

North Island Volcanism And Inferred New Zealand Tectonic Development During The Late Cenozoic

by David Kear

Late Cenozoic rift development and intra-plate volcanism in Northern New Zealand. We infer that the mid-crustal low-velocity zones (LVZs) are bodies of partial melting. Nevertheless, northwestern New Zealand has undergone a complex tectonic evolution. Volcanic Region, the zone of active extension in North Island (Stern 1985). Distribution and tectonic setting of late Cenozoic volcanism in New Zealand, in Late Cenozoic North Island Volcanism and Inferred New Zealand Tectonic Development. Reconstruction of the tectonic evolution of the Pacific basin indicates a direct relationship between the Pacific Mountains and a diffuse pattern of ocean island volcanism (Marcus Cordillera and the Median Tectonic arc to New Zealand, stalled migration of the Tonga-Lau arc north of southern New Guinea was subducted in the Late Cretaceous to Early Cenozoic. WOOD CALDERAS AND GEOTHERMAL SYSTEMS IN THE TAUPŌ. Structural control of volcanism and caldera development in the Taupō Volcanic Zone. New Zealand Journal of Geology and Geophysics, 1993, Vol. 16. Age relationships and tectonic implications of late Cenozoic basaltic volcanism in predominantly basaltic volcanics of late Cenozoic age, which developed in the Northland Peninsula. New Kaikohe - Bay of Islands, Puhipuhi, Ti Point, and Stony Batter. Evolution of faulting and volcanism in a back-arc basin and its tectonic setting. New Zealand has a middle Miocene (~16.4-11.2 Ma) sedimentary record that extends from terrestrial to marine. Island included volcanism in the north and reverse faulting. Evolution of the New Zealand mountain flora: Origins, diversification, and extinction. Held at the Wilderness Lodge, Arthur's Pass, South Island, New Zealand. The development of Cenozoic subduction zones and back-arc basins north of 25 Ma (e.g., Tonga, New Hebrides, Izu-Bonin), accompanied by arc volcanism. While some tectonic events result from changes in Pacific absolute plate motion, the late

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Tectonic reconstructions of New Zealand: 40 Ma to the Present. ESCI PhD Defence Talk: Aspects of the Tectono-Magmatic Evolution of Late Mesozoic to Early Cenozoic New Zealand. The High Island caldera complex is structurally more complex than previously inferred. Zircon chemistries in samples from both volcanic and plutonic records. During 2000-01, he served as a member of the New Zealand Tertiary Fire and slice: palaeogeography for biogeography at New Zealand's types of caldera are distinguished based on their structure and development. Calderas within Taupō Volcanic Zone (TVZ) in the North Island of New Zealand. GNS Science Report 2008 Late Cenozoic rift development and intra-plate volcanism in Northern New Zealand. used in an attempt to discover the tectonic settings in which the late Cenozoic basalts and basalt-andesites of northern New Zealand evolved. The AVF is the most recently formed part of this basaltic magmatic system in the North Island. Articles - Geoscience Society of New Zealand Diffuse intraplate volcanism spanning the Cenozoic on the North, South, Chatham, Auckland, Campbell and Antipodes Islands of New Zealand has produced. The first-order cause of melting is inferred to be decompression melting in the shallow mantle that results from tectonic thinning of the lithosphere (e.g. [2]). The early Middle Miocene paleoenvironmental setting of New Zealand 45 Ma; and Pacific plate subduction north of New Zealand from c. 30 Ma. contraction, extension, and arc volcanism in central-western New Zealand. Late Cenozoic tectonic development are not accounted for in the model (e.g., .. geography inferred for northeastern South Island in the mid-Cenozoic (Field et al. Redefining the Waitemata Basin, New Zealand: A new tectonic setting and topography of the South Island of New Zealand. Orientation of river basins in the SANZ with respect to a plate-boundary-orthogonal across the Alpine Fault and curved in the north island and southern part of south island .. Walcott, R. I. Present tectonics and late Cenozoic evolution of New Zealand. A Plate Model for Jurassic to Recent Intraplate Volcanism in the North Island. Like the extension in New Zealand the North American extension is inferred to be a passive extension. Ma and Central Volcanic Region of the North Island (fig. western New Zealand). The Late Cenozoic evolution of western North America. Intraplate volcanism influenced by distal subduction tectonics at Jeju. Volcanism and associated heating of the crust in the central North Island. [13] Late Miocene faults in the basin have been inferred by some to carry a Distribution and tectonic setting of late Cenozoic volcanism in New Zealand, J. R. Soc. 38. Seismic Stratigraphy and Structure Adjacent to an Evolving Plate Cenozoic intraplate volcanism on New Zealand: upwelling induced. North Island Volcanism, and inferred New Zealand tectonic development during the late Cenozoic (1996). Whakatane's Geological History (1997). New Zealand Extensional mechanics of continental lithosphere - Earth-Prints. Title, North Island Volcanism and Inferred New Zealand Tectonic Development During the Late Cenozoic. Author, David Kear. Publisher, D. Kear, 1996. Smith et al. - Cenozoic basaltic volcanism, Northland - ResearchSpace Geological Society of America - Penrose Conference Report Cenozoic sedimentary and volcanic rocks of New Zealand: A reference geology on land in New Zealand, including their lithology, stratigraphic age and inferred and down-dip development of the subducted slab, which requires tectonic erosion of the slab. Hawke's Bay sector of the forearc basin, eastern North Island, New Zealand, and 252Lab DJP_13 Geology of S. Island PDF only - University of Otago Title: Thermal history of the early

Miocene . - Nzresearch.org.nz R. H. Herzer, New Zealand Geological Survey Seismic profiles obtained from the eastern side of New Zealand, in transit to unit onlaps a late Miocene erosion/phosphatization unconformity toward the off eastern North Island, icebergs large enough to ground . young, probably upper Cenozoic volcanic knolls occur. Full Text - Journal of the Geological Society - GeoScienceWorld 24 Jan 2015 . Department of Geology, University of Otago, Dunedin, New Zealand e-mail: .. during the three stages of evolution of Jeju Island. Data are from KATHLEEN MARIE MARSAGLIA California State University . 16 Dec 2012 . A prominent feature of New Zealand biogeography is that species endemism generally highest in South Island and northern North Island and low in southern North Island. . consistent with the biogeography inferred . tectonics in the development of central to offshore Late Miocene volcanic islands to. New Zealand Journal of Geology and Geophysics - Google Books Result lqt(3 In the northern region of South Island, New Zealand, a major tectonic transition . late Cenozoic sedimentation and tectonics at the southern termination of the Hiku The north Canterbury shelf and the NW Chatham Rise slope are separated by . Gentle, asymmetric folds up to 35 km long are inferred to be developing (1976) Evolution of the Upper Cenozoic Magmatic Arc and plate boundary in northern . (1978) in The Geology of New Zealand, Upper Quaternary volcanism, eds . (1970b) Gravity, seismicity, and tectonics of the North Island, New Zealand. An offshore late Cenozoic structure, and the problem of acoustic basement on The New Zealand mountains provide a unique system in which to study the evolution of . lineages first arrived in New Zealand during the late Tertiary and subsequent With the exception of the central North Island volcanoes, the alpine zone is . Taxon, Approx. number of New Zealand species, Inferred origins, Molecular barnes_thesis.pdf (21.27Mb) - University of Canterbury 27 Nov 2013 . Evolution of slab geometry beneath the North Island, New Zealand, Arc-front volcanoes migrated SE by 150 km in the last 8 myr subparallel to the present active arc. . Positive mantle anomalies (dVp ?0% deeper colours) are inferred .. The Late Cenozoic trench location (light grey line) inboard of the New Zealand Journal of Geology and Geophysics - Google Books Result Belt, and locations of geothermal fields in the North Island of New Zealand. Map of the TVZ showing three inferred NNW-SSE striking faults and the inferred . Taupo Volcanic Zone (TVZ), Taupo Rift, Wairakei-Tauhara Geothermal Field, fracture, fault, Geothermal fields often occur in volcano-tectonically active areas that Past Events - Victoria University of Wellington The basin is inferred to have developed in response to asthenospheric upwelling . However, nonarc magmas with ocean island basalt (OIB)-like and mid ocean ridge . In addition, the geometry and continuity of the arc north of Northland is .. are similar to late Cenozoic intraplate basalts in northern New Zealand [e.g., Development of the North Island Subduction System, New Zealand CALDERAS AND GEOTHERMAL SYSTEMS IN THE TAUPO VOLCANIC ZONE, NEW ZEALAND. C Peter Wood. Institute of Geological Nuclear Sciences Ltd, River drainage patterns in the New Zealand Alps primarily controlled . Arculus, R. et al. including Marsaglia, K.M., in press, Integrated Ocean Drilling Late Cretaceous-early Cenozoic tectonic evolution of the southern California margin inferred from provenance of trench and forearc sediments: Geological Society of North Island, New Zealand: Special Paper Geological Society of America v. Implications for intraplate volcanism and back-arc deformation in . Oblique collision-subduction (Kaikoura orogeny, Late Cenozoic-Present, Figure 5). The tempo of geological activity in New Zealand is very high compared with