

Geology and hydrocarbon prospects of Shaigalu and surrounding areas, District Zhob, Balochistan, Pakistan

Waliullah; Jamshed Ali Khan and Waheed Akhtar
Geological Survey of Pakistan, Quetta
j.akhan08@gmail.com

Abstract

The energy crisis has created havoc in the country. Everyone in Pakistan cries for energy and fuel. This dilemma has turned the high authorities of the government to think and manage to overcome the solution. Energy and fuel (oil and gas) paucity has made the citizens distressed, in such conditions the geological and engineering related forums have to make efforts for findings of new basins for oil and gas. In this context the Shaigalu and surrounding areas in Zhob District is proposed for detailed Geological Mapping to establish stratigraphic sequence and geophysical survey to interpret the structural setup of the basin.

The Shaigalu and the surrounding areas fall within the Lat 31°00'N-31°15'N and Long 68°45'E-69°00'E and is about 120 km southwest of Zhob city. The area is generally overlain by the sandstone and shale of the Shaigalu Formation, and shale, conglomerate / sandstone of the Bostan Formation. Broad synclines and tight anticlines with local faults exhibit the structural set up of the area. Nisai Formation of the Eocene and Murgha Faqirzai Formation of Oligocene age are exposed in the core of the anticlines with faulted contacts. The upper contact of the Murgha Faqirzai with the Shaigalu Formation of Oligocene, Miocene age is gradational. Bostan Formation (Pleistocene) is widely exposed in the broad synclines and is characterized by mute and buttes features. These synclines form large uneven plains and bad lands.

This area is situated close to Zhob Basin, represented by an anticlinorium, in which the geological sequence very silently shifts from older Triassic, Jurassic and Cretaceous Strata to Paleocene (Dungan Fm), Eocene (Nisai Fm), Oligocene (Murgha Faqirzai Fm), Miocene (Shaigalu Fm) and Pleistocene (Bostan Fm), towards the investigated area. The area is structurally not so much disturbed and shows rather complete stratigraphic sequence. The hydrocarbon potential occurs, in general, in cretaceous strata in Balochistan and to some extent the area can be related with the Karak-Kohat Basin, where oil and gas has been explored upto a depth of 4000 meters in Datta Formation (Jurassic) in Gurgori, Makori, Nashpa and Shakardara areas District Karak by MOL and OGDCL and production has been started for the last three years.

Owing to the similarities of the Shaigalu and surrounding areas with the Karak- Kohat Basin it is suggested that the Sharan Manda and Shne Bagh Shela areas may geophysically be surveyed for establishing the stratigraphic sequence and structures.