

35TH INTERNATIONAL GEOLOGICAL CONGRESS

27 AUGUST - 4 SEPTEMBER 2016 | CAPE TOWN, SOUTH AFRICA



PRE 5

Vredefort impact structure

FIELD TRIP LEADER: Roger Gibson



This two-day excursion through the world's largest and oldest known impact structure located southwest of Johannesburg showcases both the impact-related structural and thermal features generated by the 2.02 Ga impact and a transect through Archaean and Palaeoproterozoic rocks of the Kaapvaal craton spanning more than a billion years.

The 90-km-wide Vredefort Dome at the centre of the impact structure exposes a 25 km deep crustal profile through polymetamorphic rocks that range from greenschist to granulite facies. Impact-related features include shatter cones, voluminous pseudotachylitic breccias, impact melt dykes and granofelses produced by ultra-high-temperature shock heating.

Aspects of the rich archaeological heritage of the Natural World Heritage Site will also be covered.

Field Trip Leader: Roger Gibson

Start: Johannesburg

End: Johannesburg

Dates: 2 days, Friday 26th to Saturday 27th August 2016

ITINERARY

DATE	ROUTING
26 AUGUST 2016	JOHANNESBURG to SUNWA RESORT (or Similar) on a BB basis
27 AUGUST 2016	END OF TOUR

26 AUGUST 2016	<p>Guests will depart Sandton ICC at 08:30 stopping at The Sunwa Lodge to drop off their luggage before continuing the journey to Parys where the day will spent.</p> <p>Planned Visits:</p> <ul style="list-style-type: none"> * <i>Dominion Group metavolcanics and Vredefort Granophyre impact melt rock</i> * <i>Amphibolite-facies metamorphism of the lower Witwatersrand Supergroup</i> * <i>Schurwedraai alkali granite with impact deformation</i> * <i>Shatter cones in Booyens Shale, upper Witwatersrand Supergroup</i> * <i>Amazon Reef-Gold Mineralization in upper Witwatersrand Super Group</i> * <i>Shatter cones at Schoemansdrif Weir (Lunch included)</i> * <i>Daskop Vredefort Granophyre– impact melt Rock with Bushman petroglyphs</i> <p><i>(Sunset Stop at Leeukop quarry pseudotachylitic breccias if time allows)</i></p> <p>Return to Sunwa Lodge</p>
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26 AUGUST 2016	Overnight at Sunwa Lodge on a DBB basis
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27 AUGUST 2016	<p>After breakfast guests will depart the Lodge at 8h00 and will then make their way back towards Johannesburg with the various stops:</p> <ul style="list-style-type: none"> <i>* Pseudotachylitic breccias in the Vaal River pavement at Sunwa Lodge</i> <i>* Salvamento quarry (upper crustal granite gneisses and pseudotachylitic breccias)</i> <i>* Charnockites and the amphibolite-granulite transition, Vredefort Dome Visitor Centre</i> <i>* Granulite metapelites, Steynskraal</i> <i>* UHT impact-induced metamorphism and the centre of the Dome, Inlandsee pan</i> <i>* Hatthingsrust Archean komatiitic basalts with pillow lavas and shatter cones</i> <i>* Broodkop shear zone</i> <i>* Coesite-stishovite discovery site</i> <p>Guests should arrive in Sandton (ICC) at approximately 18h00.</p>
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Meal Key

BB	Bed and Breakfast
DBB	Dinner, Bed and Breakfast
DBB+	Dinner, Bed and Breakfast plus one additional activity
DBB++	Dinner, Bed and Breakfast plus two additional activities
FB	Full Board (includes 3 meals per day)
FB+	Full Board (includes 3 meals per day) plus one additional service
FB++	Full Board (includes 3 meals per day) plus two additional services
FI	Fully Inclusive (includes all meals and local drinks), plus all activities

Vehicles:

(20 Passengers) This quote is based on 2 x 15 seater coaches (or similar) depending on availability at the time of confirmation.

(44 Passengers) This quote is based on a 3 x 15 seater coaches (or similar) depending on availability at the time of confirmation.

Minimum Persons 20
Maximum Persons 44

COST INCLUDES:

- 1 Nights accommodation at Sunwa Lodge (or similar) on a DBB basis
- 2 x lunch (packed lunch or similar)
- 1 x dinner (at Sunwa Resort)
- Transport in private touring vehicles
- Entrance fees to sightseeing venues as stated in the itinerary above

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