

11.19: Comparison of Resedimented with Intact Mudrock Behavior

Jim Finnegan, Tufts University

ABSTRACT

Understanding the relationship between behavior of intact core and that of resedimented material is a main objective of the GeoFluids experimental program. This research compares experimental results of tests on resedimented Gulf of Guinea Mudrock to preserved intact samples of the same material retrieved from similar depths. Gulf of Guinea Mudrock is the first kaolinite material in the GeoFluids database. The mechanical behavior of the material indicates that clay mineralogy is not the only predictor of mud rock behavior.

Compression behavior and MICP measurements of the resedimented material are compared to the intact core. Intact porosity is slightly less than resedimented porosity at 10 MPa. Resedimentation effectively recreates intact pore structure at that stress level. This research will also be the first to compare the results of undrained triaxial compression tests on intact and resedimented material.

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Fig 1: Non-preserved core used in Tufts lab for resedimentation

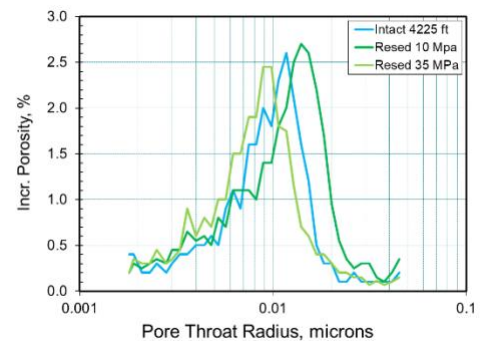


Fig 2: Mercury Porosimetry results of intact and resedimented material



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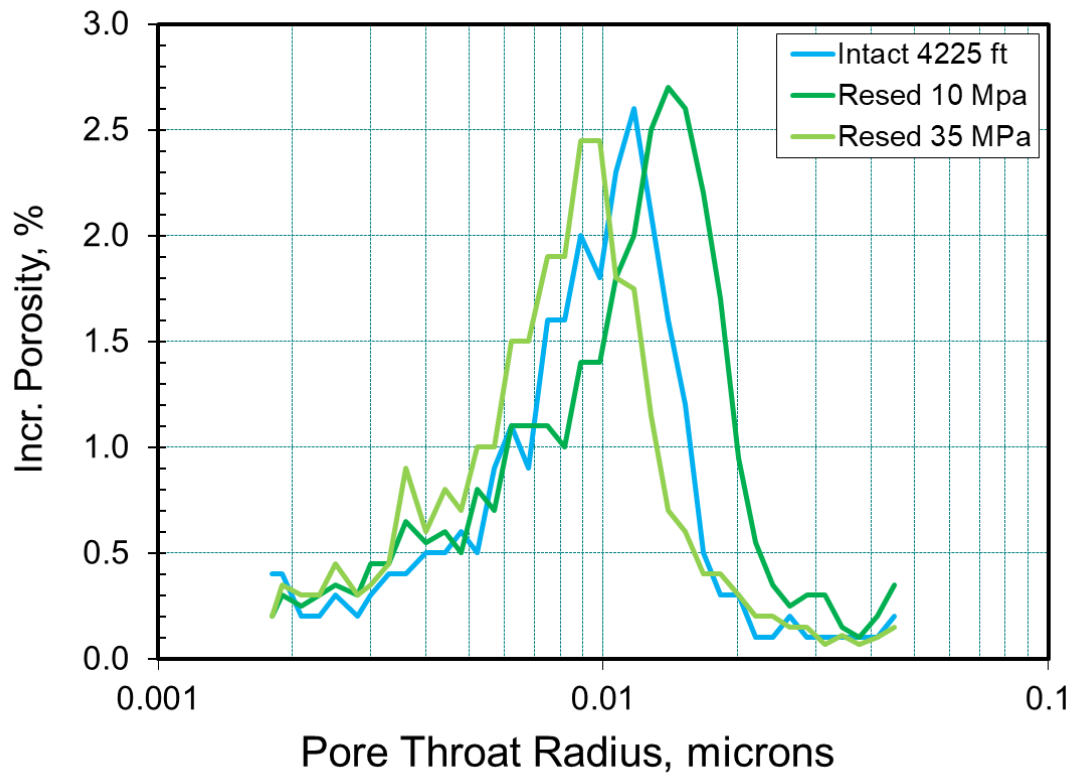


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