

**STAKEHOLDER WORKSHOP**  
**for a**  
**GEOSCIENCE MAPPING PROJECT**  
**of**  
**PRECAMBIAN BASEMENT AREAS OF SOUTH SUDAN**

South Sudan lies astride four major units of the African crust: the Congo-Uganda Craton; the Central African Fold Belt or Oubanguides; the Sahara Metacraton and the Arabian-Nubian Shield. Precambrian basement rocks with potential for gold and other metal mineral deposits outcrop over about 40% of South Sudan, an area of 300,000km<sup>2</sup>.

The geology of South Sudan is very poorly known, however, because of remote terrain, poor infrastructure, lack of past investment in primary mapping and 60 years of conflict.

The Ministry of Mining proposes to conduct a geoscientific mapping programme of these crucial basement areas. The availability of good basic mapping would not only greatly aid the development of South Sudan's mineral resources but also improve understanding of water resources, environmental chemistry, agriculture, geohazards, infrastructure opportunities and many others.

The Workshop will inform potential users and beneficiaries about the project and seek a consensus on the types and parameters of data to be acquired.

## **Project goals and benefits**

The Project goals are concerned with natural resources development and environmental management on the other. Specifically:

- Stimulation of mineral exploration and development by acquiring and publishing essential regional geoscience data and maps
- Generation of data sets of the regional geochemistry of soils and streams as a baseline against which to measure environmental change
- Contributing to sustainable land-use planning decisions by mapping relevant geological conditions
- Identifying groundwater resources and opportunities for geothermal power
- Improving human safety and health by detecting and mapping geological conditions that might give rise to hazards such as earthquakes, landslides, radon gas, and contaminated land
- Contributing to environmental and agricultural management by mapping the concentrations of trace elements in soils and waterways.

**“Pre-competitive” data made freely available to all users will ensure maximum benefits to the widest range of users. Similar programmes around the world, such as the Sustainable Management of Mineral Resources Project in Uganda and the British and Irish TELLUS programmes, have been very successful in promoting investment, increasing tax revenues and providing other benefits.**

**The value of projects of this type to mining development alone is shown by South Australia’s Plan for Accelerating Exploration (PACE) programmes between 2004 to 2014, which generated economic benefits including:**

- **Increase in state mining revenue of \$2400m for an expenditure of less than \$50m;**
- **A much-increased share of Australia’s national mineral exploration expenditure;**
- **At least \$700m extra spend in private mineral exploration investment representing a leverage of at least 20:1 on PACE geoscience expenditure;**
- **Exploration in excess of the State Strategic Plan Target of \$200m a year.**

## **Proposed mapping programme**

South Sudan lies astride four major elements of the African continent: the Congo-Uganda Craton and the Sahara Metacraton, with the Central African Fold Belt or Oubanguides between them and the Arabian-Nubian Shield to the east. These terranes came together during the second half of the Neoproterozoic Era. Stresses arising from the East Africa Orogeny gave rise to major strike-slip shear zones with northwest and northeast trends. Rifting created the Cretaceous to Lower Tertiary oil basins of South Sudan and the active East African Rift System.

A mapping programme of the basement rocks of South Sudan is likely to consist of the following elements:

- Data compilation
- A remote sensing interpretation
- A follow-up high-resolution remote-sensing interpretation of target areas
- An airborne geophysical survey with magnetic and gamma ray spectrometric methods
- A regional geochemical survey
- A follow-up semi-regional geochemical survey of target areas
- A geological mapping programme
- A prospectivity mapping study
- Capacity building of national institutions

## **Engagement with communities and authorities**

Good communication with stakeholders and affected communities is essential. From the outset, it is vital to counter any possible negative public perceptions of the survey work, particularly where it might be thought to be infringing privacy and where there is the possibility of frightening livestock by aircraft noise. Accordingly, communications campaigns must be designed, with the help of professional advisers, to ensure that the wider public understand the methods, goals and values of the work.

State, County, Payam and Boma authorities must be briefed in person by project staff; radio and TV interviews given, open days held, farming and other interest groups visited, and leaflets, posters, notices and press articles distributed. Military, police and security agencies must be fully briefed, and care taken that the information passes to those on the ground.

## **Workshop participants**

### **Academic, regional and international organisations**

World Bank, African Development Bank and other IDAs

African Union

AMGC

UNECA/AMV

Organization of African Geological Surveys (OAGS)

Geological Society of Africa (GSAf))

Neighbouring country Geological Surveys and Chambers of Mines

Other National Geological Surveys (BGS, GTK, GSI, USGS, etc)

MADI, WAXI and other regional programmes

Universities

NGOs

### **South Sudan Ministries and Agencies**

Mining

Petroleum

Commerce, Industry and Investment

Environment

Foreign Affairs and International Cooperation

Agriculture and Forestry

Electricity and Dams

Finance and Economic Planning

Higher Education, Science and Technology

Housing, Physical Planning and Environment

Humanitarian Affairs and Disaster Management

Irrigation and Water Resources

Wildlife Conservation and Tourism

Internal Affairs

National Security

State governments

### **Corporates**

Mining companies

Geoscience contractors

## **FOR FUTHER INFORMATION:**

[www.equatorgold.co.uk/workshop](http://www.equatorgold.co.uk/workshop)

[www.igsint.com](http://www.igsint.com)



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