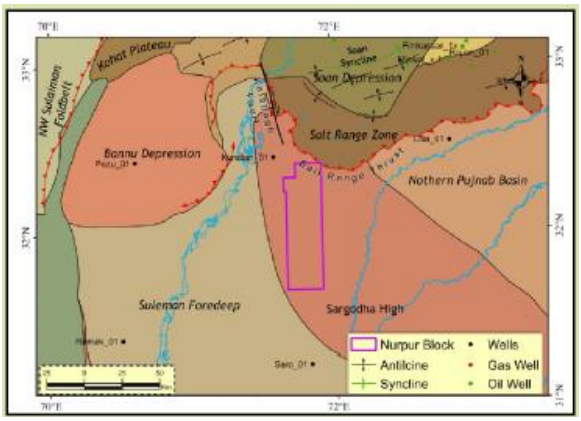
Nurpur Block covers an area 1,941.62 sq km and is located in Khushab, Mianwali and Bhakkar districts of Punjab Pakistan. Geologically, it lies in the Central Indus Platform Basin of Pakistan. The block falls in prospectivity Zone II.



Geology and Tectonics

Tectonically the block is located in the Central Indus Platform Basin (CIPB) and Sargodha High. The Central Indus basin is a broad monocline dipping gently in the west direction and joins in Sulaiman Foredeep. Tectonically, it is the least affected area by compression due to its greater distance from collision zones. During Precambrian, Late Jurassic and Cretaceous an extensional activity occurred. The uplift eroded the uppermost Jurassic whose evidence is provided by the fragmentation of Gondwana.

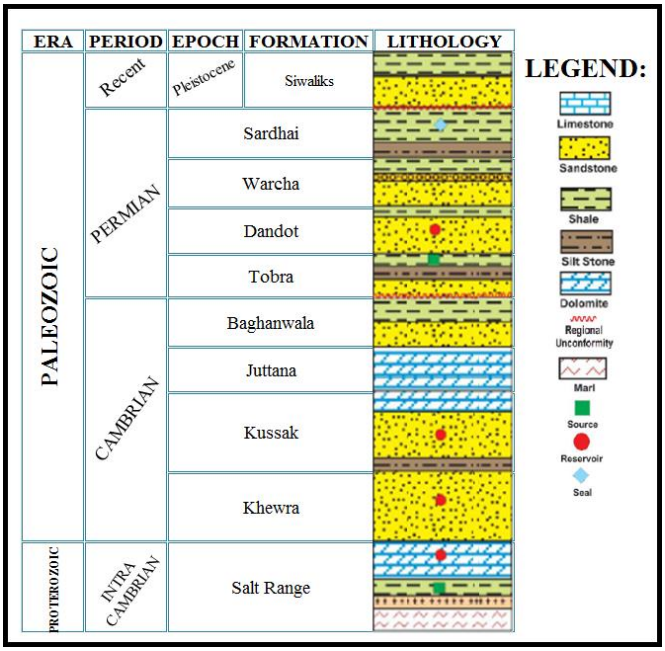
Geological Map



Stratigraphic Sequence

The stratigraphic sequence in the area ranges from Infra-Cambrian to Miocene-Pliocene strata. The prominent unconformity lies at the base of Miocene because of which the Miocene sediments directly overlie the Permian strata. The clastics and carbonates represent the Infra-Cambrian whereas the clastics and dolomites of Khewra, Kussak, Jutana, and Baghanwala formations represent the Cambrian which are unconformably overlain by clastics, glacial tillites and carbonates of Permian.

Generalized Stratigraphic Chart



Petroleum Play

A large number of gas producing fields is present in the south of this block which confirms the presence of a dynamic petroleum system comprising all the necessary elements for the generation and accumulation of hydrocarbons in this area.

Source

Shale and carbonate horizons are present in the area which include Salt Range Formation (Pre-Cambrian), Khewra Formation (Cambrian), and Tobra Formation (Permian), which have fair to good TOC and can act as a source in this block area.

Reservoir

Sandstone and carbonates of Salt Range Formation (Pre-Cambrian), Khewra Sandstone (Cambrian), Tobra Formation (Permian) can act as potential reservoirs.

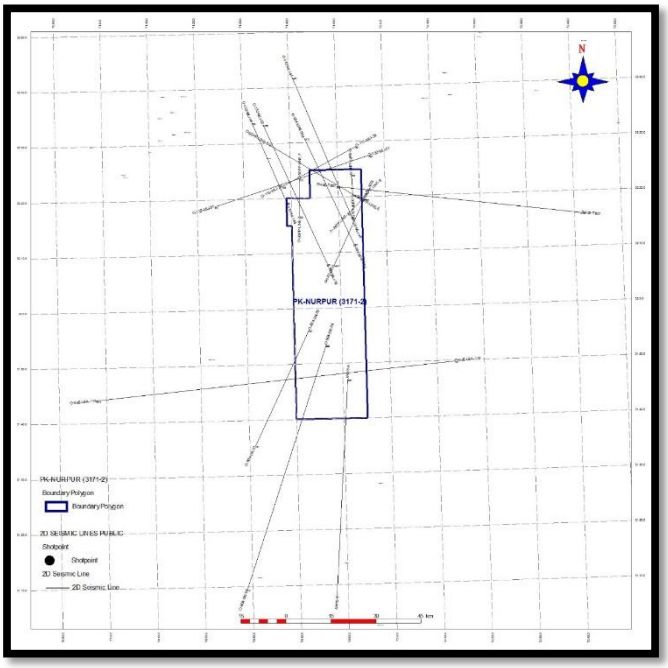
Seal

In Infra-Cambrian sequence the shale and evaporites, whereas in Paleozoic sequence the intra formational shales can act as a seal for the entrapment of hydrocarbons. The shales in Siwalik group (Miocene) are the regional seal for the truncating reservoirs below Base-Miocene unconformity.

Trap

The extensional activity, thermal subsidence and uplift controls the trapping mechanism in the Punjab platform. The occurrence of normal faults and unconformity related trapping mechanism is expected in this block. The normal faults are developed as a result of Proterozoic and Mesozoic rifting that may suggest the traps for Infra Cambrian reservoirs. The truncation of Paleozoic reservoirs below the Base of tertiary unconformity is shown by seismic interpretation which can provide a potential trapping mechanism.

Nurpur Block Base Map



Well Data

Well is not drilled in this block.

Seismic Data

2D SEISMIC DATA	3D SEISMIC DATA
Line km = 734.45	3D data is not available