

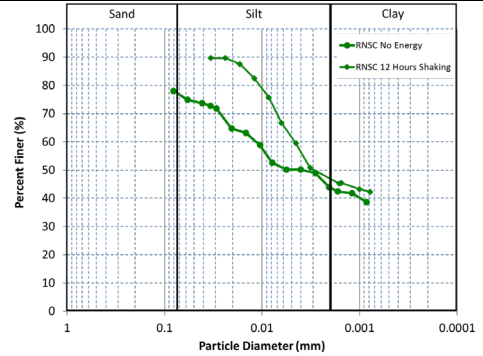
# 10.18: Effects of Processing on resedimented behavior using Nile Sediments

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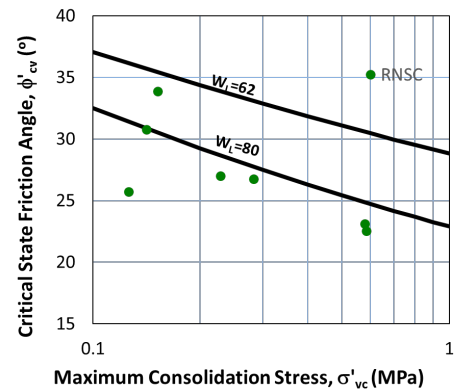
## ABSTRACT

Recent discoveries of natural gas reservoirs in the Eastern Mediterranean has made Egypt a destination for off shore deep drilling activities. The mechanical behavior of Nile Sediments in the Nile Deep Sea Fan is studied by resedimenting samples from source material excavated from the Nile flood plains. A detailed testing program encompassing Constant Rate of Strain (CRS) and triaxial shear tests investigates the consolidation pressure effects on the mechanical behavior of Nile sediments.

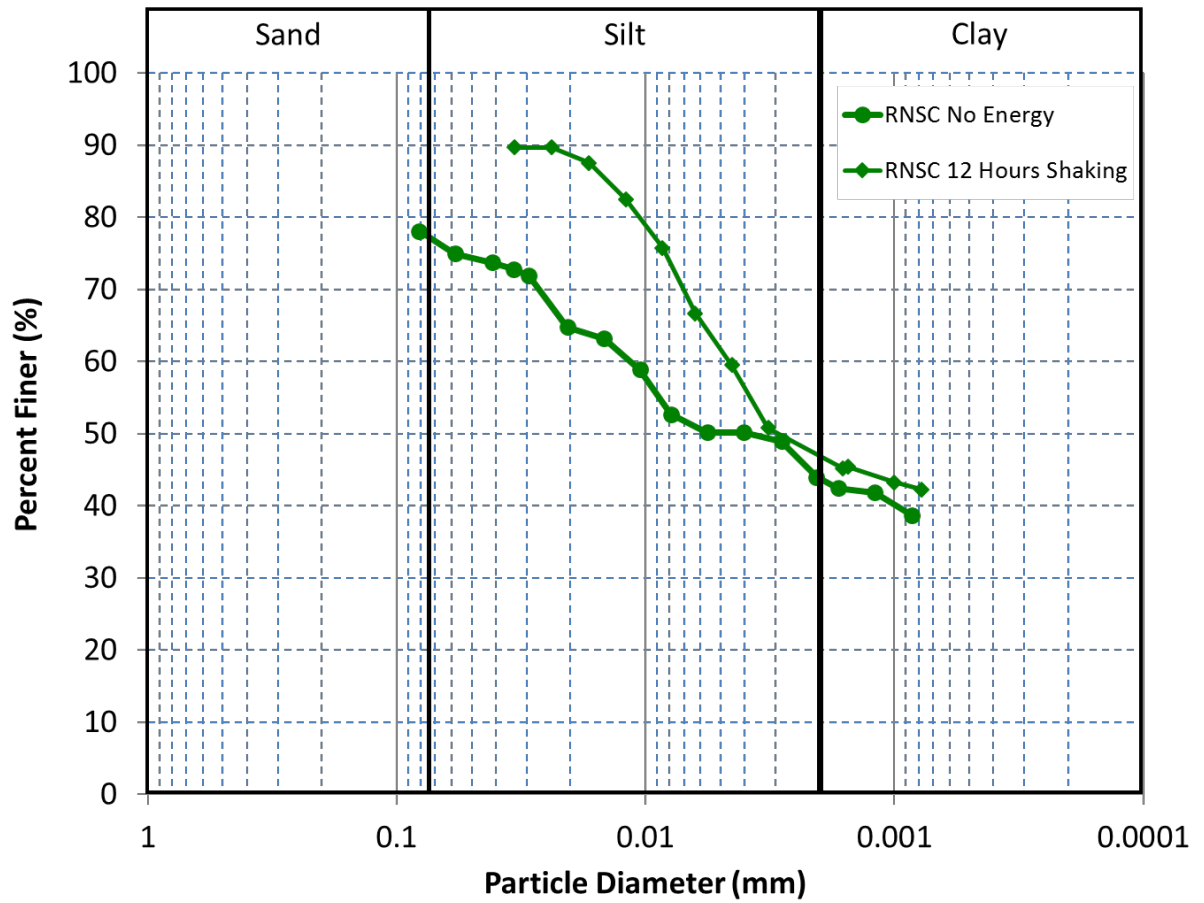
Clay aggregate structures observed present in the Nile Sediments effect the index measurements of the material. These aggregates require special processing by adding mechanical energy to break the structures for accurate index testing. The measured material behavior of RNSC is compared to the Liquid Limit correlations created from the UT GeoFluids database of materials.



**Fig 1:** Grain size distributions from sedimentation testing of RNSC with no added processing energy and 12 hours of shaking for processing.



**Fig 2:** Measured critical state friction angle of RNSC by Maximum consolidation stress with prediction correlations for  $W_L=62$  and  $W_L=80$ .



**Fig. 1: Grain size distributions from sedimentation testing of RNSC with no added processing energy and 12 hours of shaking for processing.**

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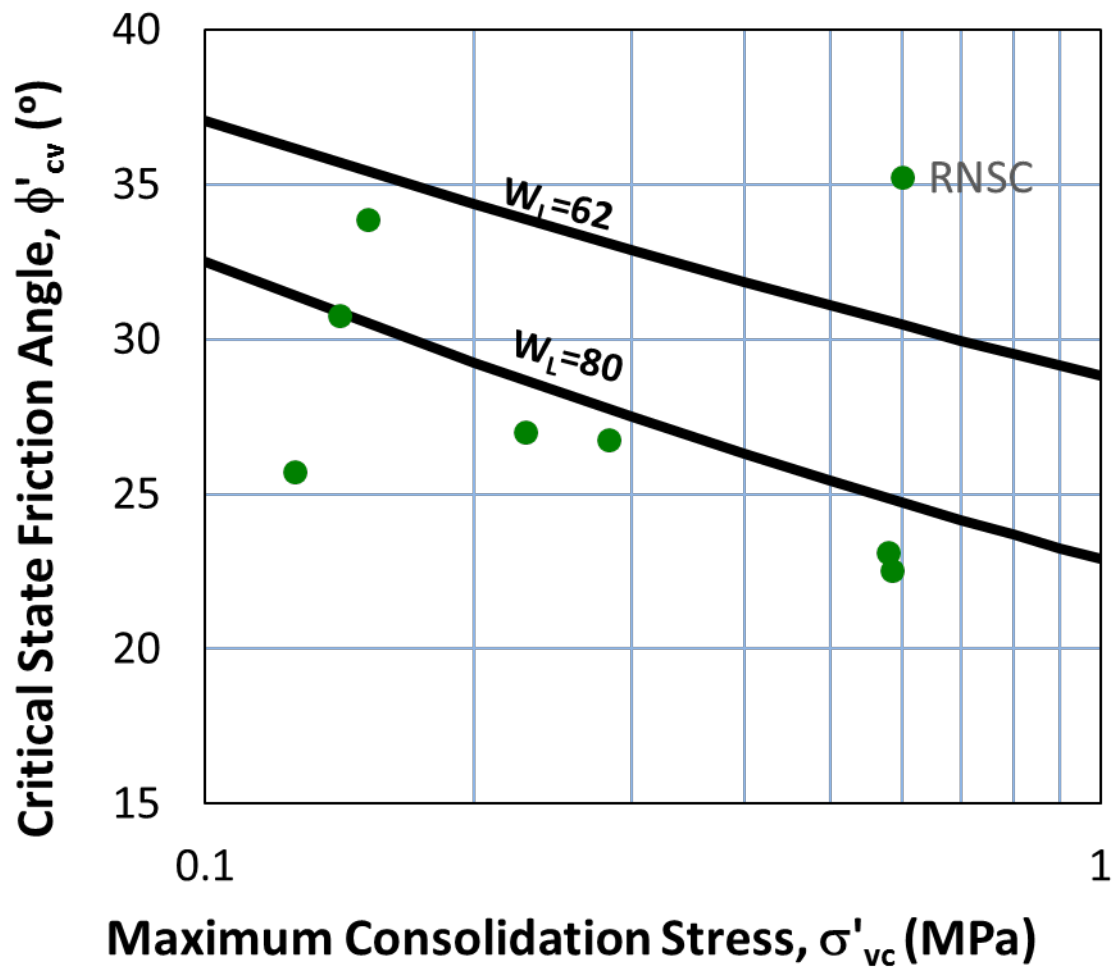


Fig. 2: Measured critical state friction angle of RNSC by Maximum consolidation stress with prediction correlations for  $W_L=62$  and  $W_L=80$ .

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