



Detecting the Occurrence of Dolomite Cementated Zones in the Otway and Gippsland Basins.

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Abstract:

Dolomite cemented zones have been recognized in both Otway and Gippsland Basins. These cemented zones have significant effects on the reservoir performance as they can degrade or enhance reservoir sweep. The CO₂CRC CO₂ sequestration project in Otway Basin may be affected by these carbonate cemented zones, where it has been detected in CRC-2 and CRC-1. Therefore, the aim of this project is to generate an empirical model using well log data to detect the dolomite cemented zones in the Otway and Gippsland Basins.

To achieve this goal, log data have been analyzed to firstly create a motif of cemented zones in the on-shore lower Paaratte Formation of Otway Basin. Then, verify cemented zones in the Casino Field of the Shipwreck Trough (offshore Paaratte Formation). As a result, the dolomitisation interval motifs will be generated from Paaratte Formation of Otway Basin and will be used to detect the cemented zones in the Gippsland basin.

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