



AMGC Director General's Message



During the month of July 2024, the African Minerals and Geosciences Centre (AMGC) which was established in 1977 under the auspice of the UNECA in 1977 was honored to celebrate its 47th anniversary. AMGC received a working visit by a team from the Comoros Geosciences Bureau (CGB). Invited by the diplomatic missions of Comoros, Egypt and Morocco, the Director General of AMGC attended the celebrations of their national days. Two training

participants were trained from INAMI in Maputo, Mozambique. An Ethiopian and Eritrean businessmen seeking mineral services paid a familiarization visit to the Centre. They intend to invest in minerals export such as lithium, copper and manganese from Tanzania. A Sudanese geologist who is a PhD researcher at RUDN, Russia paid a familiarization visit to AMGC. A team from the Golden Specialized Mining Services (GSS) Company conducting a business trip to Tanzania to explore mining opportunities paid a familiarization visit to the Centre. AMGC was honored by a familiarization visit paid by a delegation of Al-Merrikh Sporting Club, which is a Sudanese professional football club currently visiting Tanzania. Two apprentices were recruited as local technicians after successfully completing their nine months internship program at the Centre. A Tanzanian young geologist has finished his nine months internship while a young Tanzanian female and a Comorian female have started their internship. The Centre received 13 undergraduate students for free of charge practical training i.e. 4 from Ardhi University, 4 from University of Dar es Salaam and 5 from University of Dodoma. Congratulatory letters were sent to Eng. Yahya Ismail Samamba for being appointed Permanent Secretary of the Ministry of Minerals of Tanzania and to H.E. Mr. Aboubacar Said Anali for been appointed Minister for Energy, Water and Hydrocarbons of the Comoros. Condolences were expressed for the demise of the Prof. Mohamed Abdelsalam, Editor-in-Chief of the Journal of African Earth Sciences (Prof. of Structural Geology, Oklahoma State

Contents

AMGC is honored to celebrate its 47 th anniversary	Page 1
A team from the Comoros Geosciences Bureau (CGB) paid a working visit to AMGC	Page 2-4
Director General of AMGC attended the Independence Day of Comoros	Page 5
AMGC received Ms Assia Ahamada El Badaoui for an 8-weeks internship programme in the Chemical and Environmental Department of the Centre	Page 6
Director General of AMGC attended the 72 nd anniversary of the July 23 Revolution of Egypt	Page 7
Director General of AMGC attended the Morocco's Throne Day (National Day)	Page 8
Two training participants were trained from INAMI in Maputo, Mozambique	Page 9-10
An Ethiopian and Eritrean businessmen seeking mineral services paid a familiarization visit to the Centre	Page 11
A familiarization visit to AMGC by a delegation of Al-Merrikh Sporting Club, which is a Sudanese professional football club currently visiting Tanzania	Page 12
A Sudanese geologist who is a PhD researcher at RUDN, Russia paid a familiarization visit to AMGC	Page 13
A team from GSS Company paid a familiarization visit to the Centre	Page 14
Condolences for the demise of the Prof. Mohamed Abdelsalam, Editor-in-Chief of the Journal of African Earth Sciences (Prof. of Structural Geology, Oklahoma State University, United States)	Page 15
Newly Recruited Local Technicians	Page 16
A Tanzanian young geologist has finished his nine months internship while a young Tanzanian female has started her internship	Page 17
AMGC received 4 undergraduate students from Ardhi University in Tanzania for free of charge an 8 weeks practical training	Page 18
AMGC received 9 undergraduate students i.e. 4 from University of Dar es salaam and 5 from University of Dodoma for free of charge an 8 weeks practical training	Page 19
Congratulation to H.E. Mr. Aboubacar Said Anali and congratulate Eng. Yahya Ismail Samamba for been appointed Minister for Energy, Water and Hydrocarbons of the Comoros	Page 20
Congratulation to Eng. Yahya Ismail Samamba for being appointed Permanent Secretary of the Ministry of Minerals of Tanzania	Page 21
Events	Page 22-23
Training Courses	Page 24-28





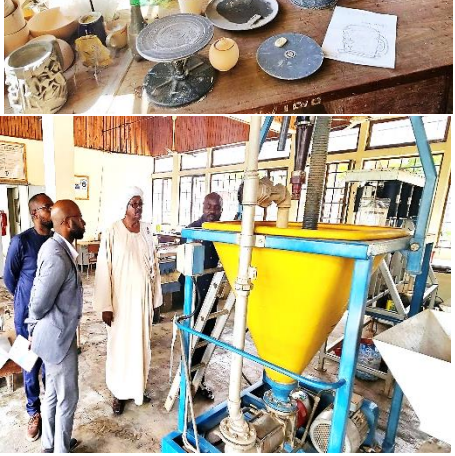
THE AFRICAN MINERALS AND GEOSCIENCES CENTRE (AMGC) WHICH WAS ESTABLISHED IN 1977 UNDER THE AUSPICE OF THE UNITED NATIONS ECONOMIC COMMISSION FOR AFRICA (UNECA) IN 1977 IS HONoured TO CELEBRATE ITS 47TH ANNIVERSARY.

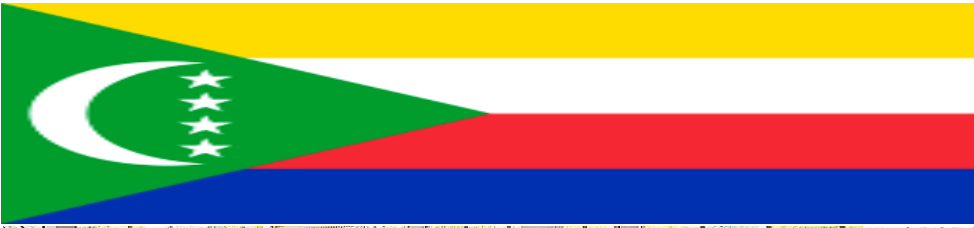


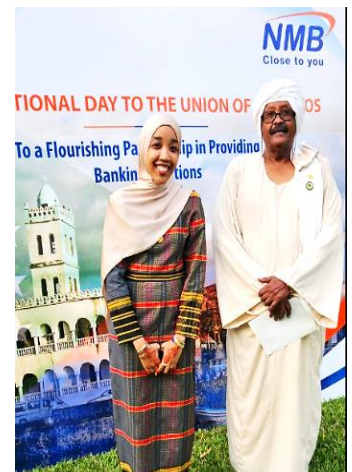
On 3rd July 2024 the African Minerals and Geosciences Centre (AMGC) received a working visit by a team from the Comoros Geosciences Bureau (CGB), Ministry of Economy, Planning, Energy, Tourism, Private Sector of the Investments, and Land Affairs including Petroleum- Mining. The team involved:

- 1- Mr. Mohamed Chaheire Mohamed Chamassi, the Head of CGB**
- 2- Mr. Anlilwafa Adeine, the Head of Mining Department, CGB.**

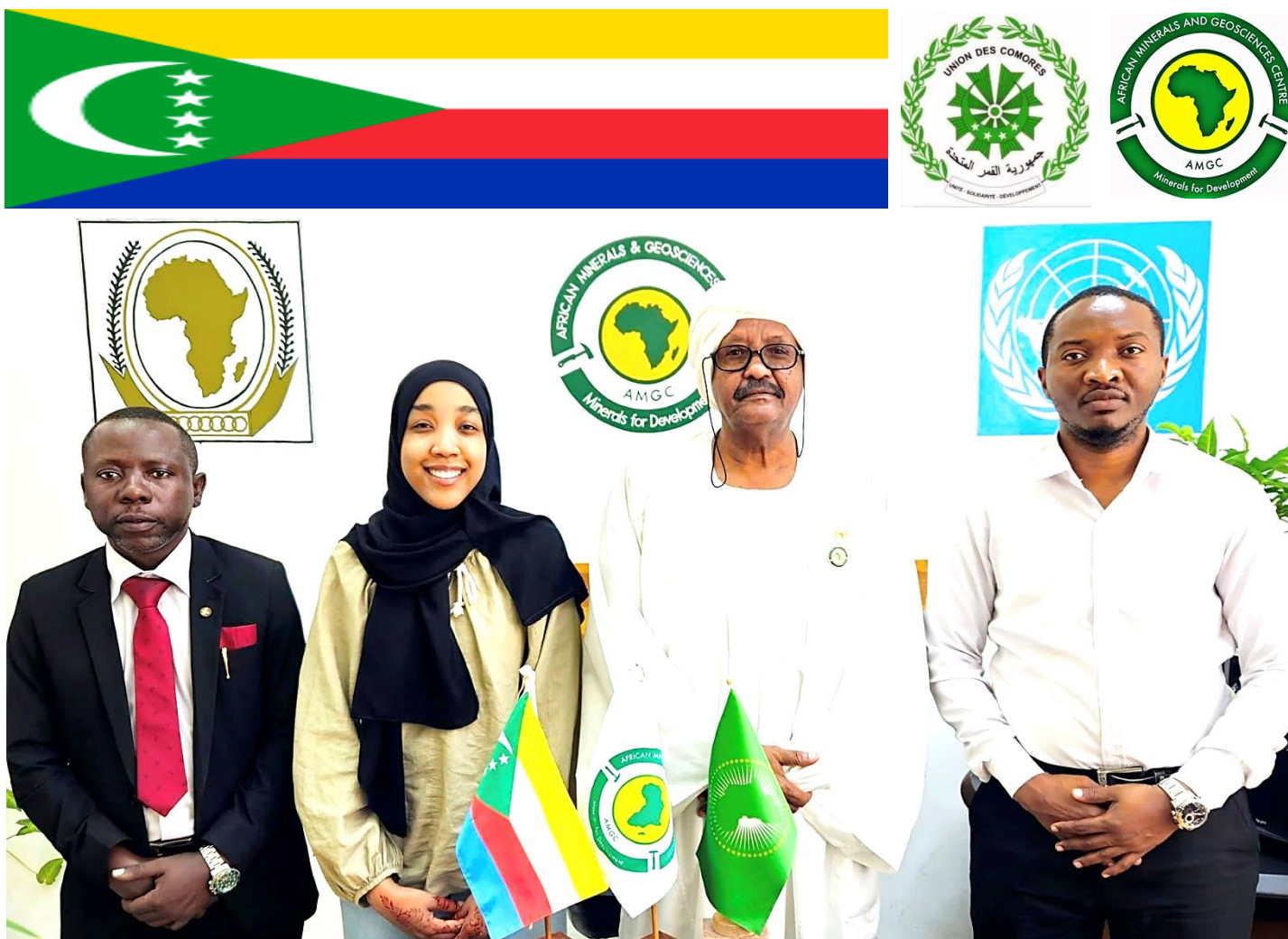
The team was also accompanied by Miss. Assia Ahamada El Badaoui Mohamed Fakih, who was a moderator in the discussion from the Embassy of the Comoros in Dar es Salaam. The visit aimed at exchanging ideas with the AMGC management and professionals on good practices and standardized protocols to ensure high quality laboratory operations at CGB, discussing the need for equipment and training of personnel and highlighting on the procedures of technical assistance from AMGC on the installation and operationalization of CBG laboratory. The Comoros is one of the founder states of AMGC and it was the state which signed the Centre's establishment agreement on behalf of the other member states.







The African Minerals and Geosciences Centre (AMGC) wishes a Happy Independence Day of Comoros, the member state of the Centre. The Director General of AMGC attend the celebration which was held in Serena Hotel, Dar es Salaam on 6th July 2024.



On 8th July 2024 the African Minerals and Geosciences Centre (AMGC) received Miss Assia Ahamada El Badaoui Mohamed Fakih for an 8-weeks internship programme in the Chemical and Environmental Department of the Centre. Miss Assia is a Comorian by nationality, and she is a 4th year undergraduate student at Izmir Institute of Technology (IZTECH) in Turkey, taking a Bachelor of Science degree in Chemistry. The Internship programme aims to bridge a gap between theory and practical knowledge, and it will add value for capacity building. Comoros is one of the founder member states of AMGC and Miss Assia Ahamada El Badaoui Mohamed Fakih is the daughter of H.E. the Extraordinary & Planetary Ambassador of the Republic of Comoros in Tanzania, as well as he is the Dean of the Diplomatic Corps in Tanzania.



Egypt's Embassy in Dar es Salaam, Tanzania, marked the 72nd anniversary of the July 23 Revolution with celebration led by H.E. Sherif A. Ismail, the Ambassador of the Arab Republic of Egypt in Tanzania. A number of Tanzanian officials and foreign diplomats, including the Director General of AMGC, attended the event in Serena Hotel, Dar es Salaam. Hon. Anthony Mavunde the Minister of Minerals was the guest of honour. H.E. Sherif A. Ismail highlighted the significance of the anniversary, honoring the



struggles of past generations and reviewing bilateral cooperation with Tanzania.

It is worth mentioning that, on 15th of May 2024, H.E. Sherif A. Ismail accompanied by Mr. Ahmed Amer, the Head of the Political Section at the Embassy of Egypt in Dar es Salaam paid a familiarization visit to AMGC so as to be acquainted with the mineral services being provided at the Centre. During the 34th and 35th meetings of the Governing Council of AMGC which were held in Nairobi, Kenya on 4 June 2014 and 27 May 2015 respectively, the Ambassador of Egypt in Kenya who attended the meetings as an observer, expressed the interest of the Arab Republic of Egypt to become a member state of AMGC. In that juncture, the Ministerial Governing Council of AMGC directed the management of the Centre to pursue with the esteemed Ministry of Petroleum and Mining of Egypt to ensure confirmation of its membership to AMGC. The current visit of the distinguished Egyptian diplomats is expected to pave the way for finalizing the expression of interest shown by Egypt to join the concentrated force of AMGC in serving the mining sector of our African continent.



The Director General of the African Minerals and Geosciences Centre (AMGC) was cordially invited to Morocco's Throne Day (National Day) reception that took place at the Embassy of the Kingdom of Morocco in Dar es Salaam, Tanzania on Tuesday evening of 30th July 2024.

It is worth mentioning that AMGC has invited the esteemed Moroccan Ministry of Energy, Mines, Water and Environment (MEMWE) to join the membership of Centre so as to be among its driving force. The MEMWE is one of the regional leaders in the Mining Sector of Africa and the mining industry of Morocco contributes honorably in the national economy. The technical know-how is developed and Morocco is the world's largest producer of phosphate, and contains about 75% of the world's estimated reserves. Mining contributes more than 35% of exports and 5% of GDP. Foreign investors have found the investment climate, the infrastructure, fiscal situation, and political stability very favorable to continue business in the country in this sector.



On 2nd July 2024 the African Minerals and Geosciences Centre (AMGC) received two training participants from the National Institute of Mines (INAMI) in Maputo, Mozambique. The two trainees are:

- 1. Mrs. Nelfa Abel Eliasse, who is a geologist attended a two weeks training course on GIS AND REMOTE SENSING FOR MINERAL EXPLORATION. This course is conducted by the Geo-information Department in collaboration with Mr. Japhet Fungo, a resource person from the Department of Geology University of Dar es Salaam, Tanzania.**
- 2. Mr. Goncalves Judas Manhique, who is a mineral processing technician attended a two weeks training course on GENERAL SAMPLING AND SAMPLE PREPARATION FOR LABORATORY ANALYSIS in the Mineral Processing and Small-Scale Mining Department.**



On 12nd July 2024 certificate hand out ceremony for two (2) professionals from the National Institute of Mines (INAMI) in Maputo, Mozambique. The two professionals are:

1- Mrs. Nelfa Abel Eliasse, who is a geologist, has finished attending a two weeks training course on GIS AND REMOTE SENSING FOR MINERAL EXPLORATION. This course is conducted by the Geo-information Department of AMGC in collaboration with Mr. Japhet Fungo, a resource person from the Department of Geology University of Dar es Salaam, Tanzania.

2- Mr. Goncalves Judas Manhique, who is a mineral processing technician, has finished attending a two weeks training course on GENERAL SAMPLING AND SAMPLE PREPARATION FOR LABORATORY ANALYSIS in the Mineral Processing and Small-Scale Mining Department of the African Minerals and Geosciences Centre (AMGC).





On 11th July 2024 the African Minerals and Geosciences Centre (AMGC) received Messrs. Teklay Kahessay Gezahagn and Vitorio Perino Giovani on familiarization visit to the Centre. Mr. Teklay Kahessay Gezahagn is an Ethiopian businessman resident and working in Tanzania and involved in business such IT HTC Africa (T) Limited, Hotel Luxury Beach Villa Inn and Ethiopian Luxury Restaurant. Mr. Vitorio Perino Giovani is an Eritrean businessman resident and working in Dubai. The two businessmen intend to invest in minerals export such as lithium, copper and manganese from Tanzania. They visited AMGC seeking mineral services particularly analysis, training and consultancy.



On 4th July 2024 the African Minerals and Geosciences Centre (AMGC) was honoured by a familiarization visit paid by a delegation of Al-Merrikh Sporting Club, which is a Sudanese professional football club currently visiting Tanzania. The delegation consisted of the following administrators:

1. Mr. Hitham Capo, the head of the football sport delegation to Tanzania
2. Mr. Ibrahim Hussein (Captain Abrahouma)
3. Mr. Muawia Aliak, the sports journalist and sports marketing manager
4. Dr. Muhammad Al Amin, the photographer

The Director General of AMGC briefed the delegation regarding the development of the Centre, vision, and mandate in provision of mineral services, including training, consultancy, and analysis to the Mining Sector and Geosciences Community in Africa. The delegation expressed gratitude and appreciation having the opportunity to visit the Centre, which currently is managed by a distinguished Sudanese geologist as well as he is one of the Sudanese prominent figures in Dar es Salaam, Tanzania. For recognition, the delegation awarded Al-Merrikh Sporting Club souvenir to the Director General of the Centre. It is worth mentioning that Al-Merrikh is one of the oldest football clubs in Africa that was founded in 1908. It has won the Sudan Premier League 22 times and Sudan Cup 26 times. It is the only club in Sudan to win the Continental Cup.

- African Cup Winners' Cup
- Winners (1): 1989
- CAF Confederation Cup
- Runners-up (1): 2007

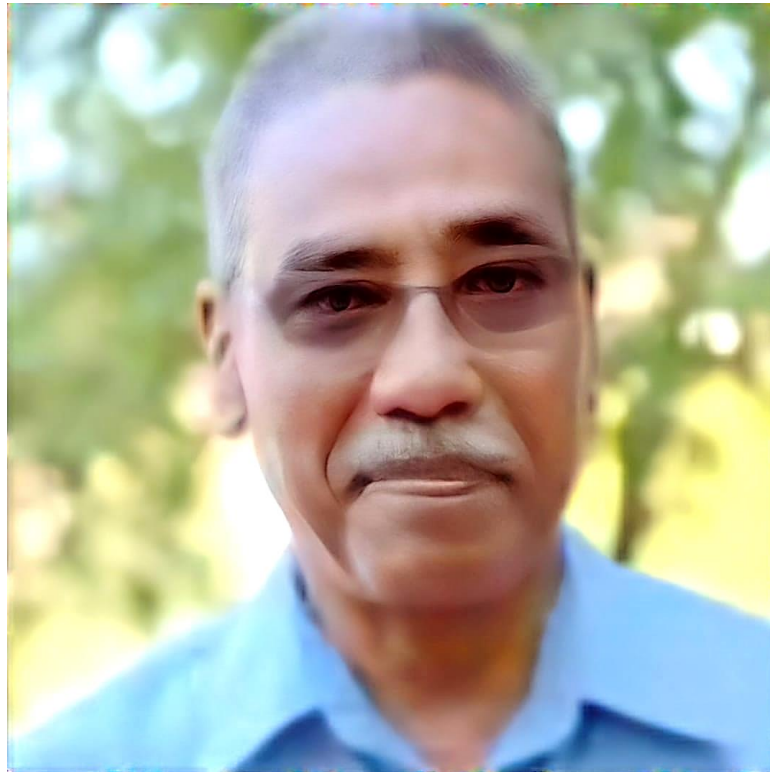
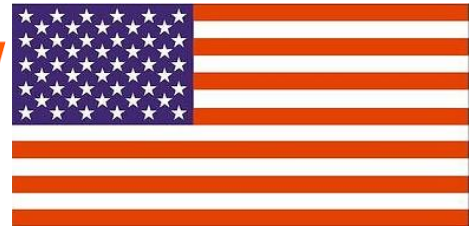


On 9th July 2024 the African Minerals and Geosciences Centre (AMGC) received Mr. Muhammad Abdullah Al-Sharif, on a familiarization visit to the Centre. Mr. Muhammad is a Sudanese geologist who graduated from the Department of Geology at the University of Khartoum (U of K) in 2012. He obtained a Master's degree from the Peoples' Friendship University of Russia (RUDN) in Moscow and is currently pursuing a doctorate degree at RUDN. Mr. Muhammad is on a visit to the University of Dar es Salaam (UDSM) as part of the cooperation and student exchange program between RUDN and UDSM.

Mr. Muhammad reported that the family of the late Russian Professor Nikolai Nikolayevich, on the 95th anniversary of his birth, would like to publish a book about his contribution to Africa in general and Sudan in particular in developing geological researches. Prof. Nikolai had special respect and affection for Sudan and the late Dr. Muhammad Zain Shaddad, who was his first PhD. student and Prof. Nikolai supervised Dr. Shaddad's doctoral research on chromite of Ingessana Hills, Sudan. The family of late Prof. Nikolai requests the family, friends, and colleagues of late Dr. Muhammad Zain Shaddad to provide them with information about his academic and research activities in geology, in addition to his biography to be included in the biography book of Dr. Nikolai will be published on the occasion of his 95th birthday anniversary.



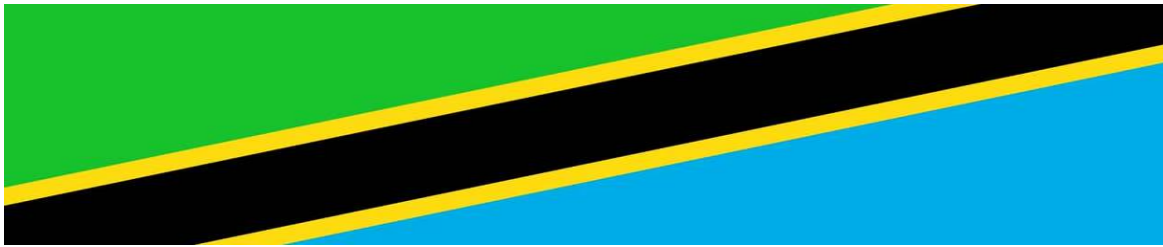
The African Minerals and Geosciences Centre (AMGC) received a team from the Golden Specialized Services (GSS) Company led by General Manager Awad Musa, Technical Manager Diaa El-Din, and Geologist Wael Ahmed on a familiarization visit to the Centre on 31st July 2024. The GSS Mining Services Company is conducting a business trip to Tanzania to explore mining opportunities. The visit aims to assess the mining potential in the area and explore investment opportunities and potential partnerships in the Tanzanian mining sector.



CONDOLENCES

The African Minerals and Geosciences Centre (AMGC) heard with great shock on the demise of the Prof. Mohamed Abdelsalam, Editor-in-Chief of the Journal of African Earth Sciences (Prof. of Structural Geology, Oklahoma State University, United States).

On behalf of staff, management of AMGC and geosciences community in Africa, I would like to convey our deepest condolences to his family, friends, neighbors, colleagues, post graduate students and the scientific community in the world over on this very sad occasion. We pray his soul rests peacefully in the hands of Allah, the most merciful and compassionate.



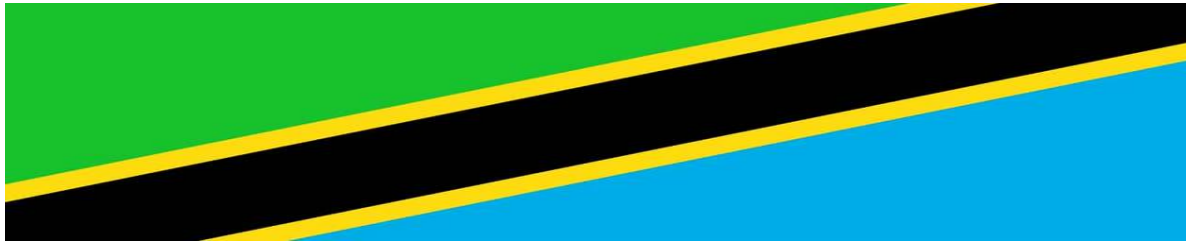
NEWLY RECRUITED LOCAL TECHNICIANS

The African Minerals and Geosciences Centre (AMGC) was happy to offer:

1- Mr. Henerico Mazzuki a two years contract as Ceramic Potter under the Industrial Minerals and application Department (IMAD) at the Centre. Mr. Mazzuki was an apprentice

at IMAD and has shown great skills in pottery throwing, decoration, and curving during his nine months internship period. The position was vacant due to the retirement of the former Ceramic Potter Mr. Said Hassan in June 2024.

2- Ms. Heriethana Christomoo Tenga a two years contract as a laboratory assistant under the Mineralogy, Petrology, and Gemology Department (MPGD) at the Centre. Ms. Heriethana was an apprentice at MPPGD and has shown great ability in mineralogical and petrological, sample preparations, as well as gem identification basic skills during her internship period of nine months, which started at the IMAD.



INTERSHIP PROGRAM

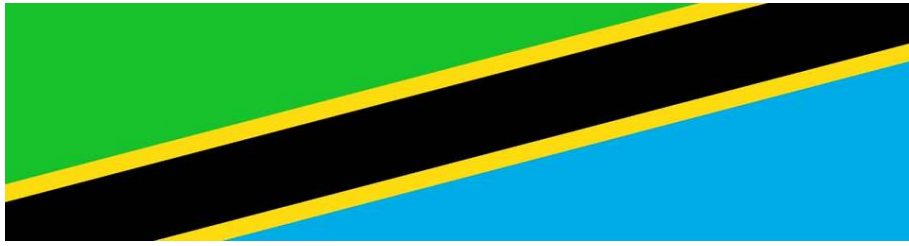
The African Minerals and Geosciences Centre (AMGC) provides economic capacity building to different apprentices as part of empowering women and youth to build their skills and create competent professionals in current and future generation.

AMGC congratulated Mr. Dickson A. Clemence, a young Tanzanian geologist who had successfully completed as an apprentice a nine months internship program for capacity



building at the Centre. He acquired GIS and Remote Sensing skills at Geo-information Department (AMGC). Furthermore, software applications in geological data processing, analysis and interpretation (SPSS, ArcMap and GEOVIA Surpac). We wish him all the best in his career.

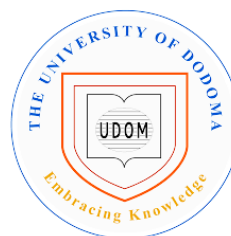
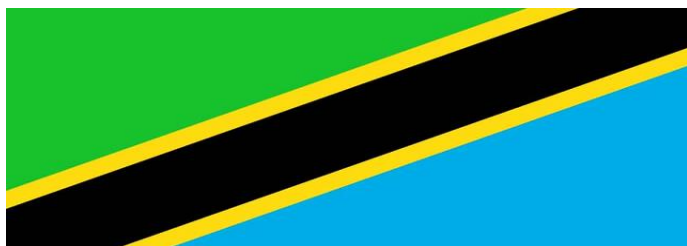
On 1st July 2024 the Centre received Ms. Nuru Abeid Msellem who will build her skills as apprentice for a maximum nine months in leadership and management, financial management and executive secretarial at the Finance and Administration Department.



On 15th July 2024 the African Minerals and Geosciences Centre (AMGC) received 4 undergraduate students from Ardhi University in Tanzania taking BSc. (Environmental Laboratory Science and Technology). The students started the training with free of charge for 8-weeks Industrial Training from 15th July 2024 to 06th September 2024 so as to bridge the gap between theory and practical knowledge in analytical science. The students are;

- 1. Miss. Anna A. Mutashobya**
- 2. Miss. Marcelina O. Maiko**
- 3. Mr. Azizi J. Rashidi**
- 4. Mr. Mohamed M. Fatiu**

AMGC continued to provide this opportunity for undergraduate students from various universities in the member states.



On 22nd July 2024 the African Minerals and Geosciences Centre (AMGC) received 09 undergraduate students from two Universities in Tanzania for an eight-weeks practical training in analytical laboratory science to bridge the gap between theory and practical skills from 22nd July 2024 to 13th September 2024. The students from the University of Dodoma (UDOM) taking BSc. (Chemistry) and BSc. (Metallurgy & Mineral Processing Engineering) are;

- 1. Miss. Aneth F. Magalo**
- 2. Miss. Millenium Mwambene**
- 3. Miss. Sawia H. Kileo**
- 4. Mr. Bahati S. Kiniga**
- 5. Mr. Mohamed A. Ngajima**

The students from the University of Dar es Salaam (UDSM) taking BSc. (Chemistry) are;

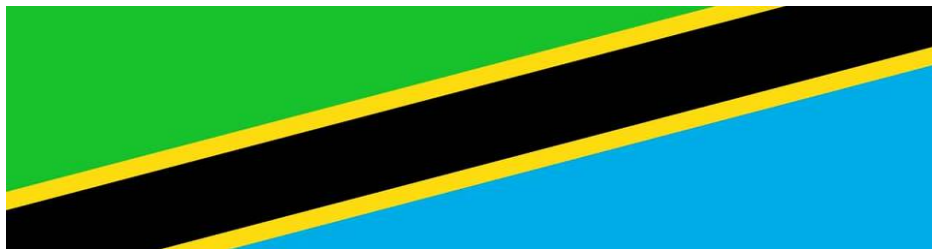
- 1. Miss. Anisia K. Gunze**
- 2. Miss. Mariam H. Mrisho**
- 3. Miss. Subira Jacob**
- 4. Mr. Carlos G. Gamariel**

The Centre has continued to provide this free capacity building program to young scientists and engineers from various institutions in the Member States.



CONGRATULATIONS

On behalf of the African Minerals and Geosciences Centre (AMGC) the Director General would like to congratulate H.E. Mr. Aboubacar Said Anali for been appointed Minister for Energy, Water and Hydrocarburs of the Comoros. The Comoros is among the early founder members states who on behalf of the other member states signed the Agreement Establishing the Centre in 1977.



CONGRATULATIONS

The African Minerals and Geosciences Centre (AMGC) the Director General would like to congratulate Eng. Yahya Ismail Samamba for being appointed Permanent Secretary of the Ministry of Minerals of Tanzania.

It is worth mentioning that, Tanzania has been chair and host of policy organ meetings of the Centre for more than twenty-three times since its inception in 1977. Tanzania, being one of the founding member state and host country of AMGC, has been unreservedly

supporting the Centre since its establishment in 1977. AMGC sincerely recognizing about the outstanding commitments and obligations of the Government of Tanzania to the Centre that enabled it to implement its activities to its highest peak.

EVENTS

UPCOMING EVENT:

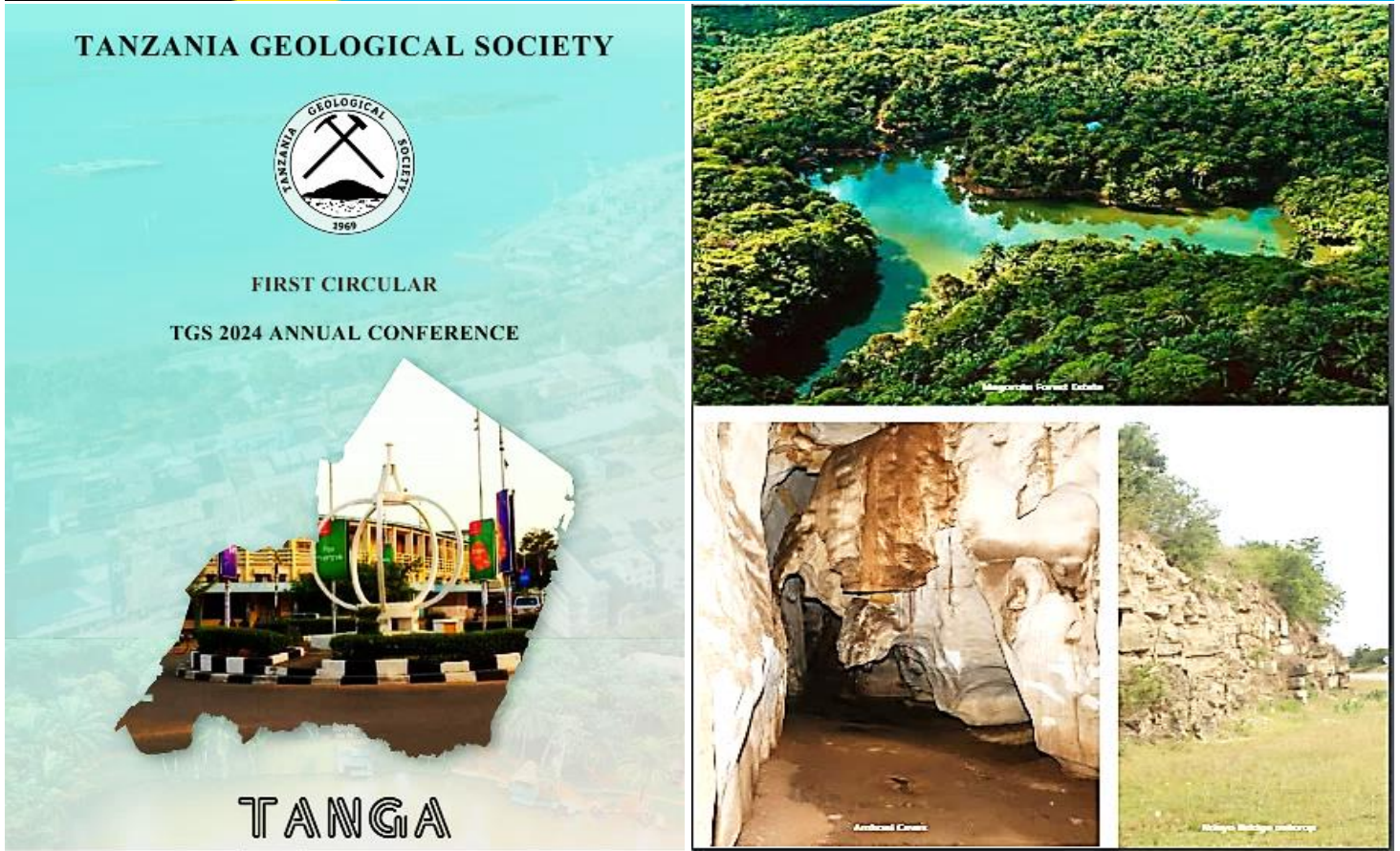


08th MINEXPO TANZANIA 2024 - International Trade Exhibition on Mining & Machinery, Dar es Salaam from 25th to 27th September 2024



SECOND CIRCULAR:

10th African Rift Geothermal Conference (ARGeo-C10), that will take place on 21st to 27th October 2024 at Julius Nyerere International Convention Centre, Dar es salaam, Tanzania



TANZANIA GEOLOGICAL SOCIETY (TGS) ANNUAL CONFERENCE 2024

This year annual meeting will be held in Tanga, Tanzania from 1st to 06th of December 2024 with the leading theme “Harnessing Tanzania Mineral Wealth for Sustainable Economic Growth and Smooth Energy Transition”.

New Courses




AMGC

New Courses

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

1

Gemstone/Mineral Estimation and Valuation

2

Jewelry Design

3

Gemstone Exploration & Gem Safari's

www.seamic.org

More Info
matokeo@seamic.org



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 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 (FAD)		
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 (CED)		
Spectrometric Methods of Analysis.	2 Weeks	\$800
Analysis of Gold and Other Base Metals	2 Weeks	\$800
Modern Laboratory Management Method	2 Weeks	\$1,500
Quality Management Section (QM)		
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 (MPGD)		
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 (IMAD)		
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 (MPSSMD)		
Practical Mineral Processing and The Basic Mineral Processing Flowsheet	2 Weeks	\$800
Sampling and Sample Preparation for Laboratory Testing	2 Weeks	\$800
Artisanal and Small-Scale Mining Activities	2 Weeks	\$800
Techniques of Gold Cyanidation	1 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	1 Week	\$400
Geo-information Department (GID)		
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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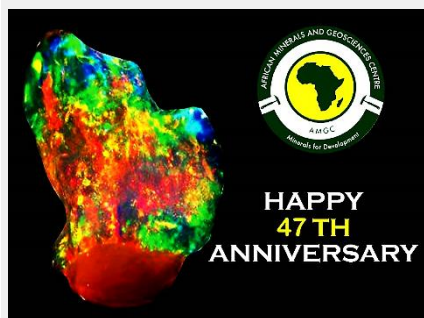
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MINERALOGY, PETROLOGY AND GEMMOLOGY SERVICES

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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