



AMGC News

Director General's Message



During the month, the Centre received Ms. Janet Mortoo, a Programme Manager at the European Union (EU) Delegation in Tanzania & the East Africa Community (EAC) for a familiarization visit. Also the Centre received Dr. John Tychsen, the Director of Artisanal Small Scale Mining (ASSM) Consultant from University of Aarhus, Denmark. Dr. Tychsen's visit was in the context of the PanAfGeo project, a training related to the Work Package

“Artisanal and Small-Scale Mining” which will take place at AMGC in November 2023. AMGC received two fresh graduate chemists from Kenya and Tanzania for an internship programme in the Chemical and Environmental Department. The Centre through its Industrial Minerals Application Department received 26 Laboratory Assistants Level II students from Dar es Salaam Regional Vocational Training and Service Centre for getting familiar with making glazed ceramic ware. AMGC was visited by Prof. Justin W. Ntalikwa, the Principal of College of Earth Sciences and Engineering at the University of Dodoma (UDOM). His visit aimed at submitting a draft MoU to the management of AMGC. AMGC received H.E. Isaac Njenga, the Kenya High Commissioner to Tanzania, who has paid a familiarization visit to AMGC and also officiated the handing over of certificate to a fresh female chemist.

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Internship Programme



The African Minerals and Geosciences Centre (AMGC) on 3rd of April 2023 received two fresh graduate chemists from Kenya and Tanzania for an internship programme in the Chemical and Environmental Department. The aim is to put into practice the knowledge they got from the university and be able to appreciate various applications of Chemistry in the mineral sector. The interns are Miss. Gift Mbithe who is a graduate in BSc. Analytical Chemistry from University of Embu in Kenya and Miss. Mariama B. Diaby who is a graduate in BSc. Chemistry from The Open University of Tanzania. The programme will be conducted from 3-28 April 2023.

Visit of a Programme Manager at the European Union (EU) Delegation in Tanzania & the East Africa Community (EAC)



Ms. Janet Mortoo, a Programme Manager at the European Union (EU) Delegation in Tanzania & the East Africa Community (EAC) paid a familiarization visit to the African Minerals & Geosciences Centre (AMGC) on 12th April 2023. She had a courtesy meeting with Mr. Ibrahim Shaddad, the Director General of AMGC, discussing AMGC's work in Tanzania, and other member states of the Centre, future plans and possible avenues for cooperation between AMGC and the EU Delegation.

Visit of Students from Dar es Salaam Regional Vocational Training and Service Centre



The African Minerals and Geosciences Centre through its Industrial Minerals Application Department received 26 Laboratory Assistants Level II students from Dar es Salaam Regional Vocational Training and Service Centre for getting familiar with making glazed ceramic ware.

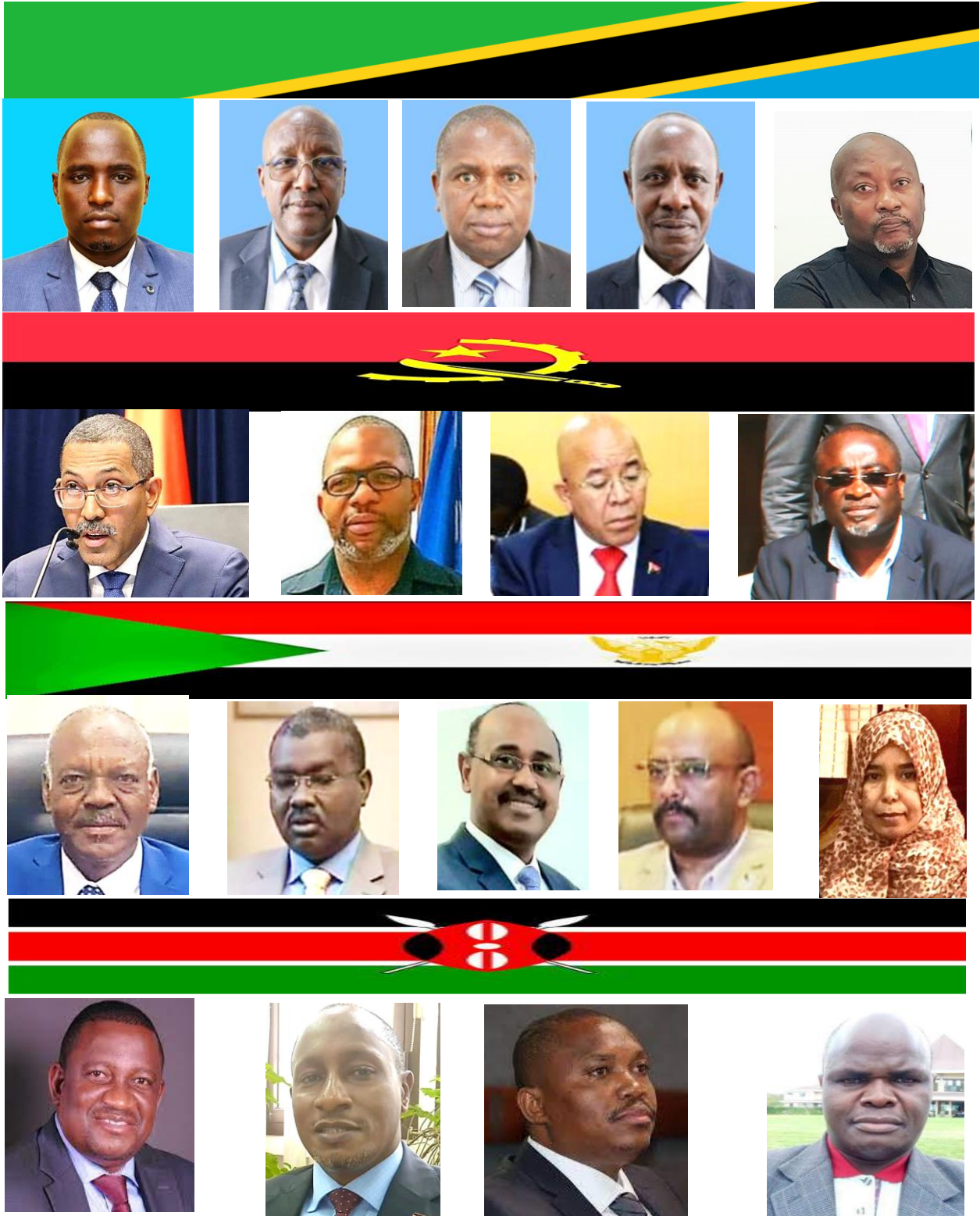
Visit of the Director of Artisanal Small Scale Mining (ASSM) from University of Aarhus, Denmark



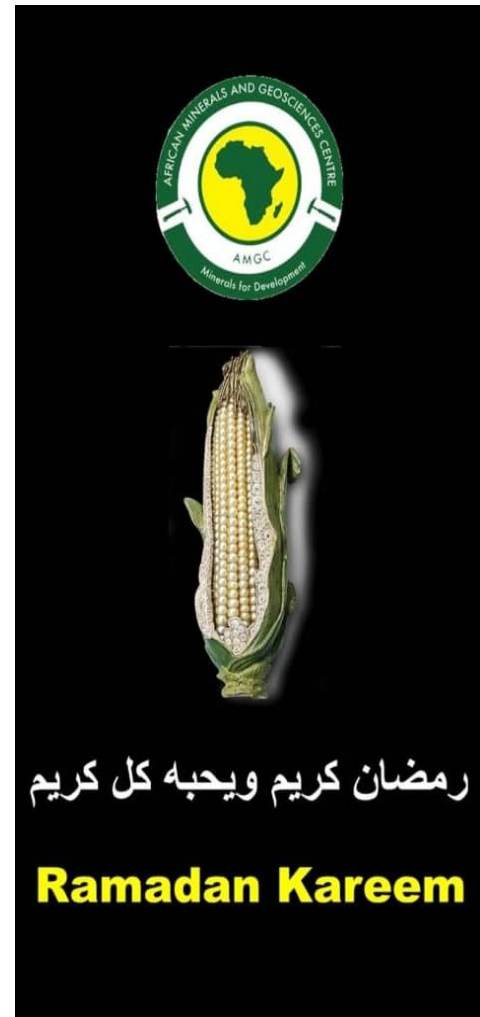
The African Minerals and Geosciences Centre (AMGC) on 18 April 2023 received Dr. John Tychsen, the Director of Artisanal Small Scale Mining (ASSM) Consultant from University of Aarhus, Denmark. Dr. Tychsen's visit was in the context of the PanAfGeo project, a training related to the Work Package "Artisanal and Small-Scale Mining" which will take place at AMGC in November 2023. He discussed with AMGC management arrangement of hotel, venue, print shop etc. and his visit was facilitated by Ms Janet Mortoo, the Programme Manager Economic Governance at EU Delegation in Tanzania and East Africa Community (EAC), who paid a familiarization visit to AMGC on 12th April 2023. The 4th regional training in PanAfGeo-WPC, which will be for 40 participants from 16 English speaking countries in Eastern and Northern Africa during 13-16 November 2023. The training will officiated by EU-ambassador, CEO of Geological Survey of Tanzania (GST) and Director General of AMGC on 13 November 2023. After the training, the three officials will honour the hand over certificates as well as they will write forward for publication of all the presentation in "ASM Handbook for Eastern and Northern African Region".

APPRECIATION & GRATITUDE

The African Minerals and Geosciences Centre (AMGC) would like to express its much appreciation and gratitude to Tanzania, Angola, Sudan and Kenya for fulfilling its financial commitments to the Centre.



Seasonal Greetings



Visit of the Principal of College of Earth Sciences and Engineering at the University of Dodoma



On 24th April 2023, African Minerals and Geosciences Centre (AMGC) was visited by Prof. Justin W. Ntalikwa who is the Principal of College of Earth Sciences and Engineering at the University of Dodoma (UDOM).

His visit aimed at submitting a draft Memorandum of Understanding (MoU) to the management of AMGC with expected areas of collaboration on;

- 1. Environment and water resources management**
- 2. Mining and application of mineral resources for sustainable development**
- 3. Exploration and exploitation of earth energy resources**

Other areas of collaboration would include; staff and postgraduate students' research activities, joint consultancy services, short training, field attachment for students, internship programs and sabbatical leave programs.

Both institutions have been striving to strengthen collaboration to make it beneficial for themselves and the community they serve. This MoU is expected to be signed upon mutual agreement by both institutions in the short time to come.

Visit of the Kenya High Commissioner to Tanzania



The African Minerals and Geosciences Centre (AMGC) is grateful to receive H.E. Isaac Njenga, the Kenya High Commissioner to Tanzania, who has paid a familiarization visit to AMGC and also officiated the handing over of certificate to a fresh female graduate with BSc. Analytical Chemistry, in the name of Ms Gift Mbithe from the University of Embu in Kenya has been attached at the Centre for an internship programme in the Chemical and Environmental Department for a period of one month from 3rd to 28th April, 2023. Mr. Ibrahim Shaddad, Director General of AMGC expressed gratitude and appreciation for Kenya's sustainable support through the esteemed Ministry of Mining, Blue Economy & Maritime Affairs, which enabled the Centre to implement its activities to its highest peak. It is worth mentioning that Kenya joined the Centre in July 2006 becoming the 7th member state, chaired the AMGC Governing Council and hosted the Policy Organ Meetings three times (May 2011, June 2014 and May 2015) and the coming one will be hosted by Kenya under the chairmanship of Hon. Salim Mvurya, Minister for Mining, Blue Economy & Maritime Affairs, of Kenya who is the current Chairman of the Governing Council of AMGC for the year 2022/2023.



AMGC

New Courses



The Mineralogy, Petrology and Gemmology Department is happy to announce the following new training courses

1

Gemstone/Mineral Estimation and Valuation

2

Jewellery Design

3

Gemstone Exploration & Gem Safari's

www.seamic.org

More Info

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EVENT

CAG29 Second Circular

SECOND CIRCULAR



29th Colloquium of African Geology

"The earth sciences and Africa's development: current realities, future projections"

26 – 29 September 2023 | Windhoek, Namibia

CALL FOR ABSTRACTS



The Lion's Claw, a distinctive rock formation at the World Heritage site of /Ui-//aes, also known as Twyfelfontein in the Kunene Region, Namibia

"Namibia the World's Geological Paradise"

Spearheaded by the Geological Survey of Namibia



NEW Training Courses

African Minerals and Geosciences Centre (AMGC) is pleased to announce the introduction of four new courses Geostatistics, Petroleum Sciences and Resource Estimation in collaboration with Khartoum based Consulting firm called **Knowledge and Training Centre (KTC)**. The course shall be facilitated by the Director of KTC, Dr. M. Zayed Awad, an eminent specialist in the areas of Geostatistics, resource evaluation, stratigraphy, reporting, training and mentoring, risk and decision analysis, petroleum economics, project management. The training course will be organized in Dar es Salaam at the AMGC training facilities. The following training courses are going to be offered through this collaboration.

1. Fundamental of Petroleum Economics

Duration: One Week

Course fee: US\$ 1,200

This course introduces the participants to requirements for conducting petroleum economics; different stages of the petroleum industry life cycle involving upstream, mid-stream and downstream sectors will be explained. Participants will learn how to construct a Cash Flow Model for oil and gas investment decision. They will also learn how to deal with the different financial components of petroleum cost, and classification of costs into OPEX and CAPEX. Net Cash Flow Stream analysis and computation of economic indicators (Yardsticks) such as NPV, IRR, PBP, MCE and DPI, and their interpretations are essential for petroleum investment decision-making. Cash Flow Adjustment using discount rates is also considered. Types of fiscal regimes will be explained, participant will also learn how to incorporate the fiscal parameters into a cash flow stream.

2. Geostatistical Mineral Resource Estimation

Duration: One Week

Course fee: US\$ 1,700

The course will focus on the fundamentals of Geostatistical application in mining that are required for domain specification that are required for mineral resource estimation and will include hands-on training with Geostatistical software. Geostatistical conditional Simulations may be used to assess the uncertainty associated with the Reserves Evaluation at exploration,

feasibility, and production stages. The simulations provide a range of potential reserves for the ore body's Tonnage, Metal Quantity and Recovered Grade.

3. Introduction to Oil and Gas Industry

DURATION: One Week

Course fee: US\$ 1,200

This course is designed for a wide-ranging of petroleum industry personnel. It is designed to provide green-hands technical, and a non-technical personnel with practical petroleum industry life cycle. The course covers the key phases of the exploration, development and production industry as well as transportation and refining of crudes oils.

4. Geostatistics for Mining - foundation Course

Duration: Two Weeks

Course fee: US\$ 2,000

Geostatistics, in combination with other statistical methods, offers a wide range of mathematical tools that can be used to analyze, model, provide estimates and assess uncertainties, for different types of spatial phenomena, for example, grades or geological features. The course will focus on the fundamentals of Geostatistics and statistics and will include hands-on training with Geostatistical software.

THE INSTRUCTOR



Dr. M. Zayed Awad, the former Sudanese Minister for Oil and Gas (September 2014-May 2017) BSc (Hons) from University of Khartoum, Sudan, MSc (Geol) from Technical University of Berlin (TU), PhD (Stratigraphy) from Technical University of Berlin (TU). Dr. Zayed is a university instructor with postgraduate qualifications in petroleum geology, stratigraphy, economic geology, Geostatistics, and relevant application soft wares. He has more than 35 years' experience in university teaching and more than 25 years worldwide experience in

the petroleum industry and training. He has supervised many MSc and PhD research students and reviewed several reports and research papers. He is the founder of Knowledge & Training Center (KTC) in Sudan, and he is active as a trainer since 2003. He worked on many projects and given training courses to hundreds of attendees on many aspects of geology. Dr. Zayed's skills are in Geostatistics, resource evaluation, stratigraphy, reporting, training and mentoring, risk and decision analysis, petroleum economics, project management. Dr. Zayed was the initiator and editor-in-Chief of the book titled "Petroleum Geology and Resources of the Sudan" published by Geozone (Berlin) in 2015.

LIST OF TRAINING COURSES

Training Topics	Duration	Fee
Finance and Administration Department		
Leadership and Management Skills	2 Weeks	\$1,500
Financial Management Skills	2 Weeks	\$1,500
Executive Secretarial Skills	2 Weeks	\$1,500
Chemical and Environmental Department		
Spectrometric Methods of Analysis.	2 Weeks	\$800
Analysis of Gold and Other Base Metals	2 Weeks	\$800
Quality Management Section		
Laboratory Certification and Accreditation	2 Weeks	\$1,500
Modern Laboratory Management Methods	2 Weeks	\$1,500
Quality Control and Quality Assurance in Laboratories	2 Weeks	\$1,500
Laboratory Safety and Security	2 Weeks	\$1,500
Mineralogy, Petrology and Gemology Department		
Mineralogical and Petrological Sample Preparation and Analytical Techniques	2 Weeks	\$800
Gemstone Identification Techniques	1 Week	\$400
Gemstone Value Addition Techniques	2 Weeks	\$800
Usage of Benchtop X-ray Diffraction (XRD)	2 Weeks	\$800
Gemstone formation, mode of occurrences and mining methods	2 Weeks	\$800
Industrial Minerals Application Department		
Pottery for Beginners	2 Weeks	\$800
Mould Making	2 Weeks	\$800
Forming Techniques	2 Weeks	\$800
Decorations in Pottery and Ceramics	2 Weeks	\$800
Bricks & Tiles Manufacturing [Clays]	2 Weeks	\$800
Glaze Formulation	2 Weeks	\$800
Body Composition Formulation	2 Weeks	\$800

Mineral Processing and Small-scale Mining Department		
Practical Mineral Processing and The Basic Mineral Processing Flowsheet	2 Weeks	\$800
Sampling and Sample Preparation for Laboratory Testing	2 Week	\$800
Artisanal and Small Scale Mining Activities	2 Weeks	\$800
Techniques of Gold Cyanidation	2 Week	\$800
Mineral Economics	2 Weeks	\$800
Metallurgical Balance and Process Evaluation	2 Weeks	\$800
Extractive Metallurgy – Metallic Ore Deposits, Metal Extraction and Purification Processes	2 Weeks	\$800
Environmental Management in Mining	2 Week	\$800
Geo-information Department		
GIS and Remote Sensing for Mineral Exploration and Geological Mapping	2 weeks	\$800
Best Practices in Mineral Resource Estimation	1 week	\$400
Geodatabase Development for Web mapping	2 weeks	\$800
GIS and Remote Sensing Application for Geohazards	1 week	\$400
Integrated Mineral Exploration Techniques	2 weeks	\$800
GIS and Remote Sensing for Hydrological Applications	1 week	\$400
Open-Source GIS	2 weeks	\$800
Geochemical Exploration and Mapping	2 weeks	\$1,200
Structural Geology and Geotectonics in Mineral Exploration	2 weeks	\$1,200
Fundamental of Petroleum Economics	1 week	\$1,200
Geostatistical Mineral Resource Estimation	1 week	\$1,700
Introduction to Oil and Gas Industry	1 week	\$1,200
Geostatistics for Mining - foundation Course	2 weeks	\$2,000
Prospect Evaluation: Volumetric and Risk Analysis	2 weeks	\$2,000



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***Minerals for
Development***

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MINERALOGY, PETROLOGY AND GEMMOLOGY SERVICES

The Mineralogy, Petrology and Gemmology Department utilizes the skills of its staff to address crucial issues in the mineral sector such as lack of technical knowledge on mineral testing and identification, evaluation, grading and value addition techniques.

EXPERTISE

- ✓ Mineralogical and petrological sample preparation and analysis
- ✓ Mineralogical evaluation of industrial minerals, ore minerals and clays
- ✓ Gemstone identification and grading
- ✓ Specialized training in Gemmology, Gemstone Cutting and Polishing and Mineralogical and Petrological Sample preparation and Analytical Techniques.



Petrography and Gemmological Microscopes

ANALYTICAL SERVICES

- ✓ Preparation of standard thin sections and polished sections
- ✓ Rock slabbing and polishing
- ✓ Rock core splitting
- ✓ Petrographic examination of thin sections and polished sections
- ✓ Evaluation of industrial minerals, ore minerals and clays
- ✓ Gemstone testing and identification
- ✓ Diamond grading
- ✓ Consultation and Expert opinion



Polishing Machine for Polished Mount Preparation

TRAINING SERVICES

- ✓ Mineralogical and petrological sample preparation and analytical techniques
- ✓ Gemstone Characterization, Identification and Value Addition
- ✓ Gemstone Identification Techniques
- ✓ Gemstone Value Addition Techniques (Gem Cutting)
- ✓ Gemstone Cabochon making and Carving
- ✓ Gemstone Faceting
- ✓ Gemstone Identification, Value Addition and Trading



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