

Geological Society of Zimbabwe



Newsletter

October 2024

No. 3 of 3 of 2024



Jack's Gorge, Chewore – A new, secret, dinosaur bone location – watch this space!
Lucy Broderick

www.geologicalsociety.org.zw

The Geological Society of Zimbabwe, P.O. Box CY 1719, Causeway, Harare

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Editorial

This is the final Newsletter for 2024, which heralds the annual Summer Symposium that this year is to be staged at the Natural History Museum in Bulawayo on 1st November. Coupled with this event will be Ben Mapani's delivery of the 13th A.M. Macgregor Memorial Lecture. With a strong line-up of talks, this is a chance to network with our colleagues from the south of Zimbabwe. Tony Martin will lead a field excursion to the environs of the Diana's Pool orbicular National Monument in the eastern Matopos south of Esibomvu on 2nd November. We sincerely hope that as many members as possible will be able to attend this year's Symposium, which promises to be a most stimulating event. The Macgregor lecture is open to the public, so all are welcome to attend.

In this issue we profile our Vice Chairman, Caston Musa, who is leading a fulsome career within our mining industry. Gayle Hanssen gives us an update on our Membership and welcomes new members, both Institutional and Ordinary. She gives a summary of the highlights associated with the Society of Economic Geologist's pre-Windhoek Symposium Lithium Field Trip, which she co-led with Adam Moodley and Forbes Mugumbate for 23 international delegates. As part of the GSZ co-operation with SEG, Andrew du Toit and Caston Musa have been foremost in the organization and leadership of the post-Symposium Great Dyke excursion.

A sad moment for the Society was the passing in Canada of Prof Dai Jones, Honorary Member since 2002. A summary of his academic career, which was presented by Prof Teddy Zengeni on the occasion of Dai's elevation to Honorary membership, has been adapted to share with members the important contributions that Dai made to the earth sciences, both internationally and in Zimbabwe, and to the University of Zimbabwe in particular.

Sharad Master gives a preliminary summary of plans to host the 51st International Symposium on the History of Geology (INHIGEO) at Victoria Falls in December 2026. He will elaborate on this initiative at our Summer Symposium in Bulawayo.

The abstract from the *Journal of Vertebrate Paleontology* by Challands *et al.* announces the naming of a new Upper Triassic lungfish from the Matusadona lake shore, which has been named for Steve Edwards, ex National Parks and owner of Musango Safari Camp in the Ume Estuary. Steve has been foremost in the discovery of fossil sites around Lake Kariba since 1994.

Our news from institutions hosting earth science-related departments has been expanded with our re-engagement with Manicaland State University and NUST. We welcome this involvement and look forward to an expanded interaction between those with mutual interests, a situation which should stimulate collaborative research projects.

Ernest Mugandani gives us an update on activity within the Geological Survey whilst Forbes Mugumbate is back with his insightful commentary on happenings within our mining industry. Kennedy Mtetwa is thanked for his gleanings from the literature on matters relevant to our mining industry and the region. As always, Shephard Mabhanga, as liaison member from the Committee, has made an important contribution towards communication with our contributors.

With the upcoming symposia, field trips and workshop, the February edition of the Newsletter promises to relay a plethora of news articles and new ideas. Keep them coming.

Tim Broderick (Icositet)



Chairperson's Chat



Ernest Tafumenei Mugandani etmugandani@gmail.com

Welcome to yet another exciting edition of the Geological Society of Zimbabwe (GSZ) Newsletter, the 3rd for 2024. Thanks to our editorial team, Tim Broderick with Shephard Mabhanga, and to our regular news contributors. Manicaland State University and the National University of Science and Technology (NUST) are back on track with news from their institutions. We continue to welcome the growing number of new institutions that are providing courses in the Applied Geosciences and we encourage them to come forward with newsworthy contributions.

In running the affairs of the Society, the Committee managed to organize one talk on *Geothermal Energy in Africa. A Solution to the Electricity Crisis*, which was presented by Shadrack Phetla on 5th July 2024.

In September, the Society also managed to sponsor one geoscientist, Gerald Kupeta, to attend the Society of Economic Geologists' (SEG) conference that was held in Windhoek, Namibia from 27th to 30th September 2024. Special thanks are due for the subscriptions made from our paid-up institutional members who made this sponsorship possible as we endeavor to promote the sharing and exchange of geoscience knowledge. Grateful thanks also go to our members Gayle Hanssen, Adam Moodley and Forbes Mugumbate who together led the Pre-Conference field trip to Arcadia Lithium, Bikita Minerals and the Kamativi Lithium project. Thanks again to Andrew du Toit who has helped in the organization and leadership of the post-Symposium Great Dyke excursion for the same SEG conference.

The year is coming to an end. The Society as usual has organized yet another exciting event, the 2024 Summer Symposium. This year the event has been combined with the 13th A.M. Macgregor Memorial Public Lecture to be presented by Professor Ben Mapani. We are thrilled to bring this prestigious event to the Southern Region of Zimbabwe in Bulawayo at the Natural History Museum on the **1st November 2024**.

Alexander Miers Macgregor (1888-1961) is remembered for his enormous contribution to geology in Zimbabwe. His maps changed the course of geological thinking in southern Africa, impacting on the discovery of mineral deposits and our understanding of mineral endowment. The Society, therefore, honours his achievements every 4 years.

The organisers of the symposium and memorial lecture have made sure that you get ample time to network and interact with colleagues during tea break and lunch sessions. A braai and a comprehensive field trip on the 2nd November to Diana's Pool and environs have also been arranged during your stay in Bulawayo.

I hope the Summer Symposium will stimulate scientific debate, increase the network between geoscientists and stimulate further research. I am looking forward to welcoming you all to Bulawayo for this promising and exciting 2024 Geological Society of Zimbabwe Summer Symposium and Macgregor Memorial Public Lecture.

PROFILE



Caston Musa, Vice Chairman

Caston Musa embarked on his career in geology after completing undergraduate studies at the University of Zimbabwe in 1988. He joined Anglo American Corporation as a Field Geologist, where he spent several years exploring the Zimbabwe greenstone belts for base metal, precious metal and industrial mineral deposits. His work involved extensive field geochemical work, geophysics, structural analyses and field mapping for target evaluation, reconnaissance follow-up and acquisition, which led to a substantial expansion of Anglo American's mineral title holdings in the region.

Caston's expertise later led him to work on Exclusive Exploration Orders (EPOs) in the Limpopo Mobile Belt, where he identified nickel, chrome, and kimberlite targets as a follow-up to airborne hyper-scanning for alteration patterns. During his tenure with the exploration and acquisition department he was part of the team that assessed and conducted due diligence on various deposits, including base metals, precious metals, coal, and industrial minerals, both within Zimbabwe and abroad.

Caston spent over 25 years working on Anglo American's Great Dyke operations, including chrome operations for Zimbabwe Alloys and PGM deposits at Unki Mine. His work focused on understanding the structure, alteration, layering, mineralization and landforms of the Great Dyke, culminating in the completion of his MSc degree with thesis at Rhodes University.

In addition to his technical acumen, Caston, who also achieved an MBA degree from Durham University, has extensive experience in mine production and planning. As a result of this experience and with further study he holds a Mine Manager's Certificate of Competency. He is also qualified in Mine Environmental Control and Rock Engineering. Caston has served on various boards and committees including the School of Mines Board, the Mining Affairs Board and the Geological Society of Zimbabwe Committee.

MEMBERSHIP UPDATE

Gayle Hanssen, Membership Secretary gaylehanssen@gmail.com

Institutional Membership Contribution

Institutional Membership is an important part of the Geological Society of Zimbabwe's support profile. In 2023, a decision was made to put their income contributions towards empowering and elevating Zimbabwean geologists on the International stage. This was done by funding two geologists to attend important regional conferences.

The GSZ would like to continue to form bonds with International Institutions and would like to fund further presentations at International Conferences in 2024.

Welcome is extended to our two new Institutional Members
Kavango Resources
and
Performance Laboratories, Zimbabwe

Paid-up Membership as at the end of October 2024

Institutional Members



Blanket Mines



Chamber of Mines, Zimbabwe



Dallaglio



GeoAssociates (Pvt) Limited



Kavango Resources



MaxGeo



Performance Laboratories, Zimbabwe



Prospect Resources



Unki Mines (Pvt) Ltd (Anglo American)



Zimbabwe Platinum Mines Limited

Honorary Members

Blenkinsop, Tom; Broderick, Tim; Colvine, Sandy; Eriksson, Ken; Jelsma, Hielke; Kramers, Jan; Martin, Tony; Master, Sharad; Mugumbate, Forbes; Nisbet, Euan; Park, Graham; Podmore, Francis; Prendergast, Martin; Wilson, Allan; Zengeni, Teddy.

Sadly, Professor Dai Jones passed away in Canada in August 2024

Ordinary Members

We would like to welcome the following new Members to the Society:

Buckby	Allan		Kupeta	Gerald		Murapa	Tawanda
Buhle	Privy		Manyere	Mbongeni		Murimba	Ruvarashe
Fisher	Alistair		Mashayahanya	Tafara		Mwagura	Takudzwa
Fusire	Lenon		Masiya	Molly		Ncube	Brilliant
Hlatini	Tension		Mumba	Prosperious		Zvinorova	Kundai

They join our paid-up Membership

Bingandadi	Muslin		Kanyezi	Pardon		Mtetwa	Kennedy
Blair	Dale		Kasambira	Langton		Muchingami	Dereck
Botes	Andre		Kashiri	Tendai		Mugandani	Ernest
Bouammar	Houda		Macdonald	Fiona		Mukome	Tafara
Chadwick	Peter		Machokoto	Catherine		Munyaradzi	Jabulani
Chigonda	Godfrey		Magagula	Mathew		Muoneka	Benefit
Chikandiwa	Nevison		Makwiranzou	Primrose		Mupaya	Bornwell
Chikumba	Most		Mandingaisa	Omberai		Mupwanda	Never
Chingobo	Owen		Manenji	Nhamo		Murapa	Tawanda
Chitsungo	Blessing		Mangezi	Mukai		Musa	Caston
Chituri	Owen		Mapengo	Oswald		Musengezi	Valentine
Demo	Aaron		Mapingire	Brian		Musiwa	Kudzai
du Toit	Andrew		Marazani	Tarisai		Mutika	Metrinah
Dube	David		Mashayahanya	Tafara		Ndebele	Fyrence
Duma	Steven		Masuku	Tendai		Nemahwe	Billmore
Gerema	Nyasha		Mateveke	Martin		Nkomo	Prince
Gumbo	Hillary		Matewo	Charity		Nyachuru	Nation
Gumede	Tenyears		Matsanga	Miriam		Nyamukondiwa	Irvin
Hahlani	William		Matsheza	Tinyashe		Prasad	Immandi
Hanssen	Gayle		Mbiri	Esau		Rusike	George
Hlambelo	Melusi		Moodley	Adam		Rusike	Charles
Hlasi	Fredrick		Mpala	Samuel Rukudzo		Shereni	Braine
Hwata	Joseph		Mpofu	Trust		Sithole	Onesmas
Jones	Tim		Mpofu	Priviledge		Wedu	Simbarashe

Associate Members

Dzimbanhete	Dzimbanhete	Mathe	Sithole	Wunda	White
Nago	Rodney	Chamunorwa	Daniel	Fisher	Alistair

Student Members

BAMHAMIRE	MICHAEL	MATENGA	RUDO MAKANAKA	MWONZORA	JOHN
CHATAMUK	BRIDGET	MAVHENYENGWA	RUMBIDZAI	NDENGA	KUNDAINASHE
CHIBAYA	PHARISIE	MHLANGA	ERNEST	NDIRAYA	LEON
CHIHOMA	YOLANDA	MHOWA	LIAN	RUKANZAKANZA	REJOICE
DHAU	WILBERT	MUNONGWA	K	SAMATANDA	ATHUR
GWITIRA	BEAUTY	MUNYIRA	JULIA	SANDI	KUMBIRAI
MADUKU	GETRUDE	MUNYONGA	NOMSA	SHAVA	BLESSING
MAHANYA	MOVAN	MUPFUKUDZWA	LILIAN	SIBANDA	MAKHOSI
MAKORE	MELODY	MUPUNGA	HENRY	TIENGA	MUNASHE
MAKUNGUWO	FANUEL	MUSASA	PRIDE		WALTER
MANGANI	SHALOM	MUTINGWENDE	TINASHE		RUTENDO
MAPINGURE	SHEUNESU	MUWORI	RUTENDO		
MATAMBO	PRECIOUS	MUYAMBI	LAURA		

- **Honorary:** This membership has been bestowed on all presenters of the A.M. Macgregor Memorial Lecture, and to those who have made outstanding contributions to the Society over the years. Currently we have 15 such members.
- **Ordinary:** Professional membership by application for geologists who have a registered degree. To apply for this category, we need a copy of your degree certificate, a form sponsored by 2 current Ordinary Members, and your CV.
- **Foreign:** As above, but for those not resident in Zimbabwe.
- **Associate:** For interested parties not holding a degree but who are interested in participation.
- **Institutional:** Corporate membership and ardent supporters of the Zimbabwe Mining Industry.
- **Student:** Members of a recognized Student Body by the GSZ. Student body to submit members names and their number. For a Student Body to be recognized, the Constitution and current Committee to be submitted to GSZ.

<http://www.geologicalsociety.org.zw/membership>

The Membership Application Form can be down-loaded from the Membership Page of the website.

MEMBERSHIP SUBSCRIPTION FEES & RENEWAL REMINDER**(The first year's fee is the joining fee. If your application is rejected this joining fee will be forfeited)**

Members (including Associate Members) US\$30 annually
(or ZWL equivalent at the bank rate on the day of payment if US\$ unobtainable)

Institutional Member US\$500 annually
(invoices have been sent to existing members, but if your organisation is interested – please get hold of Gayle Hanssen, Membership Secretary, for an invoice - gaylehanssen@gmail.com)

Note: Foreign Members are classified as such on the basis of postal address. There is a different NOSTRO account for external payments, details for which will be provided on request.

Banking Details

Geological Society of Zimbabwe
First Capital Bank (Barclays)
Kurima House Branch

OR**Ecocash**

Merchant Number 82758

USD Nostro FCA Domestic: 21573779436

OR

RTGS Account Number: 21576533195

OR**FOR EXTERNAL FOREX TRANSACTIONS**

Account Name: Geological Society of Zimbabwe
Branch Name: NGO Centre
Account Numbers: Nostro FCA: 21573779533
Swift Code BARCZWHX

THE OFFICE IS OPEN

*University of Zimbabwe – Geology Department – First Floor – Room 20
Mondays and Wednesdays from 9am to 4pm*

Scan and Email your POP to geol.soc.zimbabwe@gmail.com AND kundaizvinorova@gmail.com



Join the Geological Society of Zimbabwe Facebook Group

Articles and Reports

LITHIUM FIELD TRIP

Zimbabwe 22nd to 26th October 2024

Zimbabwe for the first time in many years, participated by hosting 2 field trips as part of the SEG2024 Windhoek Conference. Two field trips were organised – a pre-conference trip to the major lithium deposits of Zimbabwe and a post-conference trip to the iconic Great Dyke.

The Lithium Field Trip was led by Adam Moodley, Gayle Hanssen and Forbes Mugumbate. Delegates were literally from the four corners of the globe, with Professors from Beijing, Alaska and Cambridge. There were several PhD students from Equador, Canada and Belgium and a strong contingent of Industry specialists, particularly from Rwanda and Zambia.

The first mine to welcome the party of 23 was Arcadia. Large-scale production and good examples of spodumene replacing petalite were the highlights. Arcadia is currently the 5th largest declared operational lithium hard rock resource. The participants got to visit the Step Aside prospect approximately 7km to the north and to observe what weathered and leached pegmatites look like in the field.



Arcadia Mine welcomes the SEG Field Trip

Day 2 was one of the highlights with a wonderful visit to the fabled Bikita pegmatite. The geologists on site welcomed us and everyone could not resist adding pristine spodumene, pollucite and zinnwaldite to their collections. The weather was perfect, and many hours were spent in 3 of the different operational pits. The day was rounded off by a wonderful bit of history with a visit to Great Zimbabwe.



Bikita Main Pit – Pollucite zone



Day 3 was a travel day when the southern greenstone belts of Zimbabwe were traversed, including a quick stop on the P1 Pyroxenite of the Wedza Chamber. The evening was spent watching the elephants at Hwange – a unique experience for many.

The final day in the field was a trip to Kamativi looking at pure spodumene of the Type 1 pegmatite being mined in the main Kamativi pit. A quick stop was made at exploration projects of the Type 2 pegmatites, before heading off to Victoria Falls.



Participants from South America, Asia and Africa

Professor David Lloyd (Dai) Jones 1936-2024

Adapted from a citation read by *Dr T.G. Zengeni*, Dean of the Faculty of Science, University of Zimbabwe, on the Occasion of Professor David Lloyd Jones' elevation to Honorary Membership of the Geological Society of Zimbabwe

Friday 22nd January, 2002



Barbara and Dai Jones – *Jones' Facebook Page*

I feel extremely honoured to say a few words about a man whom the Geological Society of Zimbabwe has chosen to honour. Born on 18th June 1936, it would appear that Dai Jones' life encapsulated the model of a whole man:

- A teacher and mentor;
- A reputable scientist and researcher with a rare aptitude for team work and leadership;
- A gifted organiser;
- An avid sportsman;
- A humane individual with a passion to help the less privileged, and;
- An exemplary husband, father and grandfather.

Educated in England, he graduated with a BSc (Honours) London degree in Physics and was awarded a PhD degree in Solid State Physics, all at Exeter in the years 1958 and 1963 respectively.

After completing his studies, Dai joined the Department of Physics in the University College of Rhodesia & Nyasaland in September 1963. As a consequence of the prevailing circumstances he abandoned his original field of Solid State Physics and joined the Geophysics Research Group headed by Dr Ian Gough. The team was academically formidable, comprising Drs Mike McElhinney, Andrew Brock, Neil Opdyke, and later joined by Mike Walford and Jim Briden, among others. They set up a world renowned Palaeomagnetic Research Group, internationally recognised as a centre of excellence. This, in conjunction with the then newly established Department of Geology, constituted an Earth Sciences grouping next to none in Africa.

The work they did contributed immensely, in a pioneering fashion, to the ideas of continental drift that culminated in the theory of plate tectonics.

Due to the unfortunate Unilateral Declaration of Independence in 1965, the Palaeomagnetic Group dispersed and Dai Jones went to Edmonton, Canada, to regroup with Ian Gough in January 1967. After a year and a half, Dai returned to our University in July 1968 to

continue with the unfinished work and to build a new team. He became the team leader with such students as Phil McPhadden and Martin Mushayandebvu, among others.

Dai's scholarly achievements saw him rise from Senior Lecturer to Reader and ultimately Professor of Physics in 1979. He was an excellent teacher and mentor. The speaker, Dr Zengeni, bears that testimony as he was his teacher and later colleague. Among Dai's early students were Professor Makhurane, Dr Mandishona and myself, in that year the only black students taking Physics.

Dai Jones' contributions to the Department of Physics, to the Faculty of Science and to the University of Zimbabwe are unparalleled. He was Head and Professor during the lean period of the Department in the late 70's and early 80's. He rebuilt the Department, virtually from scratch, to what it is now. Through his resolve and initiative, the Department of Physics prides itself for having maintained a steady flow of young academics. He was instrumental in establishing the Masters' Degree programme in Exploration Geophysics in the Department, after the recruitment of Alan Reid. He was Deputy Dean and Dean of the Faculty, a long-standing member of Council and its various committees, as well as being Chairman of the Research Board.

Dai Jones' scholarly work in the Earth Sciences is extensive. He had carried out wide ranging field work in the Arctic and in Labrador. He analysed rocks from Antarctica and carried out very successful studies on the hominid-bearing cave sediments of South Africa. His work in Palaeomagnetism was published in reputable international journals. I believe he and his colleagues were the first to date the Umkondo dolerites using palaeomagnetic techniques. In 1976 he, with others, was awarded the Jubilee Medal of the Geological Society of South Africa for what was judged to be the most outstanding paper published in the Society's journal in 1975. Apart from presenting papers at international conferences, he was invited to several as one of the keynote speakers, as well as receiving invites to universities in Europe, the United Kingdom, the United States, Canada and Australia to present research seminars and to participate in collaborative research.

His insatiable love for the Earth Sciences saw Dai in the company of geologists. Together with such eminent scientists as Jan Kramers and Jim Wilson, he contributed significantly to the international conferences on Dyke Swarms. I am told by some geologist friends that Dai should have been a geologist instead of a physicist. Probably the truth is that he was both.

Dai Jones participated actively in scientific organisations, having been a Committee Member of the Geological Society of Zimbabwe between 1984 and 1988 and again in 1992-93 when, among other things, he judged the Phaup Awards. He was a Member, Committee Member, Treasurer and Past President of the Zimbabwe Scientific Association. For his scholarly work, he became a Fellow of the Royal Astronomical Society.

A gifted organiser, Dai Jones took on tasks which many people of his standing would shy away from. His involvement with the local World University Service (WUS) Committee, with Priestly Knottenbelt and others, had a tremendous impact in boosting the number of young Zimbabweans who would not have otherwise been admitted to the University of Zimbabwe. As treasurer, he disbursed more scholarships to our students than any other organisation during that time. The sourcing of the funds by himself and the committee was no mean achievement.

All work and no play was not one of Dai's beliefs. He was a natural sportsman - a man who enjoyed keeping fit in the company of others. Even as a member of staff he played soccer with students for the University team. He loved his tennis. Not only did he play cricket, he also got heavily involved in the administration of that sport as Secretary to the Mashonaland Cricket Association.

On a personal note, Dai Jones was a man with an itch to provoke, being intolerant of unprofessional expediency. As a result of his straight talk, he occasionally brushed some of his victims up the wrong way as he would speak his mind when others thought otherwise.

Behind every successful individual, there is always a supporting partner and in his case this was Barbara. Incidentally, when Dai Jones first came to UNRN, he did so as a bachelor. Having met Barbara on the Island of Guernsey, she soon followed and they were married here in Zimbabwe. The couple were blessed with two children, Malcolm now in Australia and Claire in Canada.

After retiring from the University of Zimbabwe, Dai spent some years teaching Physics at St John's College in Harare where he continued to inspire young students and to umpire their cricket. Dai and Barbara spent his final years in Canada where he died in Ottawa, Ontario on 30th August 2024.



The late Professors Loveridge and Jones with Mrs Lake at St John's College.
St John's College Facebook Page

INTERNATIONAL COMMISSION ON THE HISTORY OF GEOLOGICAL SCIENCES (INHIGEO)



51st INHIGEO Annual Symposium 2026

In 2026, the 51st INHIGEO Annual Symposium will meet in Johannesburg (South Africa) and Victoria Falls (Zimbabwe). A local Organising Committee will be formed this spring and work out a program for the conference.

Prospective topics of the conference will be:

- Pre- and Post-colonial History of Mining in southern Africa;
- History of Palaeoanthropology in southern Africa;
- History of Geological Exploration in southern Africa.

We will start with a pre-Conference excursion in Johannesburg, which is the international airline hub for southern Africa and where most delegates are expected to arrive. In Johannesburg there will be a focus on the History of Gold Mining in the Witwatersrand, with visits to preserved gold reef workings (Standard Bank Building, Johannesburg), an underground visit to a tourist gold mine at Gold Reef City, and other historic places. A second theme will be on the history of Palaeoanthropology in South Africa, with visits to the Origins Centre at the University of the Witwatersrand and the Maropeng Museum, Sterkfontein Caves and the Museum in the Cradle of Humankind World Heritage Site.

Then we will fly to Victoria Falls, Zimbabwe, where the INHIGEO Conference will be held. Delegates will be taken to see the Victoria Falls (a World Heritage Site) and to experience a sunset cruise on the Zambezi River upstream from the Falls. There will be a day trip across the border into Livingstone, Zambia, where we will visit the Livingstone Museum to see exhibits related to David Livingstone, the Explorer and Missionary; early mining and smelting by the indigenous peoples of Zambia; and the early history of Geological Exploration around Victoria Falls by Czech explorer and geologist Emil Holub. On the Zimbabwe side we may also examine pre-historic Stone Age archaeological sites.

The post-Conference Excursion will travel by bus from Victoria Falls to Bulawayo (the second city of Zimbabwe), where delegates will be housed at a game lodge near the Matobo National Park. Visits will be arranged to see caves, rock paintings and the World's View site of Cecil Rhodes' grave. A visit will also be made to the Natural History Museum in Bulawayo, with exhibits on the History, Natural History, Geology and Mining in Zimbabwe. The excursion will continue to the archaeological site of Great Zimbabwe, which flourished from the 12th to 14th centuries CE. This was the product of an indigenous

civilization that arose as a result of gold trading with Arabs based at Sofala in present-day Mozambique.

The excursion will return to Bulawayo, from where delegates may fly to Johannesburg and back to their home countries.

Dates have yet to be finalised, but we will try to organize our INHIGEO Meeting in proximity to the 7th International Palaeontological Congress (Cape Town, 30th November to 3rd December 2026), so that delegates who so wish can attend both meetings. That would schedule the INHIGEO event from 4th to 11th December 2026 plus the post-conference fieldtrip ending in Bulawayo on 16th December.

Sharad Master

A new Lungfish from the Upper Triassic of the Mid-Zambezi Basin, Zimbabwe

Tom J. Challands, Lionel Cavin, Michel Zondo, Darlington Munyikwa, Jonah N. Choiniere, and Paul M. Barrett

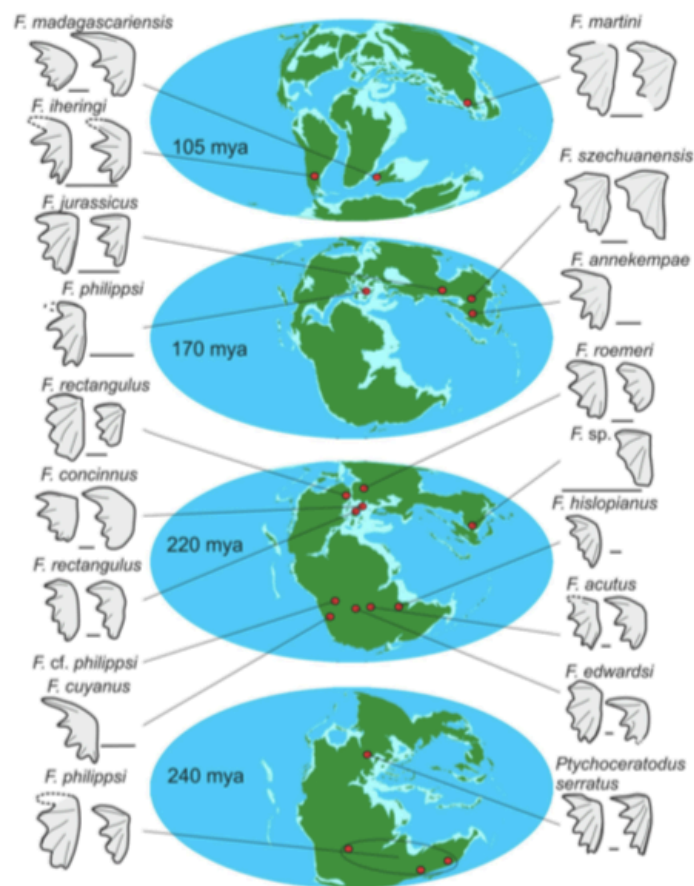
ABSTRACT—The lungfish, the extant sister group of the tetrapods, have an evolutionary history illustrated by a fossil record extending for ~420 million years. The post-Paleozoic fossil record of the clade is almost exclusively restricted to sediments deposited in freshwater paleoenvironments and is characterized by an abundance of highly mineralized tooth plates, whereas cranial and postcranial remains are scarce. Here, we report a sample of isolated tooth plates found in the Upper Triassic Pebbly Arkose Formation of the Mid-Zambezi Basin, Zimbabwe. It consists of pterygoid and prearticular tooth plates from adult individuals, plus some dental plates referred to juvenile individuals, which we refer to a new species of *Ferganoceratodus*. This discovery provides an opportunity to review briefly the tooth plates of the ‘ptychoceratodontid morphotype’ reported from around the world. We discuss how various occurrences previously referred to *Ptychoceratodus* may be more appropriately referred, with caution, to *Ferganoceratodus*. We also describe the histology of the tooth plates of the new species and note similarities with other Mesozoic taxa. The scarcity of histological data for Mesozoic lungfish tooth plates compounds the problem of assigning isolated tooth plates to genus and species level. *Ferganoceratodus* and closely related taxa arose in the Early Triassic in southern Gondwana and diversified worldwide in the Late Triassic. The genus then became more common in Laurasia during the Jurassic and Early Cretaceous and declined thereafter with relict Late Cretaceous occurrences in Madagascar and South America.

<http://zoobank.org/urn:lsid:zoobank.org:pub:FC238772-BF6D-4646-ADBA-34AA724758F8>

Challands, T. J., Cavin, L., Zondo, M., Munyikwa, D., Choiniere, J. N., & Barrett, P. M. (2024) A new lungfish from the Upper Triassic of the Mid-Zambezi Basin, Zimbabwe. *Journal of Vertebrate Paleontology*. <https://doi.org/10.1080/02724634.2024.2365391>



Ferganoceratodus edwardsi from Tashinga, Matusadona National Park, named for Steve Edwards of Musango Safari Camp



Geographic and stratigraphic distribution of *Ferganoceratodus* spp.

News



Geology Section: **Department of Chemistry and Earth Science,** **University of Zimbabwe**

Submitted by Maideyi Meck and Fadzanayi Mupaya

The semester commenced well on 24th August with students preparing for their first block examinations scheduled for the final week of September. The department has, this year, welcomed a new group of 10 first-year students into the Geological Sciences degree program. This year's graduating class had 55 students from both the phased out BSc Honours Degree in Geology and the new BSc Honours in Geological Sciences.

Establishment of the UNESCO-funded National Groundwater Project, which is to be based at the University of Zimbabwe, is progressing well. A workshop, with stakeholders from the industry, was held at the Geology Department, UZ from 18th to 20th September, 2024. Two more meetings were scheduled to be held at the Upper Save and Lower Gwayi sub-catchment offices. This project will see 2 PhD students funded to conduct groundwater research in these sub-catchment areas. A final workshop is scheduled for 13th to 14th November. Your participation and contributions to the hydrogeology centre are welcome. Share your thoughts via maideyimeck@yahoo.com.

The department has 100 hard copies of *Dambo Farming in Zimbabwe* by Dr Richard Owen available. Contact Ms. Hama for a personal copy.

The UZ – PAMUST MSc program has seen an increase in the intake of Exploration Geology students expanding from last year's 6 to 26 students this year. A good development perhaps, but the initiative should be paralleled with a similar increase in exploration activity, which strongly hinges on the timeous granting of EPOs by the Ministry of Mines. In related news, the UZ has established co-operation/partnership with MGRI (Russian State Geological Prospecting University) of Russia, which will see exchange programs between the two institutions. As part of this co-operation, a group of UZ lecturers (Dr Maponga, Mr Mabhanga and Mr Maketa) and PAMUST students took part in a week-long geology workshop in Russia. The workshop will be followed for a similar field excursion by an MGRI team to Zimbabwe before the end of the year.

Staff Contact details as of October 2024:

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Mr G. Kwenda	Lecturer	gkwenda@gmail.com	0772935936		
Mr P. Maketa	Lecturer	geologistmaketa@gmail.com	0777386284		
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Mr D. Mupambo	Technician	DIDYMUS@science.uz.ac.zw	0772916652	16	15024
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The Mennell Geological Society

Fadzanayi Mupaya (Patron)

fbmupaya@gmail.com

SEG (Society of Economic Geologists) student chapter in Zimbabwe

Geology students from the UZ are working closely with the GSZ to help establish a SEG student chapter in Zimbabwe. Students have started subscribing for their SEG membership. Invitations have been extended to other universities in Zimbabwe, including NUST, ZSM and MSU, to enable the formation of one committee that will administer the new student chapter. However, positive responses are yet to be received from these institutions.

Apart from establishing a new student chapter, students from the University of Zimbabwe, led by the outgoing Mennell Society Chairman, Movan Mahanya, have started periodic technical Zoom sessions. Two presentations have been successful so far; Namibian students presented on Namibian geology in August and UZ students presented on the general geology of Zimbabwe in September.

To strengthen relations, the outgoing chairman and his team have invited the geology students from Namibia to attend this year's Summer Symposium to be held on 1st November 2024 in Bulawayo. Through motivation from the Mennell Society's patron, one of the students from Namibia will present physically at the symposium.

Technical Conference, Windhoek, Namibia

Two geology students and one recent graduate received the CAP funding from SEG to attend the technical conference held in Windhoek in September 2024. From these three presenters, two are presenting posters at the conference with the third one presenting at the University of Namibia Southern Campus. The department is excited and thankful for the assistance offered by GSZ for students attend the conference in Windhoek. Students got an opportunity to practice professional communication out of their everyday academic comfort.

The Mennell Geological Society is aiming to facilitate more than 10 students to attend the Summer Symposium. Behind the scenes, the department has encouraged recent graduates from the class of 2024 to attend the symposium in order to gain knowledge and to network.

With Movan Mahanya ending his term as the Mennell Society Chairman, the current Vice Chairperson assumed the chairmanship as of August 2024. Thus Pharisie Chibaya holds this position until August 2025.

The Mennell Geological Society Executive to August 2024

PATRON	Mr F.B. Mupaya	fbmupaya@gmail.com
CO-ORDINATORS	Mr S. Mabhanga Mr P. Maketa Mr G. Kwenda	smabhanga@science.uz.ac.zw geologistmaketa@yahoo.com gkwenda@gmail.com
CHAIRMAN	Mr Movan Mahanya, 4.2	Movan.mahanya@simbaredzidzo.org.au
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VICE SECRETARY GENERAL	Mr John Mwonzora, 3.2	jmwonzora20@gmail.com
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MIDLANDS STATE UNIVERSITY
FACULTY OF ENGINEERING & GEOSCIENCES
ZVISHAVANE CAMPUS

Updates from the Department of Geosciences**1. Introduction**

The MSU Geosciences Department continues to grow from strength to strength in staffing numbers and skills-mix. Our undergraduate student intake remains stipulated at the healthy class size of 30 per programme per intake for our 4 programmes on offer: BSc Honours (Applied Geology), BSc Special Honours (Applied Geology) and BSc Honours (Geophysics). In terms of postgraduate training, the department welcomed its first MPhil candidate in June this year. Four more are working on their MPhil candidacies which, it is hoped, should be attained during 2024.

2. Staffing

With a current teaching staff complement of 18 including two part-time lecturers and 5 teaching assistants, the Department of Geosciences is well-staffed. Clearly, the department has a strong staff development programme, with the current teaching assistants expected to transition to lecturer over the next two year. Names and email addresses of staff within the department are listed in Table 1.

Table 1. List of teaching and non-teaching staff at the Geosciences Department, Midlands State University - October, 2024

Names	Position	Email Address
TEACHING STAFF		
Mr P Chifoto	Lecturer	chifotop@staff.msu.ac.zw
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Mr Dewah	Lecturer	dewahh@staff.msu.ac.zw
Dr T Dzvinamurungu	Lecturer	dzvinamurungut@staff.msu.ac.zw
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Miss T Gwavuya	Teaching Assistant	gwavuyat@staff.msu.ac.zw
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NON-TEACHING STAFF		
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Mr T Mwaramba	Technician	mwarambat@staff.msu.ac.zw
Mr L Ndhlovu	Technician	lndlovu@staff.msu.ac.zw
Mr F Zihanzu	Chief Technician	zihanzuf@staff.msu.ac.zw

3. Research

There is a strong drive for research within the department, which has recently been boosted by a major focus of the university and department on postgraduate studies. The first postgraduate candidate successfully enrolled with the department in June 2024, with at least 4 others expected to have enrolled by year-end. Some of the significant research by staff and students will be highlighted in the next edition of the newsletter.

4. Student Activities

The Midlands State University Student's Geological Society is an affiliate of the Zimbabwe Geological Society and is dedicated to fostering a deeper understanding and interest in geosciences among students. It provides a platform for learning, networking,

and practical engagement in the field of geology. Currently, the Society consists of 83 members, led by 13 executive members who organize events, workshops, and field trips. Through various activities, the Society aims to enhance the academic and professional growth of its members, while also promoting collaboration with other institutions and industry experts.

4.1 Student's AGM

In June 2024, the Midlands State University Student's Geological Society held its Annual General Meeting. During this event, a new executive was elected to replace the outgoing executives who, due to their commitments to work-related learning, could not continue steering the Society. The transition was smooth and as such serves to guarantee continuity of the Society's activities.

4.2 Welcoming New Students to the Society

At the start of the second semester in August 2024, the Society actively participated in the orientation programme for new students. The Society's constitution was outlined, highlighting the benefits of joining the Geological Society. New members were given a brief on past field trips, including those conducted in conjunction with the University of Zimbabwe's Mennell Geological Society. Such trips always offer insightful experiences to staff and students, two of the most recent being:

- Chishawasha Field Trip, March 2024.
- Nyabira-Mapinga-Mutorashanga Field Trip, November 2023.

4.3 Work-place Experiences - Sharing Seminars

Between September and October 2024, the Society held weekly seminars for Level 4.1 students, to share their experiences straight from their Work-Related Learning stints in industry, including on different mines, in exploration camps and with mining house headquarters. The seminars provided valuable insights into the practical applications of geology and industry expectations. These sessions were highly beneficial to the Society, allowing students to connect classroom knowledge with real-world geological applications. Some of the shared experiences are:

- Mackan Rugara and Shyleen Ncube shared their experience working at Zambezi Coal and Gas in Hwange;
- Shelton Manginazi and Leah Sonza discussed their time at Shamva Gold Mine, focusing on the geology of the region and the operations of the mine;
- Takudzwa Chokuona shared his journey at Freda Rebecca Mine, Bindura.

5. Conclusions

The MSU Geosciences Department, with an excellent age and skills-mix, is poised for sustainable growth. With an emphasis on postgraduate training, research and collaborative partnerships, the department can transform into a world-class centre of excellence in geosciences.

*Compiled By:
Antony Mamuse and Trisha Paraziva*



ZIMBABWE SCHOOL OF MINES

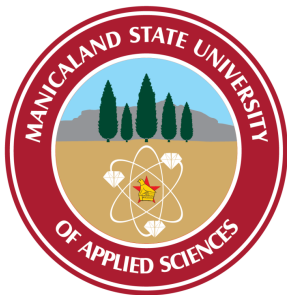
Serving the SADC mining industry

The second semester at ZSM commenced on 29th July, with 100% of first- and third-year students returning to school. However, four second-year students remain unattached, and we continue to seek assistance in this area.

On 4th October, ZSM celebrated its 30th Graduation Ceremony. A total of 428 students graduated across various disciplines, including Mining Engineering, Mine Surveying, Metallurgical Assaying, Mineral Processing and Extractive Metallurgy, Mining Geology, the Executive Diploma in Mine Management, Gemstone Cutting and Polishing, Small-Scale Mining, Mine Occupational Health, Safety & Environment, and Mine Ventilation & Environmental Engineering.

Additionally, the Geology Department has established a Geology Club, which is still in its early stages but with members eager to engage. They welcome guest talks from geologists and encourage anyone interested in contributing to their success to reach out to the department.

Submitted by Fyrence Ndebele



MANICALAND STATE UNIVERSITY OF APPLIED SCIENCES

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Department of Mining and Processing Engineering

Research.

Innovation.

Sustainable Development.

The third quarter of this year has commenced successfully, with lectures actively ongoing at various institutions. Among the noteworthy events is the upcoming 3rd Graduation Ceremony for Manicaland State University, where the third batch of mining engineering students is set to graduate.

We are thrilled to announce that four members of our Metallurgy Department have achieved **second place** for the **Best Innovation in Mining** at the 2024 Presidential Innovation Fair. Their innovative project focused on enhancing gold recovery in small-scale mines through the use of **oxygen harvesters** to catalyse the dissolution of gold in cyanide solutions, alongside the introduction of **premixing tanks**. This recognition underscores the importance of innovation in improving mining practices and we commend the team for their dedication and hard work. We hope to see more such accolades in the future!

Small-scale mines continue to play a crucial role in providing attachment opportunities for our students. We appreciate the vital contributions these mines make to our educational framework. However, we also recognize the need for greater collaboration with larger mining companies. We invite more of these organizations to engage with our institution by absorbing more students into their attachment and graduate traineeship programmes. This partnership would not only benefit students but also enhance the workforce available to the mining industry.

Contributed by Hazel Chibaya

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Mr Dhlwayo	Assistant Lecturer	donald.dhlwayo@staff.msuas.ac.zw	+263784434524
Mr Mlambo	Assistant Lecturer	masimba.mlambo@staff.msuas.ac.zw	+263783829275



NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF APPLIED PHYSICS
EARTH SCIENCES

The Applied Physics Department at NUST hosts the two earth science-related degree programmes, namely Bachelor of Science Degree in Earth Science and Masters in Geophysics. We are pleased to announce that this year we have a graduating class of Masters in Geophysics-degree students after a long break. These students will graduate during the 30th graduation ceremony of the NUST together with our third graduating BSc (Earth Science) class. Our third-year Part III Earth Sciences students are due for attachment starting January 2025 when they will gain first hand practical experience within industry. We are therefore appealing to our industry partners to avail internship opportunities for these students. The success of our Industrial Attachment Programme depends on the willingness of industries to embrace our students. Consequently, the Applied Physics Department is embarking on a drive to expand and strengthen the existing links with industry in order for us to produce graduates who are going to be relevant to the needs of the nation.

The Applied Physics Department is also in the process of creating a new department, which will see the earth sciences-related courses being housed in the proposed new department, the Department of Earth Sciences. This is in line with the university mandate to strengthen and streamline its programs to be more focused. A dedicated earth science department allows for the development of specialized educational programs that cater to students interested in all disciplines of the earth. Creating an earth science department can also open avenues for partnerships with industry stakeholders involved in resource extraction (such as mines), environmental consulting firms and governmental organizations focused on disaster management. These collaborations can lead to funded research projects that benefit both students through internships or job placements while providing valuable insights into real-world challenges faced by these industries.

Currently, we have 8 Applied Physics staff members associated with the earth science-related training and research activities (see table below). We are also pleased to announce that two new staff members joined the Applied Physics Department at the beginning of the First Semester of the 2024-25 Academic year. The new staff members are Mr Ezekiel Jonathan, and Dr Prince Mandingaise, bringing with them to the Earth Sciences Programme much needed expertise in the fields of Geophysics and Geology respectively. These appointments are expected to strengthen and expand teaching and research expertise in the Earth Sciences programme. Currently, the group has been working on a sustainable development project on “Investigating the Potential of Harnessing Geothermal Energy Resources from Zimbabwe’s Hot Springs”. On another note, we would like to announce the retirement of Professor John Dumisani Hlatywayo from the Department of Applied Physics. However, Prof Hlatywayo will continue participating actively in research activities in the department whilst supervising Masters and PhD students.

Name	Email address	Position
Mr. Robin Mashingaidze	Robin.mashingaidze@nust.ac.zw	Full-time Lecturer
Dr. Brassnavy Manzunzu	brassnavy.manzunzu@nust.ac.zw	Full-time Senior Lecture
Mr. Constant Chuma	Constant.chuma@nust.ac.zw	Full-time Lecture
Mr. Thabisani Ndlovu	Thabisani.ndlovu@nust.ac.zw	Full-time Lecture
Mr. Mervyn Gumbo	Mervyn.gumbo@nust.ac.zw	Research Fellow
Dr. Prince Mandingaise	mandingaisap@gmail.com	Temporary Full-time Lecture
Mr. Ezekiel Jonathan	Ezekiel.jonathan@nust.ac.zw	Full-time Lecture
Mr. Joseph Zulu	zulujoephm@gmail.com	Temporary Full-time Lecture

Submitted by Dr. Brassnavy Manzunzu



Geological Survey Department

Ernest T. Mugandani
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- The Zimbabwe Geological Survey congratulates and warmly welcomes the seven new geologists who joined the department in July 2024. These are **Malvern Tsikai, Jonathan Chikati, Takunda Gideon Nyakatswau, Mellisa Phiri, Yeukai Audrey Shamu, Brandon Kunjaira** and **Takunda Joel Chikoore**. They are all based in Harare.
- The Director, **Forbes Mugumbate**, participated in the Society of Economic Geologists pre-Namibia Conference excursion to Arcadia Lithium, Bikita Minerals and Kamativi Lithium Mine. The SEG conference was held in Windhoek, Namibia

from 27th to 30th September 2024 whilst this pre-conference excursion was conducted in Zimbabwe.

- Forbes and **Diana Mugadza** also attended the 2024 Mining Engineering Transport (MinEntra) conference and exhibition that was held in Bulawayo from 9th to 11th October 2024.
- The Deputy Director, **Ernest Mugandani**, attended the 29th Session of the International Seabed Authority (ISA) General Assembly that was held in Kingston, Jamaica from 29th July to 2nd August 2024. Zimbabwe is a member of the International Seabed Authority. The ISA is an autonomous international organization established under the 1982 *United Nations Convention on the Law of the Sea* (UNCLOS) and the 1994 *Agreement relating to the Implementation of the United Nations Convention on the Law of the Sea* (1994 Agreement). ISA is the organization through which State's Parties to UNCLOS organize and control all mineral resource-related activities in the sea for the benefit of humankind as a whole. In so doing, ISA has the mandate to ensure the effective protection of the marine environment from harmful effects that may arise from deep seabed-related activities. The 29th session of ISA General Assembly was attended by more than 90 member-states and observers.
- Ernest and Laboratory Technician, **Ms Rudairo Kapito** were also part of the 29-member delegation that attended a Seminar on the *Development and Management of Minerals for Zimbabwe* that was held in Beijing, China from the 31st August to 13th September 2024. The other geoscientists who participated in this seminar were **Mitshel Ngadya**, **Edeleen Savieri**, **Godfrey Dadirai** and **Admire Charumbira** who are respective Deputy Provincial Mining Directors for Mashonaland Central, Manicaland, Mashonaland East and Masvingo. The seminar was organized by the Development Research Centre of China Geological Survey. Geochemical surveys have proved to be a very useful method for mineral exploration in China. About 70% of the 817 mineral deposits discovered by various methods in China between 1981 and 2000 were located through the application of geochemical surveys.
- Principal Economic Geologist, **Evelyn Marumisa**, attended the 2024 Africa Down Under (ADU) conference that was held in Perth, Australia from 4th to 6th September 2024.
- Principal Geologist, **Mangwiro Sibanda**, attended the 16th Annual General Meeting (AGM) of the Organisation of African Geological Surveys (OAGS) that was held in Eswatini from 3rd to 5th September 2024.
- Geologist, **Roseweter Mubaiwa**, and Geological Technician, **Charlaine Chatambudza**, participated in the 3rd Quarter Gold Mobilization initiative that was conducted during the period 16th to 29th September 2024. The purpose of the exercise is to encourage miners to dispose of their gold through official channels to Fidelity Gold Refinery (FGR).

Mining News and Commentary

Forbes Mugumbate

fmugumbate@gmail.com

State of the Mining Industry and Prospects for 2025

The Chamber of Mines of Zimbabwe commissioned a report on the state of the mining industry in Zimbabwe and prospects for 2025 on the sidelines of the Mine-Entra conference held recently in Bulawayo. The highlights of the report include:

- A projection of good prospects for 2025 in which the industry expects to spend over USD600 million in capital projects, while mineral exports are expected to generate USD6 billion up from the USD5.5 billion earned this year. This is still only 50% of the 12 billion USD mining industry that had previously been projected.
- A Mining Business Confidence Index (MBCI) that is expected to increase from less than 1 to 4 in the coming year.
- The industry has proposed an increase in the foreign currency retention threshold to 85% from the current 75%. This is in view of the fact that most inputs and services to the industry are pegged in USD, which are not easily available on the market. The proposal was, however, quickly shot down by the Chairman of the Parliamentary Portfolio Committee on Budget and Finance, who insinuated that it does not make sense for the whole country to benefit only from 25% of the forex generated by the industry, instead of the 100% as happens in other mining jurisdictions. His argument was that most of the 75% retained by the companies ends up circulating in the countries where supplies and services required by mining are coming from.
- Executives of the mining industry bemoaned high ZESA tariffs coupled with frequent power cuts, which they attributed to a loss of over USD500 million in potential revenue. ZESA responded by indicating that it is not possible to reduce tariffs, as the corporation is already making losses. Companies were encouraged to consider augmenting government efforts by building their own power plants.

It was, however, agreed that stakeholders, which include the Chamber of Mines, Ministry of Mines and Mining Development and the Ministry of Finance and Economic Development, should urgently engage in dialogue to come up with solutions to problems being faced by the mining industry.

In general, the report appears to be shallow. It does not tackle the real challenges faced by the mining industry in Zimbabwe. For instance, the value chain starts with the systematic search for the minerals within exploration licence areas. But there is virtually no regional exploration activity in Zimbabwe. EPOs are not being issued or renewed. Much of the country is sterilised by EPOs that are pending issuance or renewal. There is no mention in the report of this apparent conundrum between - 'Zimbabwe is open for business', yet companies are unable to access the necessary ground in order to search for minerals.

Gold Price Windfall

Gold Prices - Historical Annual Data

Year	Average Closing Price	Year Open	Year High	Year Low	Year Close
2024	\$2,314.33	\$2,064.61	\$2,672.33	\$1,992.06	\$2,649.58
2023	\$1,943.00	\$1,824.16	\$2,115.10	\$1,811.27	\$2,062.92
2022	\$1,801.87	\$1,800.10	\$2,043.30	\$1,626.65	\$1,824.32
2021	\$1,798.89	\$1,946.60	\$1,954.40	\$1,678.00	\$1,828.60
2020	\$1,773.73	\$1,520.55	\$2,058.40	\$1,472.35	\$1,895.10
2019	\$1,393.34	\$1,287.20	\$1,542.60	\$1,270.05	\$1,523.00
2018	\$1,268.93	\$1,312.80	\$1,360.25	\$1,176.70	\$1,281.65
2017	\$1,260.39	\$1,162.00	\$1,351.20	\$1,162.00	\$1,296.50
2016	\$1,251.92	\$1,075.20	\$1,372.60	\$1,073.60	\$1,151.70

There has been an unprecedented increase in gold prices over the years. Current Zimbabwean policies, however, appear not to be well configured for the country to benefit from the windfall. Under normal circumstances, such price increases would trigger a lot of activities in the search for new deposits, the evaluation of closed mines and the expansion of existing deposits. Although there is a noticeable increase in gold production as shown by the 24t already produced to end of September in 2024, with a projection of 35t being reached by year end, there has been no marked increase in new developments.

Chinese and the Yellow Metal

Chinese companies and individuals are, however, alive to the gold price windfall. The Geological Survey is inundated by requests for information about heap leachable gold ore resources. Several heap leaching pads are sprouting up in gold areas. A chaotic example is the destruction of the Boterekwa Pass at Shurugwi where some companies are searching haphazardly for heap leachable oxidised ore.

People are suspicious of these activities, considering that a Chinese couple was recently arrested in Zambia with close to 30kg of gold from Zimbabwe. This is compounded by a damning report by Centre for Natural Resource Governance (CNRG) entitled, *“Investments or Plunder; An Assessment of the Impacts of Chinese Investments in Zimbabwe’s Extractive Sector”*. The report gives details of how some Chinese companies are allegedly extracting minerals to leave a trail of land degradation whilst exposing locals to health hazards and violating labour rights. Eluvial chrome ore mining on the Great Dyke, mostly by Chinese companies, come into mind.

Chinese companies are also frantically looking for deposits of refractory gold ore as well as dumps, especially those associated with antimony or arsenic. They believe they have superior technology for recovering the gold together with the base metals.

Chinese companies are doubtlessly important investors in Zimbabwe. Efforts should be made to ensure that the activities of a few inconsiderate ones will not tarnish Chinese capital in general.

Kuvimba Mining House Responding Positively

Kuvimba Mining House appears to be responding positively to the gold price trends. The company is reported to be in the final stages of securing funding for their USD150 million Shamva Hill open-pit gold project. Discussions are expected to be concluded by the end of this year.

Government Interventions

Government is trying to boost gold production by occasionally deploying 'Gold Mobilization' and 'Responsible Mining' teams to mining areas to enforce compliance with regulations, and to ensure accountability for all the gold produced. It is, however, debatable whether the apparent increase in gold production is as a result of these interventions, or is due to natural trends. The bottom-line, however, is that the small-scale mining sector should be well organised to allow production to be predictable and safety gained.

Currently, gold from the small-scale mining sector, which is touted to contribute about 60% to the national output, is in danger of being labelled 'irresponsible gold' as a result of associated illicit dealings, poor safety, and environmental and social degradation. The Fidelity Printers and Refinery (FPR) is instituting the *Responsible Sourcing and Responsible Mining Project*. FPR will only buy gold 'Responsibly' produced. How this will succeed remains to be seen considering the chaotic situation in small-scale mining, including informal alluvial gold mining. Where will the gold from panners, for instance, go?

Lithium

Large Chinese companies are the biggest investors in lithium in Zimbabwe. Unlike those mining gold, who are mostly small companies and individuals, these multi-million-dollar lithium companies are directly linked to manufacturers of batteries and electric cars. They are the owners of the six large projects in Zimbabwe, namely Arcadia, Bikita, Sabi Star, Kamativi, Mbeta, and Zulu. Despite falling lithium prices, activities at these projects are increasing exponentially. In view of the rush, it would not be surprising that the potential lives of these deposits have been significantly reduced.

One would be tempted to believe a senior US official when he said during a visit to Portugal that the Chinese are flooding the global market with the critical metal to cause a "predatory" price drop as they seek to eliminate competing projects.

Chinese Beitbridge Venture

Chinese mining giant, Shanxi, is reported to be pouring USD3.6 billion into a Beitbridge venture for manufacturing steel, including stainless steel. Construction has already started at a location some 20km west of Beitbridge following approval by President Mnangagwa in 2022. The project will be multi-faceted, which will encompass mining, power generation of 1200 megawatts annually, coke production and steel manufacturing. Coal will come from the nearby Thuli locality and from Hwange with an estimated annual useage of 1 million tonnes. This is encouraging development, but we hope the company will be able to secure other inputs such as iron ore, chrome ore and nickel.

MINING NEWS

gleaned from <https://www.mining.com/>

by Kennedy Mtetwa

Cluff Africa agrees to develop Zimbabwe lithium mine

[Bloomberg News](#) | June 17, 2024 | [Battery Metals Africa Lithium](#)

Cluff Africa Ltd signed a non-binding agreement with Zimbabwe's sovereign wealth fund to develop a lithium mine in the southern African country. Cluff will be assigned a 45% share of licenses at Sandawana, founder Algy Cluff said in an emailed statement, without disclosing financial terms.

Zimbabwe is seeking to attract investors after lithium prices steadied following a boom-to-bust period that left an array of stalled projects, scrapped deals and production cuts. State miner Kuvimba Resources Ltd has said it has identified a lithium ore resource of 38 million tons at Sandawana in the country's south.

"We can now begin to develop what we believe to be a world-class, high-grade lithium resource," Cluff said. The company will start a drilling program as soon as it has signed a final agreement with the wealth fund, it said, without giving a timeframe.

Industry veteran Algy Cluff has previously invested in Zimbabwe's gold sector, but is best known for his North Sea oil and gas company Cluff Natural Resources Plc — now Deltic Energy Plc.

Zimbabwe's wealth fund also holds gold, nickel and platinum mines. Calls to the fund went unanswered.

(By Godfrey Marawanyika)

Africa's rare earths could make up 9% of global supply by 2029

[Bloomberg News](#) | July 10, 2024 | [Intelligence Africa Rare Earth](#)

African mines could account for nearly a 10th of the world's rare earths in five years, climbing from zero today, creating new players in a market dominated by China. Eight mines in countries such as Tanzania, Angola, Malawi and South Africa are expected to start production by 2029 and contribute 9% of global supply, according to Benchmark Mineral Intelligence. Most of this new supply could still be secured by Western and non-Chinese processing firms, the London-based industry consultant said in a new analysis. China mines about 70% of the world's rare earths and refines almost all of the material – a cluster of 17 elements that make magnets used in electric vehicles, wind turbines and military equipment. Beijing can flex its muscles by limiting both production and exports. In December, the Asian country banned overseas sales of a range of rare-earth technologies.

The US and its allies are trying to build supply chains independent of China. While 37% of the future African supply is already destined to be shipped to Chinese buyers, most of the production is "potentially available for ex-China and Western rare earths companies," Benchmark said, noting that Europe is developing the most processing facilities outside of China.

"China will not be the only beneficiary of Africa's active, low cost pipeline, which will also become strategically valuable for the EU and US," it said.

None of the companies building the African rare earth mines covered in Benchmark's research – including Pensana, Rainbow Rare Earths and Mkango Resources – are Chinese-owned and all are registered in Western countries. However, China's customers will remain crucial for some of the miners to ensure their projects are viable because processing capacity in the West is not expanding quickly enough, the report added.

(By William Clowes)

Africa's top gold producer opens first plant to refine bullion

[Bloomberg News](#) | August 8, 2024 | [News Africa Gold](#)

Ghana, Africa's biggest gold producer, opened a new refinery in a bid to reap more value from its natural resources. The Royal Ghana Gold Refinery aims to refine 400 kilograms of gold a day, sourcing the raw material mainly from artisanal and small-scale mines, which officially account for a third of Ghana's output of about 4 million ounces a year. There is also a large but unknown amount of gold that's illegally produced by miners locally known as 'galamsey,' who smuggle their output out of Ghana.

"This refinery will play an important role in reducing gold smuggling, which has been a major challenge for the country over the years, by providing a ready market for artisanal and small-scale miners," said Bank of Ghana Governor Ernest Addison.

"This gold refinery can mitigate the incentive for smuggling and help promote transparency and accountability in gold trading," he said.

Rosy Royal Minerals Ltd of India owns 80% of the refinery and the central bank the remainder, according to government officials. The refinery is the latest step taken to formalize Ghana's artisanal and small-scale gold mining. The central bank has bought \$5 billion worth of gold from small miners as part of a program started in 2021 to boost Ghana's foreign-exchange reserves, Addison said. Many other African nations such as Uganda and Madagascar are following the move or considering doing so to prop up their currencies.

The plan also fits within a wider push across the continent to add value to natural resources before exporting them to reap greater economic rewards.

"Our failure to successfully ensure value addition across the entire resource chain has meant that we have been unable to properly harness the benefits of being among the top 10 gold producers in the world," said Finance Minister Mohammed Amin Adam.

The gold mining history of present-day Ghana, known as the Gold Coast under British colonial rule, spans centuries. Ghana's government is also in talks with the London Bullion Market Association, which certifies gold that is responsibly sourced, to secure a wider market for its small miners.

"If we work hard, we can achieve LBMA status," Eric Santeng, a director at Royal Ghana Gold, said without giving a timeline. "This status is within our grasp but requires the concerted effort of all."

Getting the new refinery on the LBMA's Good Delivery List would make it easier to trade this gold by making it compliant with the stringent sourcing standards of some of the biggest global buyers.

(By Yinka Ibukun and Ekow Dontoh)

China drives African lithium surge to lock in key battery metal
[Bloomberg News](#) | August 12, 2024 | [Battery Metals](#) [Intelligence](#) [Africa](#) [China](#) [Lithium](#)

Chinese miners and refiners are driving a surge in African lithium output, shrugging off concerns over a glut to lock in future supplies of the critical battery metal. The continent is projected to account for almost 11% of global supply this year, compared with close to zero at the start of the decade, according to S&P Global Commodity Insights. It is projected to increase to more than 14% by 2028.

A spike in lithium prices through 2021 and 2022 fuelled a wave of investment by Chinese companies in African production. The metal has since plunged more than 80% after supply increased while sales of electric vehicles lag expectations. Despite an anticipated global production surplus this year, China, which makes most of the world's lithium chemicals, continues to expand its refining capacity and is growing more dependent on material from overseas, said Claudia Cook, an analyst at Benchmark Mineral Intelligence. "As there is growing resistance to Chinese involvement in lithium projects in the Western world, Africa is well-positioned to fill this feedstock gap."

More than two-thirds of the continent's output comes from Zimbabwe, where Chinese firms, including Zhejiang Huayou Cobalt Co., Sinomine Resources Group Co. and Chengxin Group Co., have spent billions of dollars to commission mines and processing plants. Companies from China or with Chinese backing are also developing projects in Mali, Namibia and Nigeria. Across Africa, 15 mines that are under development or being expanded are due to be producing by 2030, according to Lukasz Bednarski, S&P's principal research analyst for lithium and battery metals. Most are "sustainable," even at current prices, he said.

"It's really significant growth in the last three years," Bednarski said.

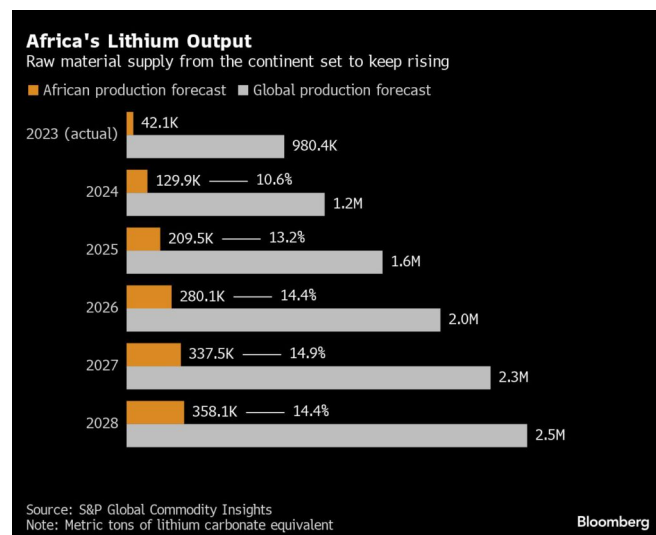


Image courtesy of [Human Rights Watch](#)

That new capacity will come online as the market is predicted to return to a deficit, following a peak global lithium surplus in 2027, according to Benchmark.

While production from Zimbabwe is more transparent due to the presence of industrial mines, supply from nations like Nigeria, which until now has exported lithium ore that has

been extracted with rudimentary tools, is harder to track. That country was the second biggest source of African lithium during the past year and a half, said Thomas Matthews, battery metals analyst at CRU Group. More than half of Africa's production last year came from hand-dug or small-scale activity, according to Matthews. That is changing though, with "growth in output from industrial operations expected to eclipse the informal activity," he said.

Nigeria opened its first lithium processing facility in May and has several more China-backed projects under development, as the government seeks to regulate the trade and maximize revenue. Low-grade material from Africa made up more than a quarter of all China's lithium imports on a metal contained basis during the first half of this year, Matthews said.

Western companies are also looking to tap African lithium. Sydney-registered Atlantic Lithium Ltd is building Ghana's first lithium mine, supplying concentrate to the US that can benefit from tax credits introduced by President Joe Biden. London-listed Andrada Mining Ltd and Canada's Tantalix Lithium Resources Corp. are developing projects in Namibia and the Democratic Republic of Congo respectively. Companies belonging to Algy Cluff, a British businessman best known for helping pioneer the UK's offshore oil and gas industry in the 1970s, and Hugh Morgan, an Australian entrepreneur who headed a copper and nickel miner that was acquired by BHP Group for A\$9.2 billion (\$7.1 billion) 20 years ago, are also aiming to produce significant volumes of lithium in Zimbabwe and Nigeria.

While Australia, Chile and China are expected to make up about 70% of total supply this year, African mines will help reduce their share to just over half by the decade's end, according to Benchmark's Cook. The continent's rising prominence "represents a wider trend in the diversification of where lithium is being produced," she said.

(By William Clowes)

Scramble for critical minerals spurs an African rail revival

[Bloomberg News](#) | August 24, 2024 | [News Africa Copper](#)

Southern Africa's railways are suddenly getting global attention and attracting billions of dollars in investment, with a race to secure copper supplies needed for the energy transition at its centre. From Angola on the continent's west coast to Tanzania on the east, governments and investors are readying to revive decades-old rail lines that have fallen into disrepair and build new ones. Much of the new demand for freight comes from the central African copperbelt that Zambia and the Democratic Republic of Congo share.

"We're at a turning point — it's very historic," Babe Botana, executive director at the Southern African Railways Association, said in an interview. "The rest of the world is developing interest to come and revitalize the railway industry."

Already, truck logjams clog routes out of Congo, which last year overtook Peru as the world's second-biggest source of copper used in electric vehicles and data centres that power the artificial intelligence boom. Zambia has ambitious plans to catch up with its northern neighbour. From the US and European Union to China, there's a growing realization that rail must play a central and strategic role in allowing exports to flow. The

surge in interest was plain to see at the Southern African Railways Association's annual conference in Johannesburg this week. Attendance was up by about 50% from last year, with many first-time delegates from around the world, according to the organizers. During the week, a rail route from Congo to an Angolan port that the US is backing with \$553 million in development finance loaded its first copper shipment bound for Baltimore. Amos Hochstein, a senior adviser to President Joe Biden who has led the US efforts to develop the so-called Lobito corridor, called the event a BFD — short for big deal, with an expletive.

The Zambian government hopes to sign a deal with China next month that will see a \$1 billion refurbishment of a line connecting its copper mines with the Tanzanian port of Dar es Salaam. In South Africa, which has the continent's biggest rail network, state-owned logistics operator Transnet SOC Ltd last month got a \$1 billion loan from the African Development Bank to help boost its rail-recovery plans. Years of neglect and a lack of funding have left many of southern Africa's rail lines limping along despite growing demand for trade routes for critical materials used to produce electric vehicles.

That has brought a \$10 billion backlog for maintenance and track refurbishment regionally, said Johny Smith, head of rail at South Africa-based logistics company Grindrod Ltd. He estimates as little as 7% of cargo travels by rail in the region. Yet securing investment to revive old lines and build new ones has not been easy. Many projects have been "stagnant for decades," according to Xoliswa Njokweni-Mlotywa, acting chief executive officer at Thelo Infrastructure Development in Johannesburg. Development financiers need to help prepare projects to make them attractive, and someone needs to pull the various funding sources together to reduce risk and ensure projects are viable, she said in an interview. "The private sector will not invest in projects without knowing that they will get a return," Njokweni-Mlotywa said.

(By Matthew Hill)

Zimbabwe to tackle gold smuggling by boosting mine surveillance

[Bloomberg News](#) | September 16, 2024 | [News Africa Gold](#)

Zimbabwe plans to tackle rampant gold smuggling by increasing surveillance at mining sites, Mines Minister Winston Chitando said. The country loses \$1.5 billion of gold a year to smugglers, depriving it of vital export revenue, according to the International Crisis Group. Most of its gold is produced by small-scale miners, who at times get paid late by the state's sole authorized buyer, Fidelity Gold Refinery, forcing some to use other channels. The government will deploy monitoring teams to mines to ensure all output flows to FGR, a plan that builds on a gold-tracing system announced in May. Zimbabwe aims to produce 35 tons of the metal this year, up from 30.1 tons in 2023, Chitando told reporters in the capital, Harare.

"The illegal extraction and trade of gold undermines our efforts to achieve these benefits," the minister said. "The key to realizing this target is the plugging of leakages to side markets."

In the latest effort to devise a credible national currency, the southern African country in April replaced its dollar with the ZiG, short for Zimbabwe Gold. The ZiG is backed by gold, precious minerals and cash reserves.

“Our currency is anchored on gold,” Chitando said. “Hence the need to ensure that all the gold trade is done through Fidelity Gold Refinery.”

In the first eight months of this year, Zimbabwe produced 21 tons of gold, compared with 19.3 tons a year earlier.

(By Godfrey Marawanyika)

Zimbabwe’s biggest miners seek \$182 million for solar projects

[Bloomberg News](#) | September 11, 2024 | [Energy Africa](#) [Chrome](#) [Platinum](#)

Some of Zimbabwe’s biggest miners are seeking \$182 million to develop 200 megawatts of locally-generated solar power, according to the head of the renewables company responsible for the projects. The agreement was signed between Grid Africa and the Intensive Energy User Group, whose members include Impala Platinum Holdings Ltd’s Zimbabwean unit, Tsingshan Holdings Group Co.’s Afrochine Smelting Pvt Ltd and RioZim Ltd among others.

“Talks with various funding partners, such as mining companies, banks, developmental financiers, and vendors like Power China and RIC Energy, are progressing,” Norman Moyo, co-founder and chief executive of Grid Africa said in an interview. “The financing structure will consist of about 70% debt and 30% equity.”

Zimbabwe faces an energy shortfall that often triggers the state-owned power company to implement rolling blackouts to balance supply and demand. The worst drought in four decades has compounded the crisis, cutting supplies from hydropower plants. Several miners rely on imported power from neighbouring Mozambique to operate.

Zimbabwe boasts the second-largest platinum deposit and high-grade chromium ores in the world, and mining contributes about 12% to the country’s gross domestic product and makes up around 80% of its exports, according to the US International Trade Administration. Additional and cheaper electricity is likely to significantly increase the sector’s contribution to economic growth.

The first phase of the deal focuses on mining companies with ready-to-go projects that have the necessary licenses but lack financing, according to Moyo. “Large mines benefit from dedicated grid infrastructure, enabling them to source power flexibly. Transitioning to local solar generation will offer significant cost and foreign exchange savings compared to importing power,” he said.

Grid Africa emerged from Distributed Power Africa, initially linked to Zimbabwean billionaire Strive Masiyiwa.

(By Godfrey Marawanyika and Loni Prinsloo)



SEG Timothy Nutt Memorial Fund

This fund will be available to provide financial support for geology students and young economic geologists located in Zimbabwe or in southern Africa with ties to Zimbabwe. The fund may be used to support SEG student chapter activities, travel to meetings, field trips, for research or study grants, technical lectures or any other activities approved by the SEG Regional Vice President for Africa.

Strong preference will be given to those applicants who are SEG Student Members.

To become an SEG Student member visit www.segweb.org/join

Applicants must describe what the project is, why the research is important and how it is to be done.

An estimate of expenses for the project must be included with the application.

Grants are expected to be fully utilized by April 30 following the calendar year in which they are awarded / dispersed.

Grant recipients are required to provide a year-end accounting of how the money was spent together with a suitable progress report or final abstract.

A 2018 Research Grant application form may be downloaded from

www.segweb.org/StudentResearchGrants

Student Research Grants Committee c/o Assistant for Student Affairs, Society of Economic Geologists Foundation 7811 Shaffer Parkway, Littleton, CO 80127-3732 USA

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GSZ Research and Development Fund

Enquiries relating to the distribution of funds through this facility should be made with the standing Chairperson.

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Conferences

Geological Society of South Africa
African Exploration Showcase
Emperor's Palace Convention Centre, Kempton Park
6 – 7 November, 2024

Geological Society of South Africa & the Northern Cape Branch
Namaqualand Diamond Conference and Centenary
Letsatsi Lodge, Vanrhynsdorp
11-20 March, 2025

Geological Society of South Africa
GEOCONGRESS 2025
Embracing Change Through Collaboration
University of the Free State, Bloemfontein
24-27 June 2025

For further information on specific events see <https://www.gssa.org.za/>
or email info@gssa.org.za

Colloquium of African Geology
CAG30 -
Unveiling Africa's Geological Resources:
"Forging a Path for Sustainable Development"
Nairobi, Kenya – 23-27 September, 2025
Biennial Conference organized by the Geological Society of Africa
cag30info@cag30nbi.org / cag30.nbi@gmail.com



Geological Society of Zimbabwe



Summer Symposium 2024

Date: 7.30am Friday 1 November 2024
Venue: Natural History Museum, Bulawayo

The Geological Society of Zimbabwe cordially invites you to our annual Summer Symposium, which this year will be taking place in Bulawayo. The Symposium will be followed by a 1-day field trip (**2 November**) to the Diana's Pool Orbicular Granite location in eastern Matopos.

Below is a list of confirmed speakers and their talks.

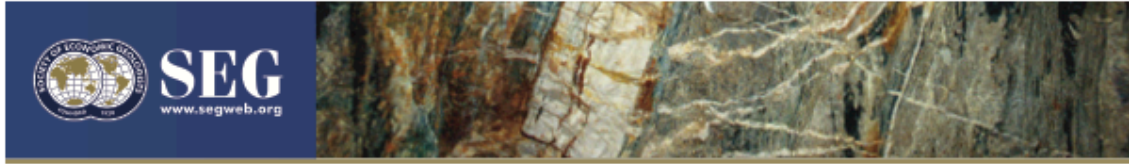
Title	Speaker
Economically important pegmatites in Africa	Judith Kinnaird
The petrogenesis of orbicular granites in the Diana's Pool area, Zimbabwe	Senamile S. Dumisa
An outline of the activities of the International Commission for the History of Geological Sciences, and a call for volunteers for "The INHIGEO 2026 Conference at Victoria Falls, Zimbabwe"	Sharad Master
A review of the geology and Au-Ag mineralization in the Gwanda Greenstone Belt: Implications to exploration	Godfrey Chagondah
Some observations on the Dwaars River chromitite seams and a nearby breccia pipe, Bushveld Igneous Complex	Tony Martin
Regional zonation of rare-element pegmatites: Why understanding the distribution of LCT and NYF pegmatites matters	Paul Nex
The Limpopo Belt in Zimbabwe as a geological heritage	Forbes Mugumbate
The Dokwe gold discovery	William Collett
The implication of metamorphism and deformation of the Vioolsdrif domain on the Haib Porphyry copper-molybdenum deposit, Namibia	Silvanus Shafiishuna
Modern-style and scale plate tectonics is Mesoarchaeon in IGCP Project 280 'two cratons and an orogen' of southern Africa; novel kinematic and geodynamic constraints	Mark J. Tsomondo
Cast in stone	Theodora Rondozi
Innovation evolution in Geosciences: why technology is central in geological spaces	Vhusaffheli Ramanugu
Summary	Sharad Master
Macgregor Memorial Lecture - Zircon geochronology: a handle in plate reconstructions, geological evolution of mobile belts and assessment of mineral deposit fertility	Prof. Benjamin Mapani

The Registration fee is **USD\$30** for ordinary members and **USD\$15** for students. Non-members are encouraged to register. The fee covers abstract booklet, teas and lunch. Members who wish to attend the symposium are encouraged to register on the link below.

Registration link: <https://forms.gle/RaVmfbdHwR2YStd8>

We look forward to seeing you in Bulawayo!

Society of Economic Geologists



2-DAY COURSE

Orogenic Gold in Africa and Worldwide

This two-day course will focus on the geology of and exploration for orogenic gold deposits, the most widespread type of gold deposit globally. Leading experts will provide descriptions of the most important Precambrian and Phanerozoic examples of orogenic gold ores formed in the world's young accretionary orogens and old cratonic greenstone belts.

Topics to be covered include tectonic and structural controls, geological characteristics, geochemical and geophysical signatures, geochronological relationships, and exploration strategies. A large component of the program will be the detailed evaluation of gold metallogenesis and recent exploration successes throughout Africa.

Richard Goldfarb will focus on the general geology, alteration, mineralogy, geochemistry, and genesis of this family of deposits. He will discuss their distribution in the Phanerozoic and features of these younger deposits that relate to a better understanding of the Precambrian gold provinces. Overlapping features with the intrusion-related and Carlintype deposits will be evaluated to better understand the formation and different exploration criteria for each of these.

Bob Foster and Lynnette Greyling will provide detailed descriptions of the Archean, Paleoproterozoic, and Neoproterozoic gold provinces and their ores across the entirety of the African continent. These will include details of the major deposits of the Zimbabwe, Congo, and West African cratons. Important insights to the complexities of the Kaapvaal Craton and the gold-endowed Barberton Greenstone Belt will be detailed by Caitlin Jones. The growing recognition of the importance of Neoproterozoic/Pan-African terranes will also be addressed, focusing on the world's largest accretionary arc complex in North Africa and on the recent exploration successes in Namibia that have led to the country becoming a significant gold producer.

REGISTRATION OPENS LATE OCTOBER 2024

Attendee Maximum: 80
A minimum of 20% of spaces are reserved for students and offered at a discounted rate.

Registration will open in late October 2024 at segweb.org/events



DATE & TIME

February 10-11, 2025
8:00am - 5:30pm CAT (UTC+2)

LOCATION

University of Zimbabwe,
Harare, Zimbabwe

PRESENTERS

Richard Goldfarb, Bob Foster,
Lynnette Greyling, and Caitlin Jones

FORMAT

Two-day in-person short course
consisting of dynamic lectures
and opportunities for participant
Q&A interaction.

WHO SHOULD ATTEND?

The course is aimed at geoscientists
from both industry and academia,
as well as students of economic
geology who desire a comprehensive
understanding of modern concepts on
the geology of orogenic gold deposits.



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Presenters



Richard Goldfarb **Goldfarb Global Gold**

Richard is a research professor at Colorado School of Mines and China U. of Geosciences Beijing, as well as USA-based consulting geologist; spent 35 years as research geologist at USGS, specializing in the geology and geochemistry of orogenic gold.



Bob Foster **Bob Foster & Associates**

Bob is a UK-based consulting geologist who commenced his career in Zimbabwe and most recently spent 10 years as Chief Executive of AIM-listed Stratex International, focused on gold exploration and project development throughout Africa and in Turkey.



Lynnette Greyling **Independent Consultant**

UK-based consulting geologist, previously lecturer and researcher at the University of Cape Town, South Africa, with industry and research experience in gold and copper mineralization in West and Central Africa and most recently focussing on gold exploration in Tanzania and consultancy support for a major company on the Central African Copperbelt.



Caitlin Jones **Tect Geological Consulting**

Caitlin is a Consulting Geoscientist at Tect Geological Consulting in South Africa, where she focuses on the 3D geomodelling of structurally-complex orebodies and their host rock sequences in LeapfrogGeo. Caitlin holds an M.Sc. in Structural and Economic Geology from the University of Stellenbosch. Her research for Barberton Mines (Pty) Ltd focused on the structural controls of hydrothermal fluid flow and gold mineralization within the Sheba and Fairview Mines of the Barberton Greenstone Belt.



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Metrinah Mutika	Hon. Secretary	mmutika1@gmail.com	0772 117 219
Melusi Hlambelo	Hon. Treasurer	melusi.hlambelo@gmail.com	0773 445 785
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