

## **Upper Cretaceous Turbidites of the Northern Demerara Plateau - Out of Africa?**

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### **ABSTRACT**

Tulow Oil has been exploring offshore Suriname since 2010. In Block 47, a very high-quality 3D was acquired in 2012, and a series of canyon-fed, turbidite systems of Upper Cretaceous age were identified on the data. These turbidites, which exhibit clear depositional geometries, both channel-levee and a form of braided channel morphology, are evidently sand-prone, something supported by the same EEI analysis which has proven so successful elsewhere along the equatorial margins in predicting sands. The canyons, trend E-W and NE-SW off the Demerara High. The conundrum that this poses for the interpreter is this: following continental separation at the western end of the Equatorial Atlantic, there is a lot of evidence that the Demerara, along with the rest of the Suriname shelf foundered rapidly, and deep marine conditions were established along the margin by Cenomanian times. The sources of coarse clastic were pushed far to the south of the north-western edge of the Demerara Platform, and the intervening outer shelf shows little or no sign of a mechanism for sediment being transported across it at this time. So how exactly do sandy sediments get carried to the far edge of the Demerara Platform wherein to be funnelled down these conspicuous canyons?