

Comparison of Slope Channel Deposits from the Shelf Edge to Lower Slope: Evidence for Changes in Erosion, Sediment Transfer, and Deposition (Magallanes Basin, Chile)

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Abstract

Deep-water slope channels are important conduits that cross continental slopes and facilitate sediment transfer from the shelf to the deep ocean. Since currents within deep-sea channels are inherently difficult to monitor in the modern, outcrop investigation offers an opportunity to better understand fundamental processes in these settings. The focus of this study is to analyze slope channel deposits in outcrop that can be directly correlated to coeval shelf edge units along a 25 km-long slope clinoform surface. Objectives include a sedimentological comparison of upper slope to lower slope channel units, which facilitates insight into the variable deposition of sand along conduits like submarine canyons and slope valleys. As such, the outcrop analogue provides context for exploration of reservoirs on the continental margins of Canada and abroad.

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