

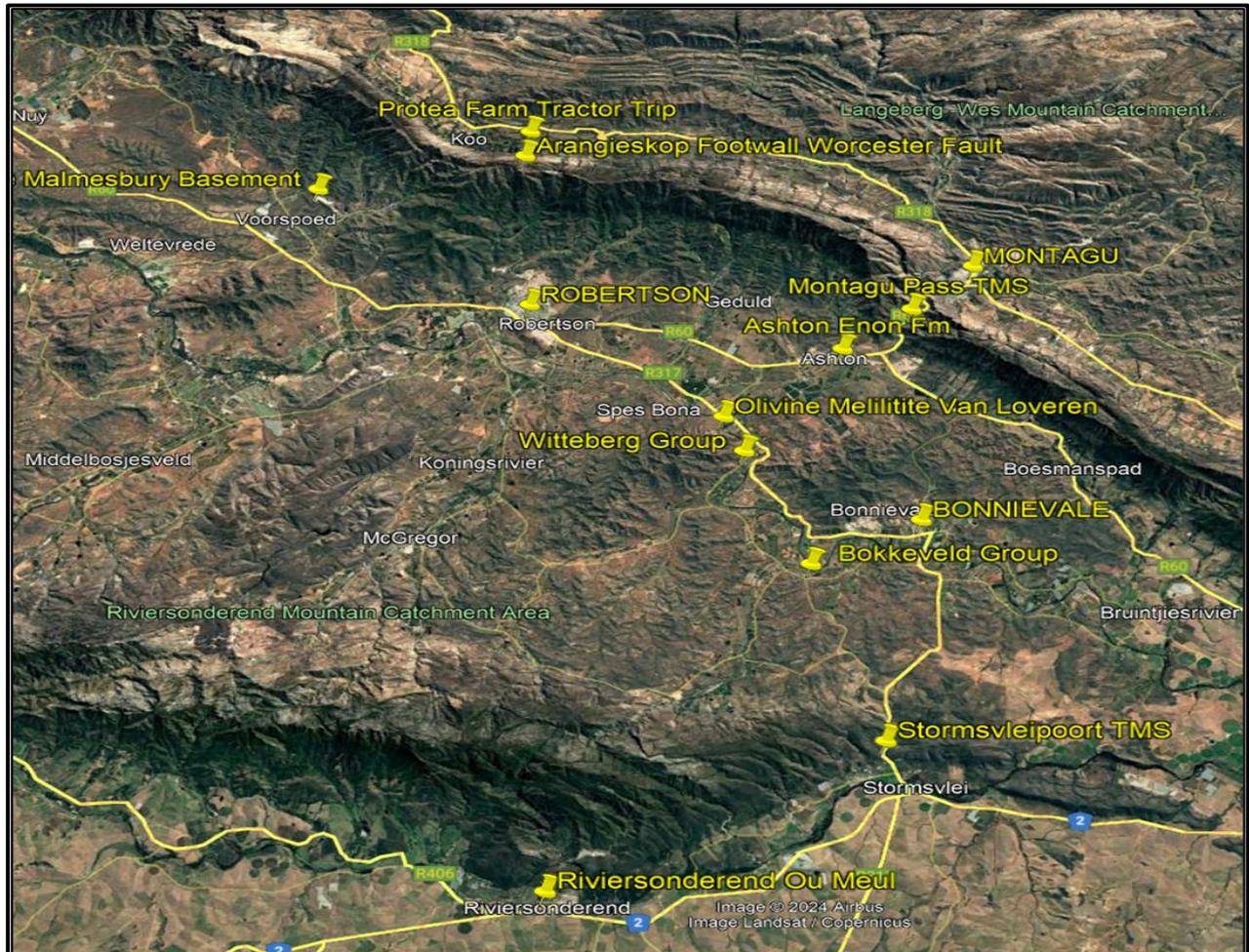
OVERBERG GEOSCIENTISTS GROUP (OGG)

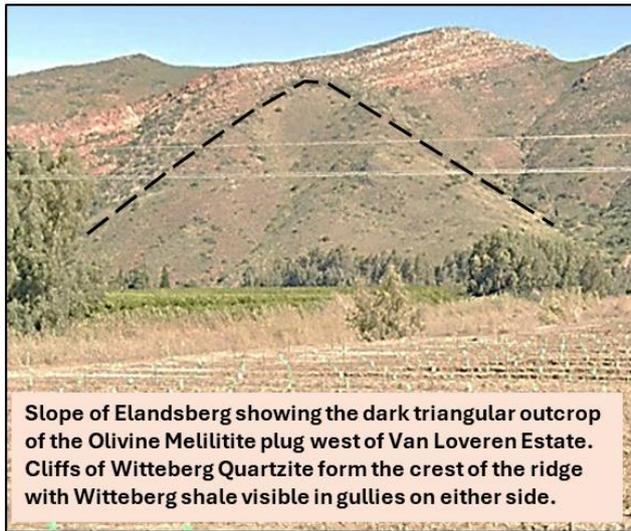
Geological Excursion: Bonnievale, Robertson, Montagu and the Keisie Valley (9 – 11 May, 2025)

Planning is underway for a two-day excursion to experience the “Geology of Bonnievale, Robertson, Montagu and the Keisie Valley” for Friday, Saturday and Sunday morning of 9 - 11 May, 2025. The group will overnight in Montagu, and return home on Sunday morning.

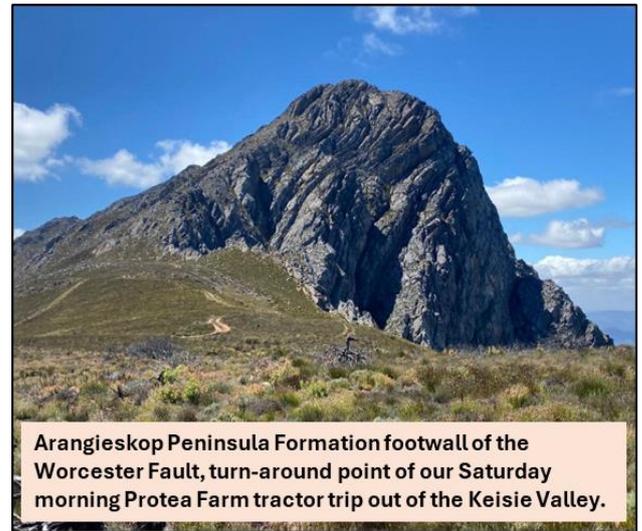
The excursion will provide insight into the geological history and outcrops of the Malmesbury Basement (>600Ma), Jurassic Enon conglomerates/sediments, the Olivine-melilitite pipe-like intrusives into the Witteberg Group, an opportunity to stand on the hanging-wall of the Worcester fault looking over the Ashton, Robertson Breede River Valley, amongst other localities and stops of interest.

Estimated costs per person are as follows: Van Loveren wine tasting and snack meal R200, Montagu Caravan Park bungalow accommodation R450 pp per night (must stay 2 nights), Protea Farm tractor trip, potjiekos lunch & wine tasting R480, and registration & Guidebook (R120) for a total of about R1700 pp, plus the costs of your other meals, refreshments and fuel. Geoexcursion participants will be responsible for booking their Montagu accommodation.





Slope of Elandsberg showing the dark triangular outcrop of the Olivine Melilitite plug west of Van Loveren Estate. Cliffs of Witteberg Quartzite form the crest of the ridge with Witteberg shale visible in gullies on either side.



Arangieskop Peninsula Formation footwall of the Worcester Fault, turn-around point of our Saturday morning Protea Farm tractor trip out of the Keisie Valley.

The Goedemoed olivine-melilitite outcrop on the slope of Elandsberg (*image above left*) has columnar jointing, due to contraction of the cooling magma as it crystallised. This intrusion has been dated at $63,7 \pm 1,3$ Ma (Duncan et al., 1978). It is part of an arc of olivine melilitite intrusions located at Heidelberg, Robertson, Lambert's Bay, Sutherland, and in Bushmanland & Namaqualand. These Olivine-melilitite intrusions are typically found *off-craton* in the *Mobile-belts* which surround the ancient stable *Archean Kaapvaal Craton* of central South Africa, Botswana and Zimbabwe.

In comparison, the stable Archean (>2,5 billion years) *Kaapvaal Craton*, is host to numerous deeper-seated kimberlites, including those that have transported diamonds to the earth's surface e.g. Kimberley, Finsch, Cullinan & Venetia diamondiferous kimberlites and diamond mines.

Geologist Jean Malan, who has a wealth of knowledge of the area to be covered, will be Guiding this excursion. Further details will follow in early 2025. For more information or if you wish to reserve you spot in the interim, please contact Jean Malan at jeanamalan@gmail.com.

Information of interest:

Protea Farm – Montagu Tractor Trips

<https://proteafarm.co.za/tractortrip/>

Information on Montagu

<https://www.montagu.org.za/information/coqmanskloof/>

STORIES IN STONE FURTHER AFIELD: THE CAPE FOLD BELT - (Duncan Miller, 20 November, 2020)

<http://ctminsoc.org.za/resources/6.%20CAPE%20FOLD%20BELT.pdf>

STORIES IN STONE: A GUIDE TO THE GEOLOGY OF THE WESTERN CAPE, SOUTH AFRICA (Duncan Miller, 2020).

<http://ctminsoc.org.za/resources/3.%20GEOLOGICAL%20HISTORY%20OF%20THE%20SOUTHWESTERN%20CAPE.pdf>

Duncan, R.A., Hargraves, R. B. and Brey, G.P. (1978). Age, paleomagnetism and chemistry of melilitite basalts in the Southern Cape, South Africa. *Geol. Mag.*, 115, p. 317-396

Janney, P.E.L, le Roex, A.P. and Viljoen, K.S. (1998). Trace Element and Isotopic Characteristics of Olivine Melilitites from the Western Cape, South Africa: Implications for the Sources of Group 1 Kimberlites. 7th *International Kimberlite Conference, UCT, Cape Town, South Africa.*