

**PETROPHYSICAL ANALYSIS OF MARI DEEP-06,
CENTRAL INDUS BASIN, PAKISTAN**



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ABSTRACT

Research work is carried out to evaluate the reservoir potential of Mari deep-06 located in district Ghotki, Central Indus Basin, Pakistan. The Mari gas field was discovered in 1957 by Esso Eastern Inc. (EEI). The Mari deep-06 was drilled up to Lower Goru Formation of Lower Cretaceous age. Well tops and well logs of Mari deep-06 were acquired from Landmark Resources (LMKR). Petrophysical evaluation of Mari deep-06 carried out by selection of zone of interest on the base of crossover between neutron porosity and bulk density while gamma ray also reading low. On the basis of petrophysical analysis, both carbonate and clastic reservoirs are present in the well. One prospect zone has been marked in Habib Rahi Limestone at interval of 2250 to 2494 feet. Two zones at the interval of 8744 to 8758 feet and 8920-8980 feet have been marked in lower Goru Formation. Volume of shale of zone of Habib Rahi limestone is 19.74%, where as 11.05% and 7.4% volume of shale has been calculated in Lower Goru Formation. Effective porosity of zone marked in Habib Rahi Limestone is 18.89% and the porosities of the prospect zones marked in lower Goru formation are 7.6% and 9.5% respectively, zone of Habib Rahi Limestone has little water saturation of about 16.07 and the zone of Lower Goru have 47.78% and 25.97% respectively. Zone marked within both the prospect formation have good effective porosities and so on the basis of calculated petrophysical parameters the pay zones are showing fair to good hydrocarbon potentials.

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