

## **Seismic Interpretation for Structure, Stratigraphy and Geomorphology: A Case Study,**

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### **Abstract**

Seismic interpretation techniques have been developed to assist the interpreter by imaging and semi-automatically interpreting structure, stratigraphy and geomorphology in 3D seismic volumes. Complex faulting masks the presence of depositional systems in seismic volumes. Unfortunately, the image of a fault produced by an edge-imaging attribute is discontinuous and incomplete, and does not support auto tracking of 3D fault surfaces. This case study from offshore NW Australia shows that at complex faulting area, fault interpretation of the targeted interval can be identified. The area is located at Barrow Sub Basin of North Carnarvon Basin, surrounded by major oil and gas accumulations. It is an active exploration area with established infrastructure and proven Triassic to Cenozoic Plays. With the removal of the structure and reconstruction of paleo-depositional environment, the stratigraphy and geomorphology of the area have provided support to the understanding of the petroleum system.