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Freites Formation's Prospectivity South Of The Tacata Field. Eastern Venezuela Basin

The study area is located to the northeast of the Anaco town of the Anzoátegui State, eastern Venezuela. A team of expert from PDVSA interpreted a 3D seismic volume using sequence stratigraphic analysis as well as state of the art visualization tools to fully understand the geology. The results of the study may change the prospectivity of the Freites Formation, which is not known to be oil prone in the area. The seismic, in conjunction with the well data available helped to define: three third order stratigraphic sequences, two basin's floor fans, an incised valley, a low stand system track surface, and a maximum flooding surface (FS1). The incised valley has a northeastern trend and it was responsible for the formation of the basin's floor fans complexes. The basin's floor fans are within the Sequence 0, and are faulted by listric faults that developed during the sedimentation of Sequence 1. The system is embedded within the shales of the Freites Formation, and it is interpreted to have communication with the deep oil prone Oficina Formation by faults that end at the base of FS1. The estimated reserves are 97.4 MBL, 134.2 MMMPC with a possibility of success of 68%. The latter percentage is due to the uncertainty of the presence of sand. We have interpreted this as a new play on the Freites Formation, and there is the possibility of similar plays to the east. This paper will present the sequence stratigraphy analysis as well as the assessment.