

INTRODUCTION

BACKGROUND

Petroleum Exploration Project was established in 1982 AD (2039 BS) with the aim of advancing exploration of petroleum resources (oil and gas) in Nepal through a systematic and scientific approach. Since its inception, the project has actively gathered geological data through both internal resources and external cooperation, preparing comprehensive data packages that are regularly updated to reflect ongoing findings.

BASIS OF PETROLEUM POTENTIAL IN NEPAL

Petroleum production has been ongoing for a long time in Assam, India, and the Potwar region of Pakistan—both of which share geological similarities with Nepal in terms of history, structure, and stratigraphy. In Nepal, the continuous natural gas shows and occurrences of oil seeps in the Dailekh region serve as strong indicators of the presence of petroleum resources. Moreover, the Lesser Himalayan and Chure regions contain shale formations that are geologically favorable for the generation and accumulation of petroleum and natural gas, suggesting a promising potential for hydrocarbon exploration within these areas. Therefore, with the aim of promoting exploration activities, the potential area of nearly 50,000 square Kms is divided into 10 exploration blocks.

HYDROCARBON PLAYS

SOURCE

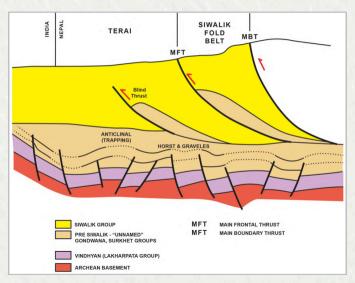
Potential source rocks are identified in the Lakharpata Group of rocks (late Precambrian – early Paleozoic), the Gondwana Rocks (Upper Paleozoic–Lower Cretaceous) and the Surkhet Group of rocks. The shale beds of these groups are found to contain 2 to 20% of Total Organic Carbon (TOC).

RESERVOIR

The potential reservoir rock is present in Lakharpata (Late Precambrian to Late Paleozoic), Gondwana (Upper Paleozoic to Lower Cretaceous), Surkhet (Upper Cretaceous – Lower Miocene), and the Siwalik (Miocene – Pleistocene) Group of rocks.

SEAL

The potential seal rocks are found in the Lower Siwalik, Surkhet and Gondwana Groups.

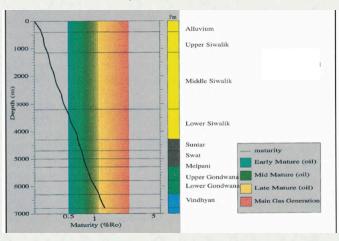


TRAP

Structural traps include anticlines and thrust/ faults developed in the Siwalik Fold Belt. The structural closures are expected associated with basement controlled faults, grabens, edge folds and fault closures, draping over pre-existing high and stratigraphic traps caused by pinch out, facies changes, permeability barriers etc.

MATURITY

Source Rock maturity basin modeling indicates that Suntar, Swat and Melpani Formations of Surkhet Group and Gondwana Group Fall within oil window, whereas the Lakharpata Group Falls in the gas window. Good maturations for gas and even oil are expected in the blind frontal thrust-folds beneath the Terai/ Siwalik areas.



AVAILABLE DATA AND LAWS

DATA PACKAGES

The Petroleum Exploration Project has its own data center housing a comprehensive archive of previous reports, including seismic interpretation, photogeological studies, aeromagnetic surveys, gravity interpretation, source and seal studies, and other geological data. The database is organized into various Data Sales Packages, and Package "A", titled General Report, is a prerequisite for companies wishing to purchase additional data or submit a formal bid for exploration acreage.

PETROLEUM LAWS

The principle law governing the petroleum operations is the Nepal Petroleum Act, 2040 (1983) which is supplemented by Petroleum Regulation 2041 (1985) and its ammendments. The act allows Nepal Government to enter into an agreement with National and International companies for petroleum exploration and production. The act grants rights and obligations to contractors such as:

- The right to export entitlements of petroleum
- exemption from all taxes and fees except a royalty of not less than 12.5%, an income tax, annual surface rentals, and miscellaneous fees of general application.
- exemption from customs duties on imported goods.
- foreign currency facilities and right to repatriate funds without restrictions.
- right to employ foreign national, and
- right to use land.

FOREIGN INVESTMENT POLICY

Nepal strongly encourages foreign investment with the economic liberalization policy and the provision of attractive fiscal incentives, the government is fully committed to cooperating with international oil and gas companies and facilitating their operations across all stages of petroleum exploration and production in the country.

RECENT DISCOVERY IN DAILEKH

As evidenced by oil seeps and gas shows in various parts of Dailekh, exploratory drilling was undertaken following comprehensive geological, geophysical, and geochemical studies. The successful completion of this drilling led to the discovery of natural gas reserves in the region.