



## Circular #03 : Excursion Update

As an update to the excursion list from Circular #2 please find below brief descriptions and pricing of the available excursion options. This will be followed up shortly with a link to the full itineraries for each excursion.

Excursions #1, #2 and #3 are pre-conference trips.

Excursions #4, #5, #6 and #7 are post-conference trips.

### RE EXCURSION Payments:

Prices are given in Namibian dollars (N\$ or NAD).

All banking and transaction fees to be covered by participant.

**PLEASE NOTE** that all EXCURSION payments are due to AfricaMosaicSafaris (contact Ms Almut Talmage at [almut@africamosaicsafaris.com](mailto:almut@africamosaicsafaris.com) ).

<b>Bank:</b>	First National Bank of Namibia	<b>Swift Code:</b>	FIRNNANX
<b>Branch code:</b>	289 375	<b>Branch name:</b>	Grove Mall Windhoek
<b>Account number:</b>	6226 7392 612	<b>Acc. Type:</b>	Cheque/current
<b>Account name/ Beneficiary:</b>	Africa Mosaic Safaris		
<b>Payment reference:</b>	SURNAME and INITIALS, followed by "Geol50" and Excursion "#"		

### 1. Mines and Exploration Tour Western Namibia

*29<sup>th</sup> August to 1<sup>st</sup> September - 4 days- Lodging*

**N\$ 9,450**

Leader – Berti Roesener

This excursion will visit mining and exploration projects within the central and western portions of the Damara Orogenic Belt. Visits are planned to Navachab gold mine, the Calcrete hosted, Trekkopje Uranium mine (on care and maintenance) and the Alaskite hosted Uranium mines at Rossing Uranium and Husab Mine. There will also be a surface visit to the Namib Lead and Zinc Mine 25 km east of Swakopmund and Osina Resources have offered a field visit and core viewing from some of their gold prospects in the Wilhelmstal and Omaruru area of central Namibia.

Pit visits will be arranged where possible.

### 2. Geology and Stratigraphy of Southern Namibia

*28<sup>th</sup> August to 1<sup>st</sup> September - 5 days – Lodging*

**N\$ 10,600**

Leaders – Dr. Ingrid Stengel, Helke Mocke

This excursion will visit the Karoo and Nama stratigraphy and fossils as well as geomorphology of southern Namibia. The first day is dedicated to details of the Dwyka tillites, glacial striations, Karoo stratigraphy and volcanics, fish and *Mesosaurus* fossils. The following days will focus on the Nama Group stratigraphy. Highlights will be the Ediacaran fossil record at farms Aar and Swartpunt, Black Limestone stromatolites and karst, the nature of the Nama base unconformity, and the overall extensional tectonics, as well as prehistoric sites on the Black Limestone (rock engravings and paintings).

The first overnight stop will be in Karoo country (Keetmanshoop), the following three nights will be in Aus. The return route will take us along the Rooirand/ Namib margin and Schwarzrand escarpment, back to Windhoek.

### 3. **Diamond Excursion (fluvial and marine diamonds, Sperrgebiet/ Namdeb Mines)**

*25<sup>th</sup> August to 1<sup>st</sup> September - 8 days – Lodging and Camping (bring own sleeping bag) –*

**Limited to 12 Participants**

**N\$ 20,425**

Leaders – Gottfried Grobbelaar, Dr. John Ward, Dr. Roger Swart

Since the initial discovery of diamonds in 1908 near Lüderitz, this regional composite placer deposit has yielded over 100 million carats of +95% gem quality stones. Most of this diamond production has been recovered from a variety of placer types that range in age from contemporary deposits to those that are some 42 million years old. Diamond Area No.1 hosts four major placer types, fluvial placers (Orange River licence), marine placers (Mining Area No.1/SCM, Bogenfels and Douglas Bay licences) deflation and aeolian placers (Bogenfels, Elizabeth Bay and Douglas Bay licences).

This excursion, which offers a very rare opportunity to travel through the relatively pristine coastal desert environment of the Sperrgebiet, will cover all four of the major placer types starting on the Orange River and the marine operations around Oranjemund, then working north through the Sperrgebiet, stopping at Bogenfels (own sleeping bag required) en-route to Lüderitz. The excursion ends with a visit to either E-Bay or the Douglas Bay deflation deposits.

### 4. **Damara Orogen Special Excursion**

*5<sup>th</sup> September to 11<sup>th</sup> September - 7 days - Camping*

**N\$ 18,500**

Leader – Dr. Roy Miller

This excursion led by Dr. Roy Miller has been the signature field trip of the Namibian Geological Society for the past 3 decades. It will probably be the last such excursion led by Roy.

The excursion examines all aspects of the development of the NE trending arm of the Damara Orogenic Belt. As intracontinental rifting of Rodinia ( $\pm 880$  Ma) evolved through spreading ( $\pm 760$ - $635$  Ma) and continental separation ( $635$  –  $600$  Ma), we will see rift-phase playa-lake evaporites, rift-shoulder submergence, passive margin turbidites, the whole of the Damara stratigraphic succession, the marker horizons of the Sturtian (Chuosi Fm) and Marinoan (Ghaub Fm) Snowball-Earth glacial deposits and their associated cap carbonates, and pre-tectonic metagreywackes with the MORB of the 350-km long Matchless Amphibolite ( $635$  –  $600$  Ma). Syn-tectonic features ( $595$  –  $542$  Ma) will include the Southern Margin nappes, thrusts and accretionary prism, 4-stage evolution of F1 folds in marble domes, D1 to D3 structures, diapiric D3 marble domes with marble mylonites, arc-trench metagreywackes, progressive shortening and sheath-fold development during collision in the Southern Zone, and contamination of Damaran granites. Late- to post-tectonic features include M2 LTHP and HTLP metamorphic assemblages ( $\pm 535$  Ma), partial melting of granitic basement, Damaran metagreywackes, and of various syn-tectonic,  $654$  –  $542$  Ma Damaran granites, Nama Group shelly fossils ( $\pm 555$  –  $542$  Ma), Nama deformation ( $542$  Ma), the fore-arc Donkerhoek Granite ( $534$ - $505$  Ma), a tin pegmatite, and the gravity-induced emplacement

of the Naukluft Nappe Complex at 495Ma. Younger features of the Namibian geology will be pointed out during the excursion.

5. **North West Namibia (“Gondwana to post-Gondwana evolution of NW Namibia during the Palaeozoic and Mesozoic”)**

*5<sup>th</sup> September to 11<sup>th</sup> September - 7 days - Camping*

**N\$ 16,200**

Leader – Dr. Roger Swart

This excursion, in one of the most scenic parts of the country, will look at the geology, geomorphology and geological evolution of the continental margin. The stratigraphic range that will be covered will be from the Dwyka glaciation event through to the breakup of Africa and South America, an event heralded by the Cretaceous Etendeka Volcanics. In addition, what we know of the climate and subsequent erosion history will also be examined in light of the offshore geological record as well as observations from onshore.

6. **Alkali Intrusive Excursion (“Carbonatite and alkaline volcanic complexes in north-central Namibia”)**

*5<sup>th</sup> September to 10<sup>th</sup> September - 6 days - Lodging*

**N\$ 15,350**

Leader – Peter Siegfried

This excursion follows much of the route undertaken during the very successful HiTech AlkCarb field trip held in April of last year which was also led by Peter Siegfried. The excursion focuses on the alkali complexes of Central Namibia and Damaraland with stops planned at the **Otjizazu** Carbonatite, North of Windhoek; **Eisenberg**, part of the Kalkfeld cluster, which has been dated at 240Ma and not the Aptian age of the Damaraland Alkaline Province, suggesting that many of these spatially congregated complexes can in fact be active over many millions if not tens of millions of years; the apatite rich **Ondurokorume** Carbonatite; **Lofdal** which has undergone significant exploration in recent years for its high HREE content; the HFSE enriched **Amis Gorge**, part of the Brandberg intrusion, with the final stop being the Damara aged (521Ma) **Eureka Carbonatite**.

7. **Central and Northern Namibia Mines Tour (“Economic geology of north-central Namibia”)**

*5<sup>th</sup> September to 9<sup>th</sup> September - 5 days - Lodging*

**N\$ 12,500**

Leader – Eckhard Freyer, Oliver Krappmann

This five-day excursion will visit six mines in central and northern Namibia, including one day in the Etosha National Park. The 30-year old **Navachab** Gold Mine near Karibib and the five-year old **Otjikoto gold mine** halfway between Otjiwarongo and Otavi are both orogenic gold deposits, which will be interesting to see and compare. At Tsumeb we will see the **Tschudi copper mine**, well-known for its SX-EW copper cathode plant, and the open-cast of the world-famous, now closed **Tsumeb polymetallic mine**. Although the **Okanjande graphite** and **Okorusu fluorspar mines** are both under care and maintenance, it will be possible to see them.

En route we will cross the Southern, Central and Northern Zones as well as the Northern Platform of the Damara Orogen.

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