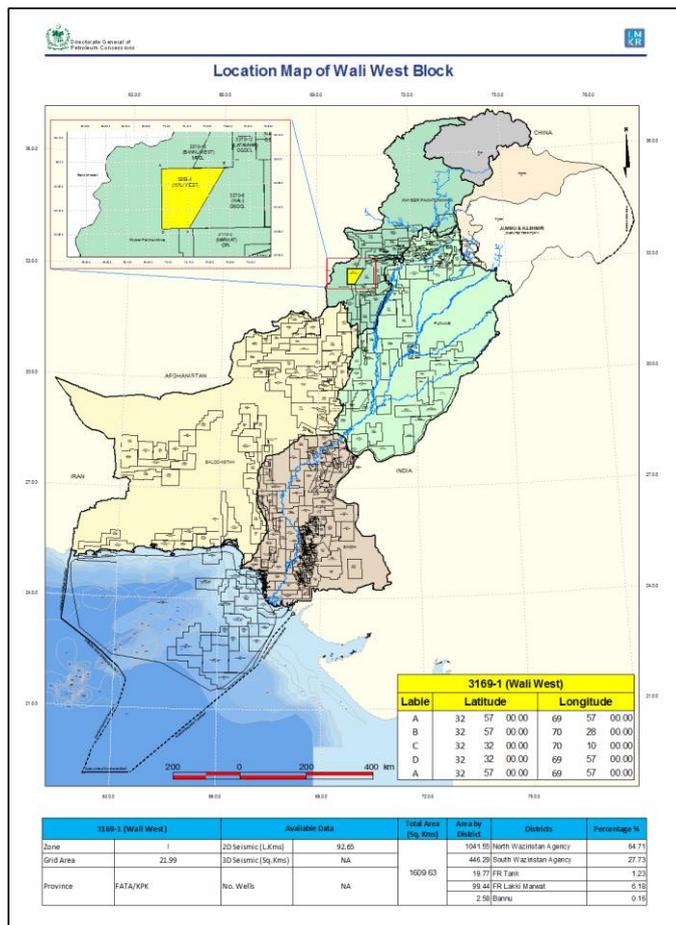


WALI WEST BLOCK (3269-1)

Introduction

Wali west Block covers an area 1609.63 sq km and is located in North Waziristan Agency, South Waziristan Agency, FR Tank, FR Lakki Marwat and Bannu districts of Khyber Pukhton Khwa (KPK) Province Pakistan. Geologically, it lies in the Kohat Bannu Basin of Pakistan. The block falls in Prospectivity Zone I.

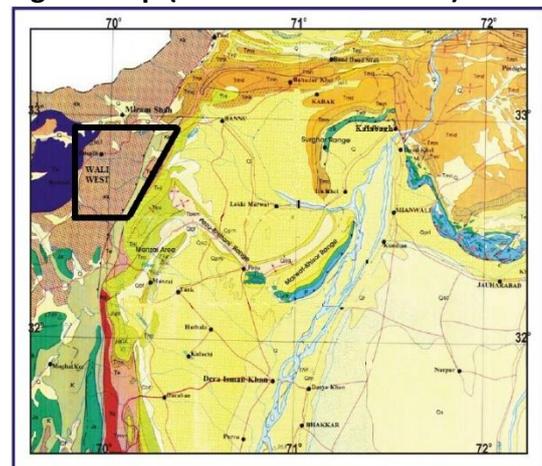


Geology and Tectonics

Pakistan possesses the northwestern boundary of the Indian lithospheric plate. The underthrusting of Indo-Pakistani Plate beneath the Eurasian Plate is producing compressional thin-skinned tectonic features since Eocene time on the northern and northwestern fringes of the Indo-Pakistani Plate. The continued underthrusting of the Indo-Pakistani Plate since Cretaceous produced the spectacular mountain ranges of the Himalaya and a chain of foreland fold-and-thrust belts as thick

sheets of sediments thrust over the Indian Craton (Kemal, 1991). Foreland fold-and-thrust belts throughout the world are conspicuous features of the convergent plate tectonic habitat. The Kohat-Potwar fold and thrust belt along with its frontal ranges of the northwestern Himalayas is one of these. The Salt and Trans-Indus ranges constitute the mobile flank of the Kohat and Potwar fold and thrust belt and is mostly characterized by decollement thrust-fold assemblages. Thrusting along with associated folding is certainly the main method of accommodating shortening within these orogenic belts. The most recent thrusting is believed to have occurred along the frontal thrust system in the Salt Range to the east and in the Trans-Indus ranges to the west (Blisniuk et al., 1998). The Trans-Indus ranges represent the leading deformational front of the Kohat fold and thrust belt and Bannu Basin in North Pakistan (Ahmad et al, 2005).

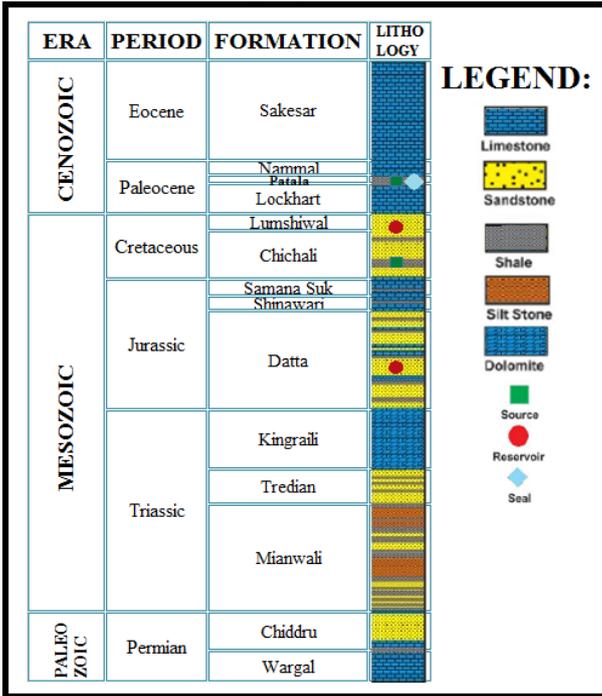
Geological Map (after Raza et al.1993)



Stratigraphic Sequence

The stratigraphic sequence in the area ranges from Permian to Eocene strata. The prominent unconformity lies at the base of Paleocene, base of Cretaceous, and base of Jurassic.

Generalized Stratigraphic Chart



Petroleum Play

The block is located near some of the producing fields which confirm the presence of a dynamic petroleum system comprising all the necessary elements for the generation and accumulation of hydrocarbons is present in the area.

Source

There are multiple source rock horizons with varying levels of maturity in the Potwar and Kohat areas. These include Patala formation (Paleocene), Distal marine shales in the Lower Cretaceous, Marine and deltaic shales of the Jurassic, Triassic, Permian, and Marine shales of the Infracambrian.

Reservoir

Several potential reservoir horizons are present throughout the stratigraphic sequence in this area ranging in age from Cambrian to Eocene. These mainly include Paleogene shelf carbonates, Cretaceous, Jurassic and Permian continental sandstones and Cambrian alluvial and shoreface sandstones (Shah, 1977; Iqbal and Shah, 1980).

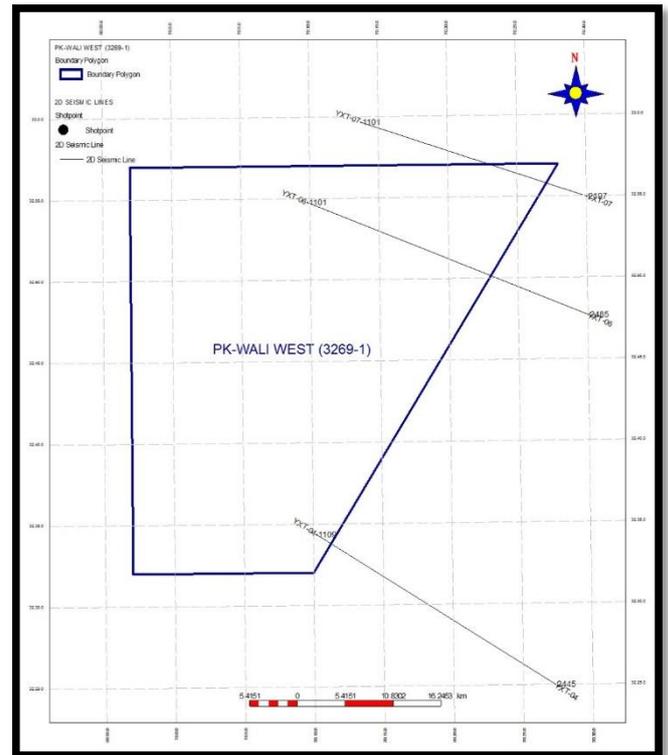
Seal

In this block area, seals may be provided by shale units, tight carbonates and regional unconformities. Several unconformities are present in this area, which might have sealing capabilities to restrict hydrocarbons.

Trap

Principal play types in the area are anticlinal structures, which are invariably faulted, mostly salt cored and at places asymmetrical to overturn. In addition, pop-up structures, fault-blocks and triangle zone traps have also been encountered. Possibility of sub-thrust plays in the footwalls of the major thrust faults and frontal faults is also there in Wali West block.

Wali West Block Base Map



Well Data

Well is not drilled in this block.

Seismic Data

2D SEISMIC DATA	3D SEISMIC DATA
Line km = 92.65	3D data is not available