

ODP Leg 155 on the Amazon deep-sea fan: amazingly like the Meguma Group

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and

The Leg 155 Shipboard Scientific Party

Leg 155 of the Ocean Drilling Program drilled 34 shallow holes (to 500 mbsf) on the Amazon deep-sea fan, in levees, channels, depositional lobes and monstrous mass flow deposits. Stratigraphic correlation was provided principally by seismic reflection profiling and rare highstand nanno-foram clays. Four glacial-interglacial cycles were penetrated. Maximum sedimentation rates on levees were 25 m per thousand years. The recovered core can be precisely related to depositional environment by the use of seismic reflection profiles.

The Amazon Fan has a thickness of many kilometres and dimensions of hundreds of kilometres. In water depths of less than 4000 m, the fan consists almost entirely of overbank muds and silts, traversed by narrow channels that deliver coarse sand to a sandy lower fan that has little interbedded mud. Many of the facies drilled on Leg 155 resemble those seen in the Meguma Group. These new observations support previous suggestions that the Goldenville-Halifax transition could represent a major facies change.