

Unveiling Karst Features in Miocene Carbonate Reservoirs of Central Luconia-Malaysia: Case Study of F23 Field's Karstification

Authors : Abd Al-Salam Al-Masgari, Haylay Tsegab, Ismailalwali Babikir, Monera A. Shoieb

Abstract : We present a study of Malaysia's Central Luconia region, which is an essential deposit of Miocene carbonate reservoirs. This study aims to identify and map areas of selected carbonate platforms, develop high-resolution statistical karst models, and generate comprehensive karst geobody models for selected carbonate fields. This study uses seismic characterization and advanced geophysical surveys to identify karst signatures in Miocene carbonate reservoirs. The results highlight the use of variance, RMS, RGB colour blending, and 3D visualization Prop seismic sequence stratigraphy seismic attributes to visualize the karstified areas across the F23 field of Central Luconia. The offshore karst model serves as a powerful visualization tool to reveal the karstification of carbonate sediments of interest. The results of this study contribute to a better understanding of the karst distribution of Miocene carbonate reservoirs in Central Luconia, which are essential for hydrocarbon exploration and production. This is because these features significantly impact the reservoir geometry, flow path and characteristics.

Keywords : karst, central Luconia, seismic attributes, Miocene carbonate build-ups

Conference Title : ICGES 2023 : International Conference on Geoscience and Environmental Science

Conference Location : Sydney, Australia

Conference Dates : May 11-12, 2023