

# Gondwana reunited

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South African research in Dronning Maud Land, Antarctica, has facilitated comparison of this region with crustal provinces in south-eastern Africa, revealing a considerable similarity in the evolution of these regions. A major mid- to late-Proterozoic orogenic terrain in Dronning Maud Land, comprising the HU Sverdrupfjella and Heimefrontfjella regions and termed the Maudheim Province, is very similar in age, lithology, structural style and metamorphic history to the Mozambique and Natal orogenic provinces of Kibaran age (1 000 million

years) in south-eastern Africa (Groenewald *et al*, 1991). Figure 2 (after Groenewald *et al*, 1991) shows a simplified geological map of south-eastern Africa and Dronning Maud Land, juxtaposed in the reconstruction of Martin and Hartnady (1986). The above geological evidence for the

reconstruction of the supercontinent of Gondwana is further supported by geophysical research on the magnetic data covering not only these regions but also the intervening Falkland Plateau (Corner *et al*, 1991). Figure 1 shows a colour composite of the aeromagnetic data covering southern Africa, the Falkland Plateau and western Dronning Maud Land within a Gondwana framework. A key feature is the deep-seated Beattie magnetic anomaly which spans virtually the entire sub-continent. The arrows in Figure 1 point to the interpreted extensions of the Beattie anomaly into the Falkland Plateau and western Dronning Maud Land. The disposition of these anomalies clearly suggests that they formed a belt within Gondwana, having a common origin in the metamorphic terrains surrounding the Kaapvaal craton.

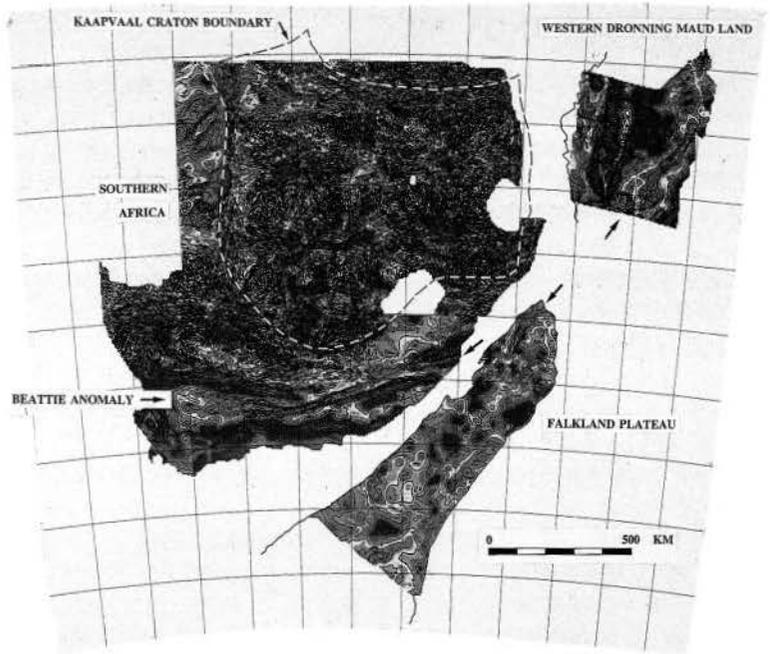


Fig 1 Colour composite image of magnetic data covering southern Africa, the Falkland Plateau and western Dronning Maud Land within a Gondwana framework

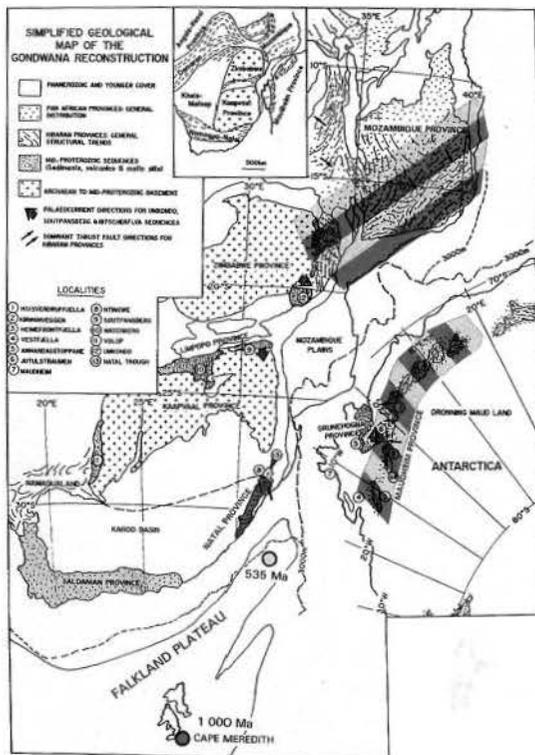


Fig 2 Simplified geological map of south-eastern Africa juxtaposed against western Dronning Maud Land in Antarctica, within a Gondwana framework

## REFERENCES

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