

Stratigraphic Discrimination Using High Resolution Seismic Data and Advanced 3D Interpretation Techniques, A Case History from the Bloque VIII Field, Lake Maracaibo, Venezuela

Ann M. Mezones and *Andres G. Espeso. PDVSA Intevep / Exploración y Producción, PDVSA Intevep, Urb. Sta. Rosa, Sector El Tambor. Edif. Fase A. Piso 3, Los Teques, 1201, Venezuela, phone: 58-212-330.66.86, fax: 58-212-330.76.33, mezonesa@pdvsa.com*

Detailed interpretation of well logs and 3D Seismic data is conventionally used in both the development and the exploitation plan of oil accumulations. However, the remaining hydrocarbon potential is difficult to be defined with traditional interpretation schemes and low resolution seismic in most of mature fields, at this point the field may be classified as marginal.

To identify new hydrocarbon opportunities either from new oil reservoirs or by-passed oil recovery, and to reduce the risk of new well locations, the Misoa Formation in the Bloque VIII field of Lake Maracaibo was studied. By using a new high-resolution seismic imaging technology, combined with the effort of 3D interpretation and visualization techniques, was possible to increase the certainty of the final highly stratigraphic and sedimentological complex model, by discriminating thin stratigraphic features and lateral heterogeneities not observed in previous seismic interpretations resulting from the increase of seismic resolution of the Eocene C sandstones from 140 ft. to 30 ft.
