

## **Sumandak: discovery in a forgotten play**

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For years it was thought that the Stage IVC sediments along the footwall of Moris fault in NW Sabah were either not prolific or gas prone. Wells drilled in this area did not produce encouraging results. The mainly stratigraphic plays ranging from basin floor fans to eroded shelf were soon forgotten.

The latest 2D seismic data acquired with a longer cable identified series of this forgotten play trending N-S. The processed data revealed evidences of possible petroleum accumulation such as structurally conformable anomalies.

Sequence stratigraphic approach was applied in constructing the depositional model. Three major sequence boundaries marked by unconformities were identified in the Stage IVC, with the depositional environment ranged from deep water to coastal setting.

The basin modelling study showed that petroleum was generated and migrated into this area from the adjacent basin in the east and trapped in this stratigraphic play.

The AVO modelling could not conclusively confirmed the presence of petroleum due to the lack of shear wave data. However, the presence of structurally conformable positive AVO together with amplitude shut-offs and flat events in the stacked data provided some confidence in the existence of petroleum accumulation in the traps.

As the result of the studies, PCSB has decided to test this forgotten play by drilling the Sumandak-1 well in 2001. The result has confirmed the presence of substantial petroleum accumulation in Stage IVC.

This discovery is significant towards understanding the petroleum system in the area and opening new ideas for further exploration in NW Sabah basin.