

**DRY HOLE ANALYSIS AND UPSIDE POTENTIAL OF  
BADAR SOUTH-01 WELL, CENTRAL INDUS BASIN  
PAKISTAN**



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## **ABSTRACT**

The study area, Ghauspur block lies in district Sukkur, Pakistan. The block covers the area of 2435.40 Km<sup>2</sup> and is almost 71 meters above the sea level. Geologically, the area lies on the southern margin of Central Indus Basin and is characterized as extensional tectonic regime. The research work was carried out to identify the possible reasons of failure to produce hydrocarbons in Badar South-01 well. Sui Main Limestone is a proven reservoir in the surrounding of Badar South-01 well, so there is no issue with source rock and top seal. Well correlation and isopach mapping is used to delineate dry hole analysis of Badar South-01. Sui Main Limestone reservoir zone was identified as potential candidate for lithology identification, volume of shale, porosity, net reservoir calculation after application of cut-off, resistivity of water, water saturation and hydrocarbon saturation. Average total thickness of Sui Main Limestone in the study area varies from 130 m to 135 m and average net reservoir thickness from 40m to 50m. The possible reason for dry hole of Badar South-01 well could be that hydrocarbons breached out due to lateral seal failure.

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