

STABILITY ANALYSIS OF THE HUDSON APRON SLOPE, OFF NEW JERSEY, U.S.A.

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Abstract

As part of the STRATAFROM project, the Hudson Apron area was selected for a detailed slope stability analysis. Results indicate that high pore pressure is necessary to trigger a failure. Under normal conditions, an excess pore pressure of more than 90% would be required for failure. On the other end, the actual strength profile would indicate a remaining marginal stability. Aggravating factors were the high sedimentation rate cyclicality and resulting layering inducing high excess pore pressures, and potentially gas pressures and earthquakes.

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