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Title	<i>Faulted New Zealand Caprocks</i>
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Abstract for	<i>Poster</i>

Faults and fractures can increase the bulk permeability of caprocks and reduce the potential for reservoirs to store CO₂ long term. How and where faults will promote fault leakage are key questions that have yet to be answered. In this poster we present an overview of the research we are conducting within the CO₂CRC to improve understanding of how and where faults may facilitate the flow of CO₂ from storage containers. Analysis of outcropping faulted mudstones from the Taranaki Basin and Whakataki in New Zealand have been used to determine the; i) architecture of open fractures and fault rock within fault zones, ii) dimensions, spacing and scaling properties of faults and fractures and, iii) connectedness of fractures within the mudstone units and across mudstone-sandstone formation contacts. Results to date suggest that, for the outcrops studied, the geometries and densities of faults are similar in sandstone (reservoir) and mudstone (caprock) units, that small scale faults and fractures are focused within larger fault zones and that small faults (< 1m displacement – well below the limit of seismic resolution) have the potential to extend vertically for hundreds of metres in caprocks. The poster will present the results and discuss the implications for CO₂ migration.