

## Press Release

Opening of new displays

# THE GEOLOGY MUSEUM

Friday 30<sup>th</sup> April 12:30



Hematite with red andradite garnet, Kuruman district

within

MUSEUM AFRICA



## PRESS RELEASE

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### **MUSEUM AFRICA IS PROUD TO ANNOUNCE THE OPENING OF THE GEOLOGY MUSEUM NEW DISPLAYS**

The Geology Museum in Museum Africa is opening new displays on Friday 30 April 2010 at 12:30 for 13:00.

The Geology Museum has a long history and was founded by the Witwatersrand Chamber of Mines in 1890 just four years after the founding of Johannesburg. At first it was used as a resource for prospectors and miners, but by 1898 was already available for the public to enjoy (7,000 came in that year). Since 1927 it has been a public museum in the care of the City of Johannesburg, and with the opening of the new displays will once again be available for the delight and inspiration of all.

Visitors will learn that South Africa is fascinating from a geological point of view and the exhibits at the Geology Museum will show this. The displays have these exciting themes:

#### **Earth's place in the Universe**

This theme will show that South Africa is host to the Southern African Large Telescope (SALT), an array of technically advanced telescopes near Sutherland, in the Karoo. SALT is helping scientists understand Earth's place in the Solar System and the Universe, and is yielding clues to the very beginnings of the Universe.

#### **The very first continents, leading to the formation of Africa as it is today**

One of the best places in the world to study the clues to the beginnings of the first continents is in the rocks near Barberton in Mpumalanga, which are also known for their evidence of the very earliest life. (There are older rocks but they are in inconvenient and inhospitable environments such as Greenland).

#### **The riches of South Africa: Gold, manganese, platinum, diamonds, coal, fossils - how and why they formed as Africa formed – the geological evidence**

- South Africa has the greatest concentration of gold anywhere in the world in the Witwatersrand Basin.
- Over 80% of land-based manganese (essential for steel-making) is found in the Kalahari Manganese Field.
- The Bushveld Complex is the largest deposit of platinum (and related metals) anywhere in the world.
- The fossils found in the Karoo sediments form an unbroken record over millions of years. They also contain fossil evidence of how continents have drifted apart and come together again and apart again over millions of years.

- The largest diamond ever found is South African. It was The Cullinan found in 1905 at the Premier Mine near Pretoria. A model of it is on display. Kimberley is synonymous with diamonds.
- The Cradle of Humankind near Mogale City has the oldest hominid fossils.
- The Vredefort Impact Structure near Parys is the oldest and largest meteorite impact crater in the world. Most of it has eroded away after millions of years, but the upended rocks of Johannesburg's Hospital Hill that are part of the structure can still be seen.

### **Economic Minerals**

Apart from the big names; gold, diamonds, platinum, coal; South Africa is rich in a surprising number of minerals, with a surprising number of uses. Aluminium, antimony, asbestos, chromium, copper, corundum, dimension stones (so-called granites), iron, fluorite, lead, zinc, manganese, phosphate, tin, titanium, zirconium and vermiculite are the main economic minerals shown.

Some of these were mined and used centuries before the colonial era. The three main copper mining areas, Okiep, Palaborwa and Musina were all mined by indigenous peoples hundreds of years before Europeans arrived. Palaborwa means "it's better here" – meaning better for iron ore. Iron mining, smelting and trading also has a long precolonial history. Tin was mined in the 16<sup>th</sup> century at Rooiberg, where about 18,000 tons of ore are estimated to have yielded up to 2,000 tons of tin. Mapungubwe, site of an ancient 1000-year-old civilization, is well known partly because of the amount of gold found there. Thulamela in the Kruger National Park has evidence of gold smelting about 500 years ago in that area.

### **The Treasure Room**

A display of rare, valuable and beautiful mineral specimens and gems has been selected from the Geology Museum's international collections. Some of these specimens are for the true connoisseur; all of them are beautiful objects of geological heritage, collected from around the world.

### **The Freak Show**

Some rocks and minerals are just amazing and weird. Did you know some rocks glow in UV light? Meet fluorite and a range of others that glow in strange fluorescent (of course) colours. You've heard of the healing powers of a crystal worn around your neck, but how about one big enough to sit on? And then there are rocks and minerals it is best to avoid – the poisonous ones. Floating rocks? You won't lose volcanic pumice stone in your bath.

### **Geological processes**

Geology is all around us, and the processes that form our familiar landscapes (and the ones deep beneath the Earth's crust) are explained using African examples. Showrock Holmes, rock detective, helps explain some of the clues to be seen in the rocks about us. For instance the layered and sinuous metamorphic rocks of the Beitbridge Belt near Musina tell of a range of mountains in the distant past that were as high as the Himalayas. The sandstones of the Golden Gate National Park are the remains of a desert that covered all of what is now South Africa and continued a long way beyond. The spectacular Drakensberg Mountains are what remain of the molten lava that flowed out to cover that sand when the Earth's crust began to rift.

One main lesson you should have learned after a visit to the Geology Museum is that our Earth is NOT rock solid, but continuously changing, and the clues to that fascinating story have been put together by geologists.

Museum Africa  
121 Bree Street  
Newtown  
Johannesburg

Tel: 011-833-5624

Fax: 011-833-5636

e-mail: [museumafrica@joburg.org.za](mailto:museumafrica@joburg.org.za)

Opening hours: Tuesdays to Sundays 09:00 to 17:00, entrance free  
Closed Mondays, Good Friday, between Christmas and New Year

Enquiries:

Diana Wall

Museum Africa

Tel 011-833-5624 x 259

082-464-9627

e-mail: [dianaw@joburg.org.za](mailto:dianaw@joburg.org.za)