

## Umm Arrazam, Libyan Drilling Fluid Resistivity Evaluation

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**Abstract :** Search and evaluate locale source of raw material which can be used as drilling fluid is one of most important economical target. Hopefully, to use Libyan clay that cost less than importing it from outside. Resistivity measurement and control is of primary concern in connection with electrical logging. The influences of resistivity utilizing Umm Arrazam clay were laboratory investigated at ambient condition (room temperature, atmospheric pressure) to fulfill the aim of the study. Several tests were carried-out on three sets of mud mixture with different densities (8.7, 9.0, and 9.3 ppg) as base mud. The resistivity of mud, mud filtrate, and mud cake were measured using resistivity- meter. Mud water losses were also measured. Several results obtained to describe the relationship between the resistivity ratios of mud filtrate to the mud, and the mud cake to mud. The summary of conclusion is that there are no great differences were obtained during comparison of resistivity and water loss of Umm Arrazam and Wyoming Clay.

**Keywords :** petroleum, drilling, mug, geological engineering

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