

**DIAGENETIC STUDIES AND RESERVOIR POTENTIAL OF THE CRETACEOUS
KAWAGARH FORMATION, KALA-CHITTA RANGE, PAKISTAN**

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Abstract

The Cretaceous Kawagarh Formation is well exposed in the Kala-Chitta Range, Northern Pakistan. It is mainly composed of limestone and marls. The Formation is 96m thick at the studied section. The lower and upper contacts are conformable with the Lumshiwal and Hangu formations respectively. The studied unit of the Kawagarh Formation is measured, logged and sampled for the diagenetic studies and their effect on reservoir quality. A total of thirty three samples were collected from the subject formation from bottom to top at equal intervals of three meters. The noticed diagenetic features includes micritization, neomorphism, compaction (physical and chemical) and cementation. Mostly stylolitic and minor vuggy and fracture porosity types are recorded in the studied formation. Under the petrographic microscope, the visually estimated porosity ranges from 2.66 % to 3.88 %. The diagenetic features observed has greatly reduced the reservoir potential of the Formation. The rock unit is intensely fractured but filling of these fractures due to the precipitation of calcite cement has greatly reduced its reservoir quality. Overall, the reservoir potential of the Kawagarh Formation is characterized as very poor.