

“Zealandia: the seventh continent”

Hamish CAMPBELL

GNS Science

It is not very often that a new continent is discovered, and this is probably the last. It is called Zealandia and was named in 1995. In the past few decades it has become apparent that New Zealand and New Caledonia are the largest emergent land areas within a large tract of continental crust that is 94% submarine. Zealandia broke away from Gondwana with formation of the Tasman Sea floor which is comprised of oceanic crust of Late Cretaceous to Eocene age. Rifting of Zealandia lasted about 30 million years. Interpretation of magnetic signatures has established that the oldest basalts in the Tasman Sea are about 83 million years old and the youngest are about 53 million. It is notable that Zealandia predates the separation of Antarctica and Australia by about 50 million years. As Zealandia rifted away to the north and east of Gondwana, it was stretched and thinned and as a consequence it slowly sank. Today, the 2,500 metre isobath serves as a proxy for the edge of Zealandia – this is taken as the natural boundary between oceanic crust and continental crust. The recognition of Zealandia and its history has massive implications for any modern interpretation of the southwest Pacific in terms of geology, paleobiogeography and occurrence of natural resources.