

# **Petrophysical Properties of a Coarse-Grained Carbonate Drift Fan, Maldives**

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## **ABSTRACT**

One of the discoveries of IODP Expedition 359 to the Maldives was that the current deposits in the Kardiva Channel form a drift fan. Although the drift package in the Kardiva Channel was identified based on the geometries seen on the seismic data (Lüdmann et al., 2013), the cores revealed a facies evolution that has far-reaching implications for interpretations of neritic carbonates. No such system has been reported for carbonates before. Thus, a comprehensive documentation of the lithology, seismic and log facies, as well as diagenesis and petrophysical properties of the drift fan is needed. This documentation will be achieved in collaborative effort that started with the documentation of the sedimentology and seismic facies by Thomas Lüdmann on behalf of the entire scientific party. The drift fan has geometries and sedimentologic characteristics similar to those of the Cretaceous Orfento Formation in the Maiella Mountains that has been studied in detail, but for which several depositional models have been proposed (Vecsei 1998; Mutti et al., 1996). It is our working hypothesis that these Cretaceous coarse-grained deposits are also a drift fan.