

Will Broadband Seismic Integrating mCSEM Data be Able to De-risk Fluids in the Foz do Amazonas Basin?

Gautier Baudot¹

¹Total

ABSTRACT

Following French Guiana's Zaedyus discovery, Total was awarded operatorship of five deep water exploration blocks (3800 square km) in the Foz Do Amazonas basin. Since then, Total acquired 11.500 square km of Broadband 3D seismic in 2015 and purchased over 3600 square km of CSEM data from EMGS over its five operated blocks of Foz Do Amazonas basin. The 3D seismic confirmed the presence of massive Campanian turbiditic sequences. The AVO and rock physics studies have played an important role in the prospect interpretation. The available 3D seismic data is an excellent lithological indicator allowing mapping of sands. Nevertheless, the mineral content of reservoirs, burial, specific petrophysical parameters and high fluid pressure make the Upper Cretaceous reservoirs the Class I AVO sands without a fluid effect from the seismic data (calibration from offset wells). Assuming seismic fluid indicator limitations in the basin, the CSEM technology inverted through highly calibrated geological model could be used as a potential DHI. This presentation describes a case study of a CSEM anomaly supported prospect.