



AMGC News

Director General's Message



The Director General of AMGC paid on 17 January 2023 a courtesy visit to H.E. Salim Mvurya, the Cabinet Secretary (CS) for Mining, Blue Economy and Maritime Affairs of Kenya.

During his visit in the Ministry the DG paid also a visit to the Deputy Principal Secretary and the Ag. Managing Director of National Mining Corporation (NMC) at the State Department for Mining in Ministry of Mining, Blue Economy and Maritime Affairs, Kenya.

Also the DG paid a familiarization visit to the Directorate of Geological Survey & Geo-information Management at the State Department for Mining in Ministry of Mining, Blue Economy and Maritime Affairs, Kenya.

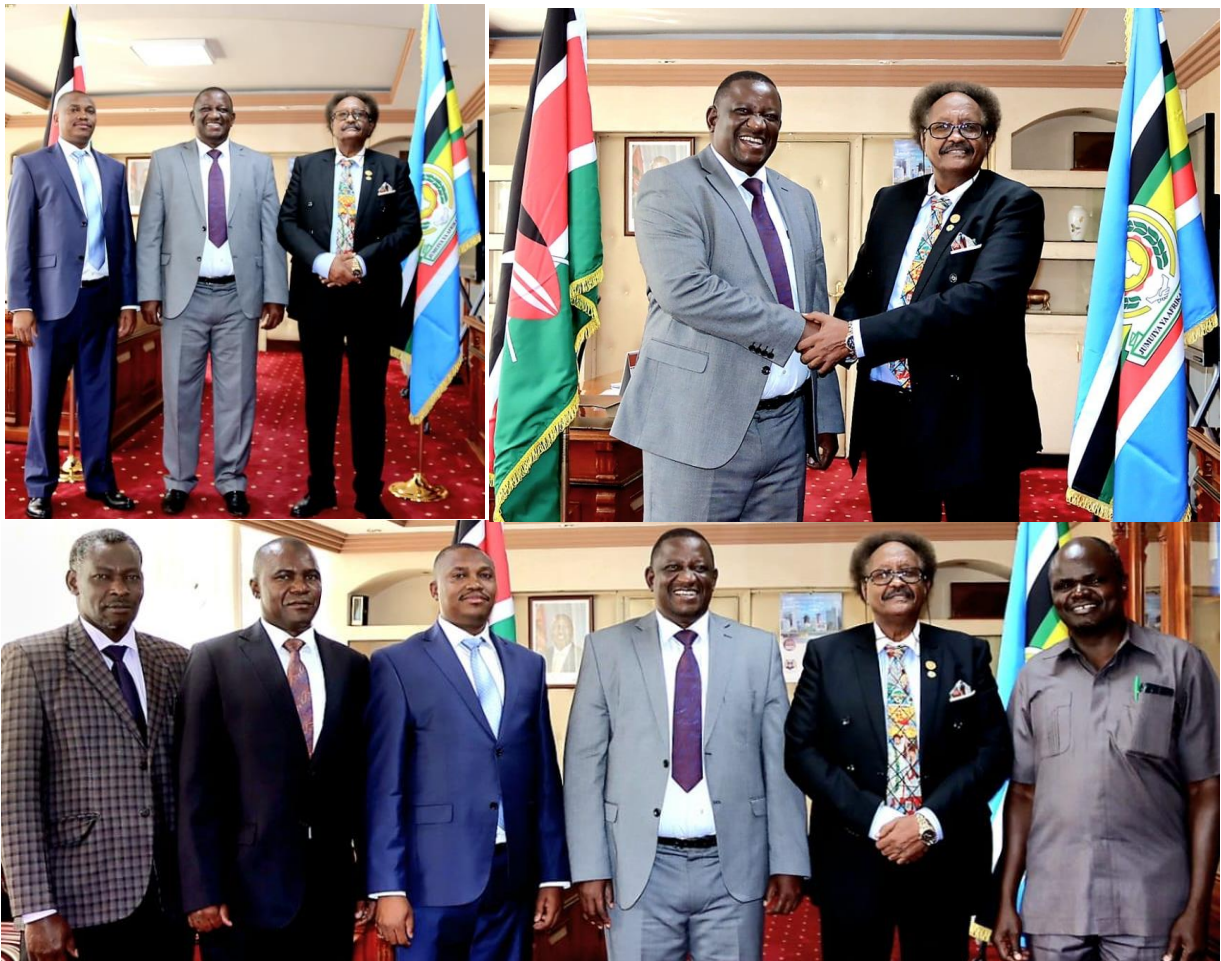
The DG paid a courtesy visit to the Embassy of the Sudan in Nairobi, Kenya and met H.E. Kamak Gubara, the Ambassador of the Sudan to Kenya.

During this month the Centre started a two weeks comprehensive paid training from 23 January to 03 February 2023 on Basic Gemology Skills. The participant is Madam Naila Juma Mburu, the Laboratory Assistant at Mineralogy, Petrology & Gemology department (MPGD)

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DG's Courtesy Visit to the H.E. Cabinet Secretary for Ministry of Mining, Blue Economy and Maritime Affairs of Kenya



Mr. Ibrahim Shaddad, Director General (DG) AMGC paid on 17 January 2023 a courtesy visit to H.E. Salim Mvurya, the Cabinet Secretary (CS) for Mining, Blue Economy and Maritime Affairs of Kenya. The DG had a successful meeting with the CS, in his capacity the current Chairman of AMGC Governing Council. The meeting was attended by the Principal Secretary for Ministry of Mining, Blue Economy and Maritime Affairs and officials from the ministry and Ministry of Foreign Affairs. The DG expressed his gratitude and appreciation for Kenya's sustainable support, which enabled the Centre to implement its activities to its highest peak. He further briefed H.E. the CS among other issues regarding current challenges facing the Centre and its performance from 2012 to 31 December 2022. H.E. the CS confirmed the commitment of Kenya to support AMGC and maximize its benefication from mineral services provided by the Centre. The coming Policy Organ Meetings of the Centre will be hosted by Kenya including the AMGC Governing Council for the year 2022/2023, which will be hosted under the chairmanship of H.E. Salim Mvurya as soon as possible and in date and time convenient to his esteemed Ministry of Mining, Blue Economy & Maritime Affairs, of Kenya. 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).

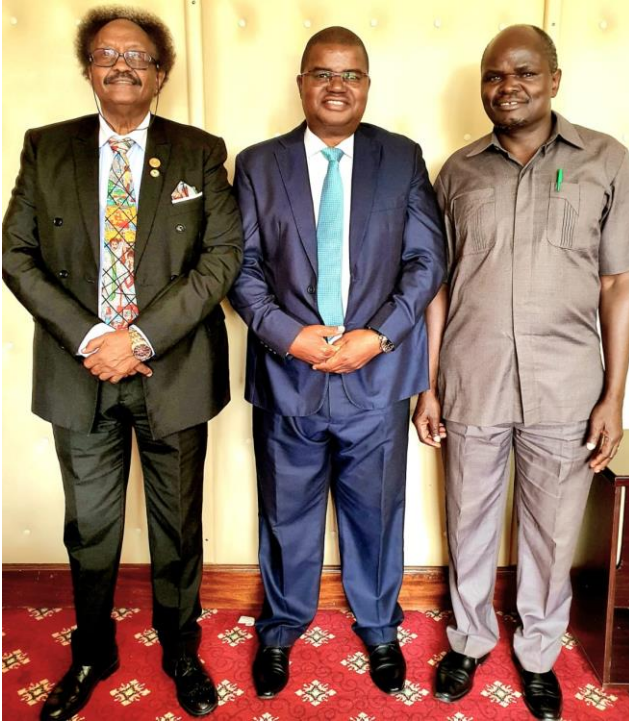
DG's Courtesy Visit to the Embassy of the Sudan in Nairobi, Kenya



Mr. Ibrahim Shaddad, the Director General of the African Minerals and Geosciences Centre (AMGC) paid a courtesy visit to the esteemed Embassy of the Sudan in Nairobi, Kenya. The Director General of AMGC met H.E. Kamak Gubara, the Ambassador of the Sudan to Kenya to express gratitude and appreciation for Sudan's sustainable support through both Ministry of Foreign Affairs and Ministry of Minerals, which enabled the Centre to implement its activities to its highest peak.

H.E. Kamak Gubara was briefed among other issues regarding the current work visit of the Director General to Nairobi, Kenya and outcomes of the successful meeting with H.E. Salim Mvurya, the Cabinet Secretary for Mining, Blue Economy and Maritime Affairs of Kenya on morning 17 January 2023. The meeting was attended by the Principal Secretary for Ministry of Mining, Blue Economy and Maritime Affairs and officials from the Ministry and Ministry of Foreign Affairs. H.E. Salim Mvurya in his current capacity as the Chairman of AMGC Governing Council has confirmed the commitment of Kenya to support AMGC and to host holding its coming Policy Organ Meetings including the AMGC Governing Council for the year 2022/2023, which will be held under the chairmanship of H.E. Salim Mvurya as soon as possible. It is worth mentioning that the Sudan joined the Centre in 2010 becoming the 8th member state, chaired the AMGC Governing Council and hosted the Policy Organ Meetings two times in Khartoum (2012 and 2019).

DG's Visit to the Deputy Principal Secretary at the State Department for Mining in Ministry of Mining, Blue Economy and Maritime Affairs, Kenya



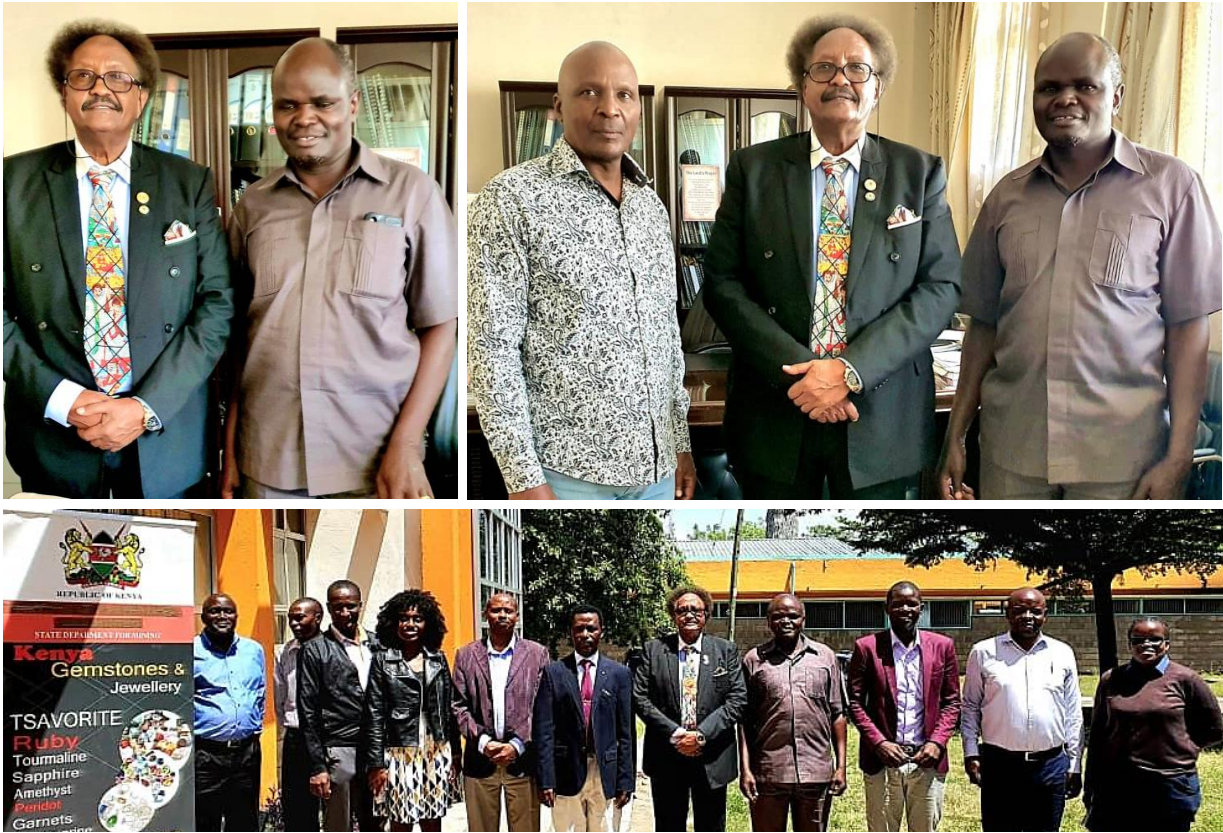
Mr. Ibrahim Shaddad, the Director General of the African Minerals and Geosciences Centre (AMGC) met the Deputy Principal Secretary at the State Department for Mining in Ministry of Mining, Blue Economy and Maritime Affairs, Kenya. Discussion was held regarding follow-up on issues of holding the coming Policy Organ Meetings of AMGC, which will be hosted by Kenya for the year 2022/2023 under the chairmanship of H.E. Salim Mvurya as soon as possible.

DG's Visit to the Ag. Managing Director of National Mining Corporation (NMC) at the State Department for Mining in Ministry of Mining, Blue Economy and Maritime Affairs, Kenya



Mr. Ibrahim Shaddad, the Director General of the African Minerals and Geosciences Centre (AMGC) met Mr. Thomas Mutwiwa, Ag. Managing Director of National Mining Corporation (NMC) at the State Department for Mining in Ministry of Mining, Blue Economy and Maritime Affairs, Kenya. In the presence of Mr. Evans Masachi, the representative of Kenya in AMGC Board of Directors, discussion was held regarding support of AMGC to the newly established NMC.

DG's Familiarization Visit to the Directorate of Geological Survey & Geo-information Management, Kenya



Mr. Ibrahim Shaddad, the Director General of the African Minerals and Geosciences Centre (AMGC) paid a familiarization visit to the Directorate of Geological Survey & Geo-information Management at the State Department for Mining in Ministry of Mining, Blue Economy and Maritime Affairs, Kenya. Mr. Evans Masachi the Representative of Kenya in AMGC Board of Directors/ Ag. Director of Directorate of Geological Survey & Geo-information Management (Madini) briefed Mr. Shaddad regarding the mandate and mission of the Directorate. The various laboratories of the Directorate were visited and the technical support by AMGC through training and sharing of analytical experience is expected to commence as soon as possible. The Director General of AMGC got the opportunity to meet the geologists at the Directorate and he encouraged them to apply for job opportunities announced recently by AMGC. Mr. Shaddad was glad to meet Mr. Josphat Wanjogu, the retired geologist/former representative of Kenya in AMGC Board of Directors. Mr. Josphat is the current registrar of the Geological Society of Kenya (GSK)

AMGC ASSISTANCESHIP FOR AFRICAN WOMEN-YOUTH EMPOWEREMENT IN COTTAGE INDUSTRY OF SMALL-SCALE VALUE ADDITION IN GEMSTONES, POTTERY & CERAMIC



The African Minerals and Geosciences Centre (AMGC) provides different capacity building trainings in an effort to assist in developing mineral resources and ensure prosperity in the African continent. Among the training provided are the Gemstone Identification and Value Addition Techniques and the Pottery and Ceramic Simple Technology courses to encourage Women-Youth Empowerment in small scale Gemstones Industry as well as in simple technology of Pottery-Ceramic Industry. We believe such initiation of small scale businesses will contribute honourably in building skills, poverty eradication, raising living standards and eventually the GDP of African states including the AMGC's member states.

Training on Pottery and Ceramic Technology

- Introduction on pottery and ceramics
- Single raw material test
- Clay body formulation
- Glaze and decorations
- Kilns and firing

Training on Gemstone Identification and Value Addition Techniques

- **Physical and optical properties of gemstones**
- **Working principles of gemological tools and equipment**
- **Testing and identification of gemstones**
- **Rough gemstones sorting and grading**
- **Different techniques for value addition in gemstones**
- **Evaluation of cut gemstones**
- **Different treatments on gemstones**
- **Marketing plans and techniques for handling gemstones**
- **Techniques used in identifying synthetic stones and imitations in the gem market**

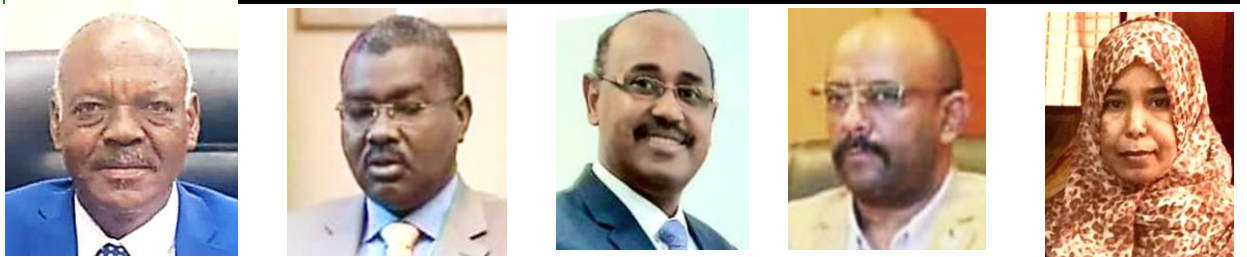
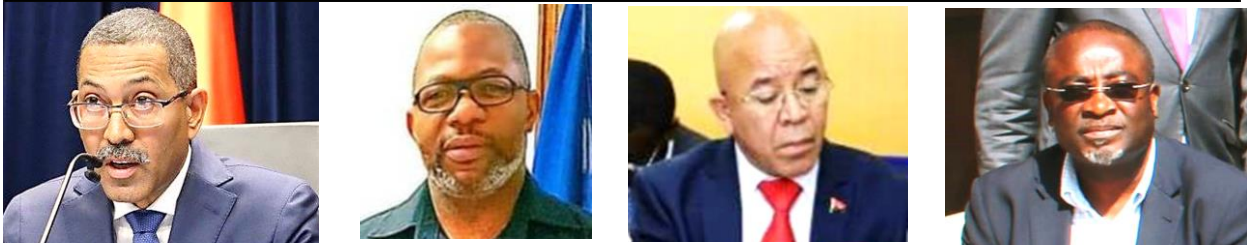
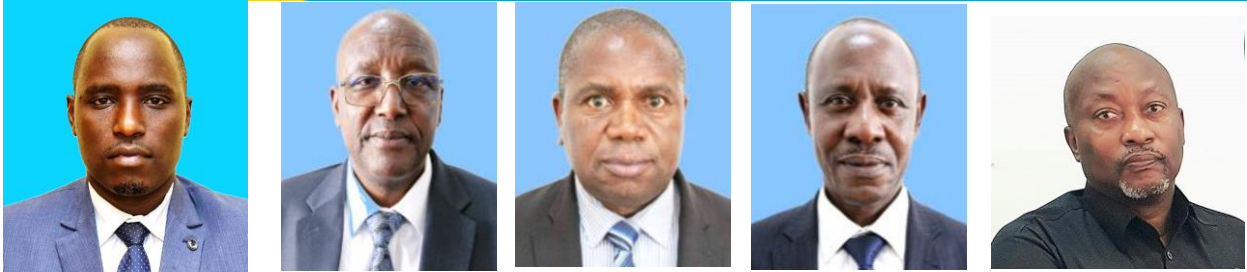
The Pottery and Ceramic Technology training is delivered in a period of four weeks while the Gemstone Identification and Value Addition Techniques training is a three weeks program. The cost for training is US\$ 400.00 per participant per week, this include lunch, tea/coffee, training materials and local transport. Member state of AMGC, who fulfilled their financial commitments to the Centre, enjoy 40% cost reduction. Accommodation is covered by participants in convenient hotels in the proximity of the Centre's premises ranging from US\$20.00 to US\$50.00 per day.

In reference to the Directives of the 38th Meeting of the Governing Council of the African Minerals and Geosciences Centre (AMGC) which was held on 08 June 2018 in Dar es Salaam, Tanzania. The Governing Council on paragraph 23, regarding the need of establishment of Gemmological Centres in AMGC member states directed the Centre to avail necessary support to member states who are willing to establish Gemmological Centres in their countries. In this regard, AMGC has assisted in establishment of Geological Centres or Units in both Tanzania and Sudan. The Centre kindly repeats its request for any such requirements within its other member states so that we can provide necessary information and assistance.

The Centre started a two weeks comprehensive paid training (23 January - 03 February 2023) on Basic Gemmology Skills. The participant is Madam Naila Juma Mburu , the Laboratory Assistant at Mineralogy, Petrology & Gemmology department (MPGD). She has expressed her keen interest to have a paid training and certificate to build capacity in her day today activities at the department, and the management approved a 20% reduction in the training cost to be deducted from her salary for the coming six months, as a special offer to staff interested in enjoying mineral services including training provided by the Centre. It is worth mentioning that Madam Naila have served the Centre indirectly by working as a house maid for two former director generals during 2003-2015 and consequently given the opportunity through an attachment to be trained in both Ceramic Section and MPGD so as to be an icon at the Centre for its efforts in Women-Youth Empowerment. Upon satisfactory result, assessment and written recommendations by the managers of the two departments, Madam Naila was employed as a laboratory assistant in the two departments. According to a written request and recommendation from the Senior Technician at Ceramic Section, she had the opportunity to join the technical staff of the section in 2017 advance Training Course on Ceramic Production Techniques for Developing Countries held for 3 weeks in China. Recently Madam Naila has decided to improve her English fluency by participating in paid evening classes for six months at British School in Dar es Salaam, Tanzania.

APPRECIATION & GRATITUDE

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



EVENT



BE PART OF CAG29 - 2023

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

THROUGH:

- Sponsorship
- Presentation
- Attendance
- Exhibition
- Lead a field trip/workshop

DATE: 26 - 29 September, 2023

VENUE: Windhoek, Namibia

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ABOUT CAG:

The Colloquium of African Geology (CAG) is a major biennial meeting organized under the auspices of the Geological Society of Africa (GSAF), where earth scientists globally have the opportunities to present their research results on topics related to African geology and surrounding areas.



"Namibia. the World's Geological Paradise"



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

Tanzanian government issued a new directive on restrictions with regards to the COVID-19. All travelers coming to Tanzania will not be required COVID 19 Free Certificate if they have a valid full vaccination certificate. If one is not vaccinated a COVID 19 Free Certificate with PCR Test and will be subjected to screening and possible additional test at the airport with Rapid Antigen Test. Below is the list of the training courses offered by AMGC.

Those who are interested to participate in the training courses at AMGC facilities are advised to consult the airline they plan to travel with about the current requirements of travel to Tanzania when planning the trip to Dar es Salaam.

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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Development***

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GEOCHEMICAL AND ENVIRONMENTAL SERVICES

The Geochemical and Environmental Department of AMGC carries chemical analysis of geological materials (rocks, minerals, soil, sediment and concentrate) so as to demarcate areas with economic mineral potential. It also offers useful analytical data on metals, water, soils, minerals, fish, sewage for use by metallurgists, environmentalists, agriculturalists, road construction engineers and water engineers. The section provides training and consultancy services to clients from member states and other countries.



Chemist at work in AAS laboratory

Chief chemist at work in ICP - OES laboratory

TRAINING SERVICES

Training on relevant aspects of specialized chemical analysis of geological and environmental materials by short courses or attachment and tailor-made basis are also organized by the Department. The training courses include:

- ✓ Spectrometric Methods
- ✓ Analysis of Gold and Other Precious Metals
- ✓ Modern Laboratory Management Methods
- ✓ Environmental Technologies
- ✓ Field Sampling Techniques for Chemical Analyses
- ✓ Laboratory Sample Preparation Techniques for Chemical Analyses



Chemist testing loss on ignition

Chemist preparing petroleum samples for ICP - OES testing

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