Depositional Environment of the Late Cretaceous Rakopi Formation in the Deepwater Taranaki Basin, New Zealand

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The Late Cretaceous Rakopi Formation in the Deepwater Taranaki Basin is one of the most important source rocks and potential reservoirs in the Taranaki Basin. This study aims to interpret the depositional environments of the Rakopi Formation in the Deepwater Taranaki Basin by using seismic and well log interpretations. Based on seismic interpretation, the Rakopi Formation was interpreted to deposit in a delta setting which developed from the prograding delta into the distributary channels and swamps deposits on the delta plain. Sandstone distributions can be demonstrated from seismic attribute map in the prograding delta. Well log data provided significant source rock intervals consisting mainly of coal measures and were developed in the delta plain setting. The results from this study also shown that the coal intervals are generally corresponding to high negative amplitude reflections. Thus, integration of seismic and well log data can be used to reveal reservoir and source rock distributions in the petroleum exploration areas.