

35TH INTERNATIONAL GEOLOGICAL CONGRESS

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PRE 10

Geology and Origin of a very large hot Orogen The High-T-Low-P Namqua Metamorphic Province

TRIP LEADER:
Paul Macey and Alex Kisters



The Namaqua Metamorphic Province is one of the largest high-T low-P terrains on earth covering an area of > 200.000km² in the northwestern parts of South Africa and southern Namibia. The origin, chronology and geodynamic setting of this vast Paleo- to Mesoproterozoic (ca. 2.0-1.0 Ga) high-grade terrain are controversial. This fieldtrip aims to provide a regional perspective on the internal architecture, chronological evolution and overall tectonic setting of the mid-crustal terrain along a > 2500 km long loop through the central-western parts of the province. The trip presents recent structural, metamorphic, geochemical and geochronological data generated during a current (2013-2018) mapping campaign spearheaded by the Council for Geoscience. We will visit key sections that illustrate the process of episodic, often melt-lubricated stacking of granulite-facies nappes, the presence of regional-scale under- and intraplated mafic/ultramafic complexes and late-stage continental-scale transcurrent shear zones that mark the final stabilization of Namaqualand around ca. 1.0Ga. We will also examine aspects of the base metal mineralisation in the Okiep Copper District, the polymetallic Aggeneys complex and late-stage pegmatites.

ITINERARY

The trip will take you through the barren, yet spectacular landscapes of northern Namaqualand between the towns of Kliprand and Springbok and during the peak of Namaqualand's flower season. After two days, we will cross the mighty Orange River into Namibia. We will sleep over at the hot springs of Ai Ais and visit the Fish River Canyon. From thereon, we will travel east, deep into the remote parts of southern Namibia and make camp along the banks of the Orange River in the Pofadder Shear Zone. For the last leg of our trip, we will return to South Africa to the Black Mountain Mining District hosted by mega sheath folds, before we return to Cape Town on Day Seven.

Field Trip Leader: Paul Macey

Start: CTICC, Cape Town

End: CTICC, Cape Town

Dates: 7 days, Sunday 21 August – Saturday 27 August 2016

MINIMUM number 14 attendees

MAXIMUM number 24 attendees

COST INCLUDES:

- One night accommodation at Sophia's Guesthouse and or similar if over flow.
- Camping equipment, bedding, mattresses, cutlery, crockery, fridges, cooking equipment. GPS
- Camping accommodation
- All meals
- Chef who will accompany guests for the duration of the tour
- Return Transfer in a 32 seater coach from Cape Town to Bitterfontein where vehicles will be picked up and collected.
- 3 x Toyota Hilux (each car is fully equipped and provides space for 4 passengers per car)
- 1 x Toyota Cruiser (accommodates 4 guests and is fully equipped)
- 1 x 4x4 Double cab Ford (accommodates 4 guests and is fully equipped)
- 1 x 4x4 Suzuki Jimney (seats two passengers-Fully Equipped)
- 1 x Echo road trailer (sleeps 2 guests in rooftop trailer)

COST EXCLUDES:

- All airfares, air reservations and airport taxes
- All other accommodation
- All other meals
- All other transport
- All other sightseeing
- Personal expenses such as tips for meals, gratuities for guides & drivers, all alcoholic and other beverages, telephone calls and laundry
- Any other services not mentioned above