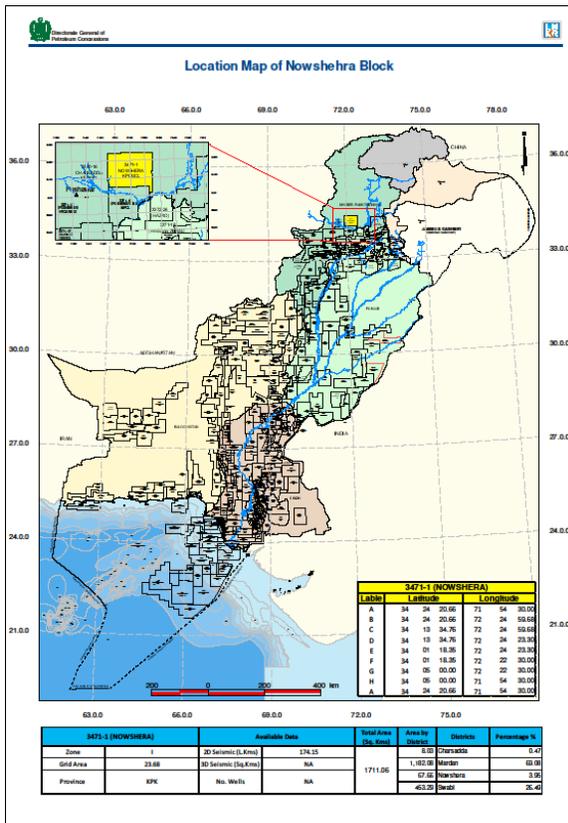


NOWSHERA EXPLORATION BLOCK (3471-1)

Introduction

Extending over an area of about 2,136 Sq. km, Nowshera block covers up areas of Mardan, Southwest Buner, Charsadda, Nowshera and Khyber Pakhtunkhwa districts. Successful discoveries surrounding the block such as Makori, Maramzai, Chanda and others in the Kohat-Bannu Basin, where the block is located, makes this block a viable prospect. The block lies in the productivity Zone-1.



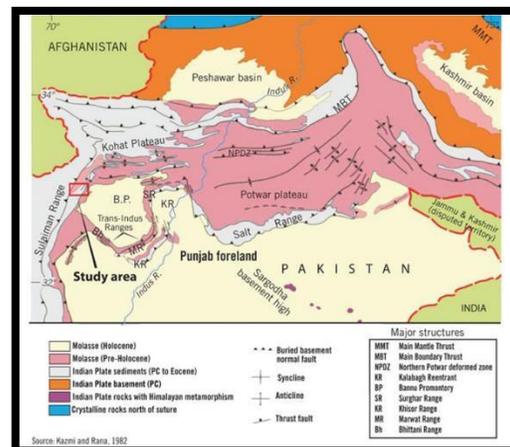
Geology and tectonics

The Kohat Sub-Basins, located on the northwestern margin of the Indian Plate, are structurally defined petroliferous regions. Sedimentation on the passive margin of the Eastern Tethys was taken up in Paleocene after the break with the deposition of the clastics which end up enduringly with the shallow marine/lagoonal deposition of the Lower to Middle Eocene, which provided an excellent platform for the accumulation of hydrocarbons.

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 traps. (Wasim Paracha, 2004.)

Geological Map

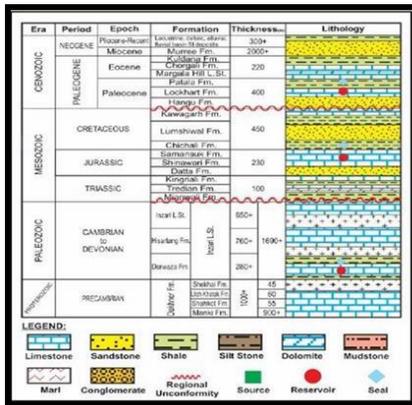


Stratigraphic Sequence

The sedimentary deposits found in the area are from Pre-Cambrian to Recent. The deposition was interrupted several times. The two identified unconformities are Cambrian- Permian and Eocene-Miocene in the area. Pinch-outs and unconformities in the region may suggest presence of stratigraphic traps.

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 Khewra, Kussak, jutana, Tobra, Wargal (Permian) and Jurassic (Datta) etc. Majority of the reservoirs producing in the region are Eocene carbonates.

Source Rock

The Source rocks in the region are predominantly shales. Shaly formations such as Patala, Hangu (Paleocene), Datta (Jurassic) and Chichali (Cretaceous) are viable source rocks in the area.

Reservoirs

Limestones in the region make up the reservoir. Lockhart limestone (Paleocene),

Samanasuk (Jurassic) and Lumshival formations (Cretaceous) also make up the reservoir rocks in the petroleum play of region.

Seal

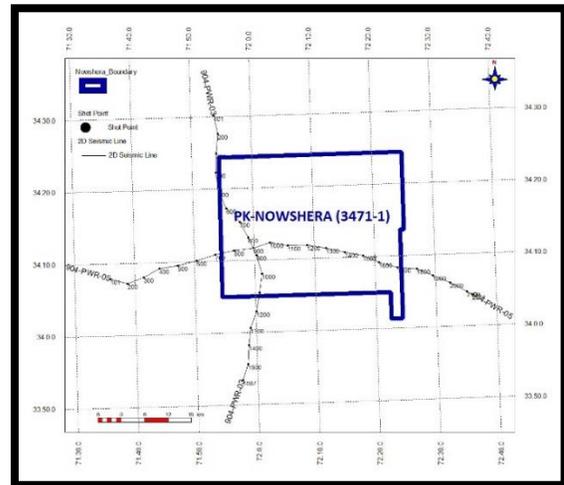
Intra-formational shales and top shales make up the confirmed seal rocks in the region.

Traps

Both structural and stratigraphic traps managed to survive in these basins. However, only structural traps have been continuously evaluated which are represented by antiformal stack, flower structures, thrust anticlines and fault propagating folds. (Wadood et al. 2018)

Structural traps exist in the region such as fault bounded anticlines along with 4 way dip closure that tend to seal the hydrocarbons in their position.

Base Map



Well Data

Well Data isn't available.

Seismic Data

2D SEISMIC DATA	3D SEISMIC DATA
Line Km = 174.1473	Not available