

THE PETROLEUM GEOLOGY OF BRUNEI

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Brunei lies within the Baram Delta Basin, an early Miocene to Recent depression filled with 35,000 - 45,000 feet of northward prograding deltaic and associated non-deltaic clastic wedges. Regressive topset sequences (i.e. coastal distributary channels, beach barriers, etc.) form the main exploration objectives.

The degree of deformation within the Brunei sector of the Baram Delta Basin decreases from south to north and is currently considered to be the result of gravity tectonics controlled by differential basin margin movements and basin morphology. On- and near-shore, en-echelon complexly faulted anticlinal ridges separated by broad, deep unfaulted synclines are found, while further offshore, N- and S-trending growth faults, lacking well-expressed associated rollover structures, occur. Hydrocarbons have been discovered in both structural provinces.

Shell began exploration in Brunei in 1913 and to date have shot over 60,000 km of seismic and drilled 89 exploration wells, including 54 off-shore. From these activities, 10 commercially exploitable oil/gas fields, including the giants - Seria, S.W. Ampa and Champion - and 8 presently marginal fields, have been found. As such, tiny Brunei (5200 mi²) surely must rank as one of the most prolific hydrocarbon provinces/square mile in the world.

The search continues, but now for the ever smaller fault/dip closure and the subtle stratigraphic trap where that elusive, but increasingly more valuable barrel, may be trapped.
