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## **Are there any gas hydrates on the passive continental margins of New Zealand?**

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Characterisation of New Zealand's gas hydrate deposits has been limited to locations where bottom simulating reflections (BSRs) are identified on two active continental margins: the Hikurangi Margin east of the North Island and the Fiordland Margin southwest of the South Island. Much of the rest of New Zealand's margins consist of basins that are potentially rich in hydrocarbon resources – but where no conclusive BSRs have been identified.

An extensive data set of publicly accessible bathymetric and seismic reflection data from the Canterbury and Great South Basins, east and south of the South Island, have been used to map the extent of the hydrate stability zone in this region. These data are combined with information on heat flow, slope processes, and seafloor hydrology to produce an estimate of gas hydrate extent and concentration. It is anticipated that this work will be tested by current results of petroleum industry exploration off the coast of southern New Zealand.