

# Geological Society of Zimbabwe



## Newsletter

February 2024

No. 1 of 3 of 2024



Geological Fieldwork circa 1912-1914, probably around Shurugwi or Kadoma – Ben Lightfoot on right and probably the only known image of A.E.V. Zealley to left. Tea in style. Note the waggon transport and the bicycle wheel for measuring distance. *Courtesy of Rob Burrett, Bulawayo, following an anonymous sharing through David Mann Auctioneers in the UK.*

[www.geologicalsociety.org.zw](http://www.geologicalsociety.org.zw)

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

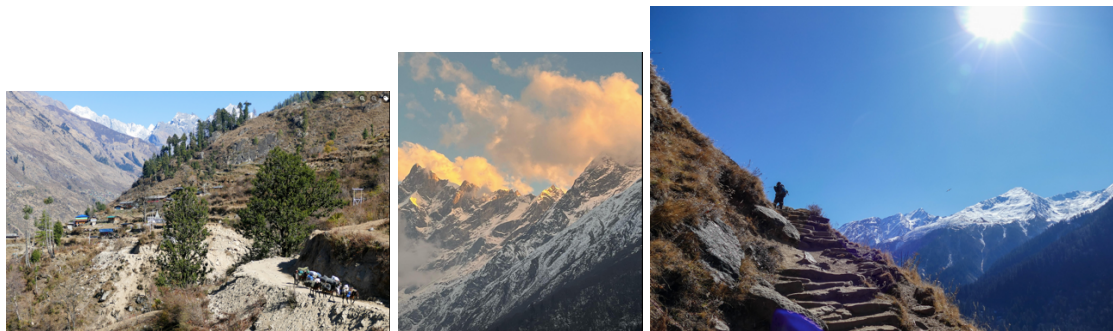
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## Editorial

This is the final Newsletter under the Chairmanship of Tenyears Gumede. We thank him and his Committee for the hard work put in on our behalf over the past year, and we look forward to welcoming Ernest Mugandani and his team at our AGM to be held on Friday 8<sup>th</sup> March at 17.00hrs at the Country Club, off Princess Drive, in Newlands. We sincerely encourage you to make the effort to attend this important event in our calendar and to take the opportunity of interacting with your peers and friends. The Agenda for the meeting is posted in this Newsletter and will be circulated by the Hon. Secretary. The minutes of the AGM for 2022 are also included for your perusal. We look forward to seeing you there!

Thanks go to Gayle Hanssen, our Membership Secretary, who updates us on her innovations to encourage enhanced membership of our Society and to apply fees gained through institutional membership in a positive and transparent way. She reports back on the ambassadorial attendance and presentations at conferences and meetings by selected members and acknowledges the continued support from our institutions. In her busy life, she managed a trip with her brother into the foothills of the Himalayas in India. A few photos give you a taste of this adventure.



Shephard Mabhanga is thanked for his role in coordinating contributions to the Newsletter and for his liaison with the Committee.

The anonymous gift through an auction house to Rob Burrett of digitized photographs recording Ben Lightfoot's early geological endeavours in Zimbabwe represents an important addition to our heritage, with a sample being presented here for your enjoyment and interest. So much so, Albert Phaup's obituary to Ben is reproduced for your appreciation with kind permission from the Geological Society of South Africa.

Patrick James, keynote speaker at the Summer Symposium, records his onward experiences at the 10<sup>th</sup> Global Geoparks Network Conference in Marrakech, which coincided with the magnitude 7 earthquake in Morocco.

Faithful contributions by Maideyi Meck, Bornwell Mupaya, Antony Mamuse and Fyrence Ndebele record progress and happenings at the Geology Section, UZ, the Mennell Society, the Geology Department of Midlands State at their Zvishavane Campus, and at the Zimbabwe School of Mines. We require correspondents from NUST in Bulawayo and at Manicaland State University to continue the good work of recording the happenings at other institutes teaching earth science-related courses in Zimbabwe. In this way we can work together and not in isolation.

Ernest Mugandani is thanked for his correspondence from the Geological Survey, a series that represents an important record of events affecting our national institution. Forbes Mugumbate is welcomed back with his commentary on affairs affecting the mining industry, whilst Kennedy Mtetwa is thanked for his gleanings from the press. Between them there are some telling truths relating to mining policy and the impact this has on the well-being of our industry. The Geological Society's voice must be heard.

*Tim Broderick (Icositet)*



## Chairperson's Chat



*Tenyears Gumede* [tenyearsgumede@gmail.com](mailto:tenyearsgumede@gmail.com)

The Geological Society exists to serve the interest of its stakeholders: these are our members, including not only individuals but also companies that employ many of these individuals, those in the geoscience field and the general community as a whole. To achieve this purpose, we need to conduct as many conferences and workshops and other networking activities as possible. The GSZ needs to be visible to its stakeholders.

Stakeholders fund the Society through their membership fees (individual and institutional) and through the generosity of sponsors who share our passion for geoscience. A significant revenue stream is required. There is a drive to encourage membership of the Society within the geological community, both locally and from the diaspora, and for them to actively participate in the GSZ affairs. To this end, the Geological Society of Zimbabwe organized several field trips during 2023 to visit geological and exploration projects in Zimbabwe. These included diamonds exploration in the Umkondo rocks, and hydrocarbon exploration in Muzarabani.

The Society must examine its value to its stakeholders, its members, and its commercial partners. We need to provide services that will attract future members and partners. We must make ourselves heard by participating in policy issues that affect us and to this end, we have been engaging through the Parliament Portfolio Committee on Mines and Mining Development, the Zimbabwe Miners Federation and the Ministry of Mines and Mining Development.

The tenure of the 2023-2024 GSZ Committee is coming to an end. I would like to encourage new leadership into the committee. Let us participate and nominate leadership that will carry our Society forward. Many initiatives are underway, including the professional registration within the Society, and this needs to be carried forward with the steam it deserves.

Lastly, I would like to thank our members for their effective involvement in the Society during 2023 and going forward. Let us build the Geological Society of Zimbabwe together.

## MEMBERSHIP UPDATE AS OF 6<sup>th</sup> February 2024

Gayle Hanssen, Membership Secretary [gaylehanssen@gmail.com](mailto: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.

Firstly, the GSZ funded Steve Duma to attend and present a paper on the *3D modelling of Eureka Gold Mine* at the Association of Mine Manager's Conference in Victoria Falls in November 2023. This paper was presented at the Summer Symposium and will shortly be uploaded to our website.

Secondly, Dr Godfrey Chagonda was empowered to do a presentation at the *Africa Exploration and Technology Showcase Conference* in Johannesburg, again in November, on *Mineral Exploration, Opportunities and Development Projects in Zimbabwe*. His presentation is currently on our website.



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

The GSZ will call for submissions from interested researchers, and these will be adjudicated by the Phaup Award panel on the basis of the applicants being paid-up members, and can represent areas of Zimbabwean geology that are of international interest.

### ***Paid-up Membership at the end of 2023***

#### **Institutional Members**

Dallaglio

Chamber of Mines, Zimbabwe

GeoAssociates (Pvt) Limited

MaxGeo

Metallon

Prospect Resources

RZM Murowa (Pvt) Limited

Zimbabwe Platinum Mines Limited

### **Honorary Members**

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

### **Ordinary Members**

Bakasa	Samuel
Bouammar	Houda
Chatora	Daniel
Chikomo	Fanuel
Chikumba	Most
Chimbodza	Paul
Chinheya	Brian
Chituri	Owen
Chiumburu	Chenjerai
Chiyama	Leeroy
Denhere	Rumbidzai
Dinginya	Paul
du Toit	Andrew
Dube	David
Dube	Dennis
Dube	Londiwe
Duma	Steven
Gerema	Nyasha
Goba	Racheal
Gumbo	Hillary
Gumede	Tenyears
Hanssen	Gayle
James	Patrick
Jones	Tim
Kanyezi	Pardon

Kasambira	Langton
Kashiri	Tendai
Kasumba	Jacob
Machiridza	Lovemore
Magagula	Mathew
Mahoso	Robert
Makumbe	Allan
Makwiranzou	Primrose
Mamuse	Antony
Manenji	Nhamo
Mapingire	Brian
Maponga	Oliver
Marazani	Tarisai
Mashiringwani	Daneonce
Matanga	Charles
Mateveke	Martin
Matewo	Charity
Matsheza	Tinyashe
Mavata	Remigiyo
Mbiri	Esau
Meck	Maideyi
Moodley	Adam
Mtetwa	Kennedy
Muchemwa	Ellah
Mudavanhu	Joy

Mudavase	Emmanuel
Mudzingwa	Tinashe
Mugandani	Ernest
Mukwashi	Renias
Mungadzi	Watson
Muoneka	Benefit
Mupaya	Bornwell
Mupwanda	Never
Muredzo	Patson
Musiwa	Kudzai
Mutchengeti	Takunda
Mutemeri	Nellie
Mutika	Metrinah
Muyambo	Talkmore
Muzulu	Reuben
Nemahwe	Billmore
Nhau	Wadzanai
Nkomo	Prince Malach
Nyagumbo	Jonathan
Poterai	Julius
Sibanda	Givemore
Siyamuzhombwe	Wesley
Tirivabaya	Renias
Tsmondo	Mark
Winch	James

### **Associate Members**

Sibanda, Chanesta; Sansole, Chipso Edina

**Paid-up Institutional Membership as at 6<sup>th</sup> February 2024***We recognise this early settlement and thank you for it*

Dallaglio



Chamber of Mines, Zimbabwe



GeoAssociates (Pvt) Limited



Prospect Resources

**Paid-up Ordinary Members**

Bouammar	Houda
Chadwick	Peter
Chikumba	Most
du Toit	Andrew
Gumede	Tenyears
Hanssen	Gayle
Kashiri	Tendai
Mapingire	Brian
Matewo	Charity
Moodley	Adam
Mtetwa	Kennedy
Mugandani	Ernest
Musiwa	Kudzai

- **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 16 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.

<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*



*Join the Geological Society of Zimbabwe Facebook Group*



**Notice is hereby given that the Annual General Meeting (AGM) of the Geological Society of Zimbabwe will be held as follows:**

**Date: 8<sup>th</sup> March 2024**

**Time: 1700 hours**

**Venue: The Country Club, off Princess Drive, Highlands**

**GEOLOGICAL SOCIETY OF ZIMBABWE ANNUAL GENERAL MEETING (AGM) AGENDA**

1. CONVENING OF THE MEETING
2. OBITUARIES
3. APOLOGIES
4. MINUTES OF THE PREVIOUS MEETING
  - 4.1 Consideration and approval of the minutes
  - 4.2 Matters arising not covered elsewhere in the agenda
5. CHAIRMAN'S STATEMENT
6. TREASURER'S REPORT
8. ANNOUNCEMENT OF THE NEXT COMMITTEE, 2024 – 2025
9. PROFESSIONAL REGISTRATION
10. PRESENTATION BY DARLINGTON MUNYIKWA
11. AWARDS
  - 11.1 A.E. Phaup Award
  - 11.2 Mike Vinyu Award
  - 11.3 J.F. Wilson Award
  - 11.4 Keith Viewing Award
  - 11.5 Geoffrey Bond Award



**K. Musiwa**  
Hon. Secretary



# Geological Society of Zimbabwe



## MINUTES OF THE ANNUAL GENERAL MEETING HELD ON 24<sup>TH</sup> FEBRUARY 2023 AT THE COUNTRY CLUB, HIGHLANDS, HARARE

### **PRESENT:**

#### **Honorary Members**

Broderick Tim, Martin Tony, Mugumbate Forbes

#### **Members**

Andrew du Toit, Paul Chimbodza, Roland Mavesera, Luyanda Ncube, Bornwell F. Mupaya, Masimba Mutakaya, Patrick Majoni Utete, Antony Mamuse, Tenyears Gumede, Mangwiro Sibanada, Brian Mapingire, Renias Tirivabaya, James Winch, Fyrence Ndebele, Mercy Mupamhadzi, Patience Mupamhadzi, Steven Duma, Shephard Mabhanga, Irvin Nyamukondiwa, Hillary Gumbo, Valentine Musengezi, Ellah Muchemwa, Kennedy Mtetwa, Kudzai Musiwa

### **1. CONVENING OF MEETING**

The Chairman, Kennedy Mtetwa, welcomed the members to the 2023 Geological Society of Zimbabwe Annual General Meeting and the Secretary declared a quorum present. The Chairman, opened the meeting at 1742hrs.

### **2. OBITUARIES AND MINUTE OF SILENCE**

The obituaries of Philip Dewhurst, Lovemore Chimuka, Evaristo Gocha, John Morgan and David Muirhead were given. A minute of silence was held in recognition of deceased members and colleagues who passed on during the year and for those not brought to the attention of the society.

### **3. APOLOGIES**

Peter Zizhou, Manenji Nhamo, Peter Bucholz, Peter Chadwick, Trish Nyirenda, Julie Kuhn, Sansole, Mungadani, Miriam Matsanga, P. Takaendesa

### **4. MINUTES OF 2022 AGM**

4.1 The following corrections were made to AGM minutes held on 26<sup>th</sup> February 2022:-

Item on the committee for the year 2022 was to read, "The incoming GSZ Chairman, Kennedy Mtetwa, thanked the outgoing Chairman, Renias Tirivabaya and his committee for their work and achievements during the past year. He announced the following members of the incoming committee:

Steven Duma, Andrew du Toit, Antony Mamuse, Kudzai Musiwa, Tenyears Gumede, Collins Mwatahwa, Shephard Mabhanga, Miriam Matsanga, Chenjerai Chiumburu, Tarisai Marizani and Renias Tirivabaya".

With that correction to the Annual General Meeting minutes, of 26<sup>th</sup> February 2022, the minutes were approved as a true record of what was discussed. Proposed by Gayle Hanssen and seconded by Tony Martin.

#### **4.2 Matters Arising:**

There were no matters arising.

### **5. CHAIRMAN'S STATEMENT**

The Chairman, Kennedy Mtetwa, thanked the outgoing committee for their commitment to society which resulted in several activities being undertaken during the year. Well attended activities included;

- i. The 12<sup>th</sup> A.M. Macgregor Memorial Lecture which was presented by Dr Sharad Master at the University of Zimbabwe on the 21<sup>st</sup> of October 2022 in the afternoon.
- ii. Summer Symposium, which was held on 21<sup>st</sup> October 2022 at the University of Zimbabwe in the morning.
- iii. A fieldtrip to Chinhoyi area to see the Magondi Supergroup, on 22<sup>nd</sup> October 2022 led by Sharad Master.
- iv. The 12<sup>th</sup> A.M. McGregor Memorial Lecture which presented by Dr Sharad Master at the Zimbabwe School of Mines, on the 24<sup>th</sup> of October 2022 in the afternoon.
- v. A talk entitled "Quantification of the impact of rock mass quality on stope width control and pillar stability in a hard rock narrow reef mine" which was presented by Omberai Mandingaisa online.

- vi. A talk entitled “Geology of the Navchab gold deposit – Theory on ore genesis” which was presented by Richard Manyanga online.
- vii. A trip to Eureka Mine in Guruve on 12<sup>th</sup> November 2022.

The Chairman informed the meeting of the announcement of Africa’s oldest known dinosaur, *Mbiressaurus raathi* with an age of 230 million years. The name honours the Mbire empire and the palaeontologist Michael Raath whose research in the area led to the discovery of the dinosaur.

The committee is awaiting a response to the letter it submitted to the Ministry of Mines and Mining Development on 3<sup>rd</sup> August 2022 regarding the Professional Registration of Geologists in Zimbabwe. The incoming [Committee] was implored to pursue the issue with the Ministry.

The members were encouraged to pay their subscriptions, encourage colleagues and recent geology graduates to join the Society. The mentorship programme would be of great benefit to the recent graduates who become members of the Society. Membership fees were unchanged at thirty United States Dollars, with the Zimbabwe Dollar equivalent being applied at the ruling auction rate. There was an appeal for membership in arrears to pay what they owe and be in good standing.

The meeting was informed of the GSZ concerns regarding the proposed Mines and Minerals Bill (H.B. 10 2022) that the Chairman had raised at the stakeholders consultative meeting. The committee has compiled 15 concerns which include:

- i. Lack of supporting documents [for] the Bill
- ii. Violation of the Constitution – Where the Bill provides undue discretion to the Minister and avoids Parliamentary oversight.
- iii. Clause 6 allows the Minister to designate any mineral a strategic mineral subject to approval by parliament and the Second Schedule lists nearly all minerals apart from gold as strategic.
- iv. The lack of predictability, especially with respect to strategic minerals is a cause of concern and the country will reflect badly when international organisations review the bill.
- v. Clause 1(2) defers the final implementation of the cadastre for an indefinite period.
- vi. The Mining Lease transfer (Clause 136) will require Ministry approval and if approval is denied, the lease may be cancelled.

Members were encouraged to attend the ongoing consultation and raise their concerns regarding the bill. The committee will submit the concerns in writing to the Chamber of Mines of Zimbabwe and directly to the Portfolio Committee.

The Chairman thanked Tim Broderick, Shephard Mabhanga and the contributors for their much appreciated efforts in producing the GSZ Newsletter.

The Chairmen wished the incoming committee well for 2023.

The chairman’s report was adopted by the meeting. Steven Duma proposed and Renias Tirivabaya seconded.

## 6. TREASURER’S REPORT

The Treasurer, Collins Mwatahwa, presented the Financial Statements for the year to December 2022. The membership subscriptions were being received in both United States Dollars and Zimbabwe Dollars. The membership fees were maintained as they were in 2022 as follows;

- i. Members and Foreign – US\$30 or the equivalent in ZWL at the prevailing bank rate at the time of payment.
- ii. Institutional – US\$500
- iii. Students - free if they are attached to a recognised Student Society.

The total funds at 31.12.2022 was US\$6040.72 and the total expenditure was US\$5608.49, giving a net income of \$432.23.

The Financial Statements were approved unanimously and thanks were given to Constantine Ncube for verifying the accounts. Proposed by Paul Chimbodza and seconded by Antony Mamuse.

Members were concerned by the failure to get subscriptions from the institutional members and the low subscriptions by members during the year. Several methods of getting both institutional and member to pay their subscriptions were proposed and the committee has to implement them. Failure to get more members was going to affect the professional registration application.

## 7. PROFESSIONAL REGISTRATION

The committee is waiting for the response from the Ministry of Mines and Mining Development to the letter that was submitted to them. The sub-committee under the leadership of Renias Tirivabaya will continue to pursue the matter with the Ministry.

## 8. NEXT COMMITTEE 2023 -2024

**Chairman:** Tenyears Gumed

**Members:** Ernest Tapfumanei Mugandani, Brian Mapingire, Benefit Muoneka, Mary Gayle Hanssen, Shephard Mabhanga, Steven Duma, Collins Mwatahwa, Andrew du Toit, Kudzai Musiwa and Kennedy Mtetwa.

The Chairman, Kennedy Mtetwa, thanked everyone for their attendance and participation.

He declared the AGM closed at 1900hrs.

## 9. PRESENTATION BY PAUL CHIMBODZA

Mr P. Chimbodza's presentation was about his personal journey travelled over 3 decades and was not meant to be a template for everyone. It gave a summary of his time at the University, in Industry and where he is today.

It gave the highlights of the projects that he was involved in among which it includes the Acadia project in Goromonzi and the Oil project in the Zambezi Valley.

The full presentation is on the Geological Society of Zimbabwe website.

## 10. AWARDS

### 10.1 A.E. PHAUP AWARD

The A.E. Phaup Award is given to the author(s) of a paper published in an internationally acclaimed scientific journal, or who contributed a paper to a book published by recognised publishers, or who authored a bulletin or book edited by recognised scientists and judged to be making the most significant contribution to the advancement of the understanding of the geology of Zimbabwe. The author(s) need neither be Member(s) of the Society nor resident in Zimbabwe.

The 2022 award was awarded to Griffin C.T., Wynd B.M., Munyikwa D., Broderick T.J., Zondo M., Tolan S., Langer M.C., Nesbitt S.J. & Taruvinga H.R. 2022. Africa's oldest dinosaurs reveal early suppression of dinosaur distribution. *Nature*.

### 10.1 GEOFFREY BOND AWARD

The Geoffrey Bond Award is given for the best project produced by a Geology Honours student at the University of Zimbabwe and this year it was presented to Tinashe Timothy Dinga in the Department of Chemistry and Earth Sciences in 2022. His project entitled "Mtshingwe Fault Zone associated alterations and implications on PGM mineralization of the Main Sulphide Zone."

### 10.2 J.F. WILSON AWARD

The Wilson Award is awarded to the Geology or Geophysics Honours student at Midlands State University who presents the best project report in the year preceding an Annual General Meeting. The recipient for 2022 was Roland Mavesera for his dissertation entitled "Integrating geological mapping, magnetic and induced polarisation techniques in prospecting for gold deposits at Mutimurefu Prison Farm, Masvingo."

### 10.4 MIKE VINYU AWARD

The recipient for the Vinyu Award in 2022 was Mercy Mupamhadzi for her project "Analysis of geological structures around May Claims, Muriel Mine Zimbabwe", presented in 2022 for her National Diploma in Mining Geology at the Zimbabwe School of Mines.

### 10.5 KEITH VIEWING AWARD

The Keith Viewing Award for the best presentation at the November 2022 Summer Symposium was to Scott MacLennan. His presentation was, 'High temperature thermochronology from the Paleoproterozoic eastern Pilbara craton and relevance to the granite-greenstone terranes of the Zimbabwe craton'.

The ceremony ended at 2120hrs.

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CHAIRMAN - KENNEDY MTETWA

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DATE

## Articles and Reports

### **Ben Lightfoot Retrospective**

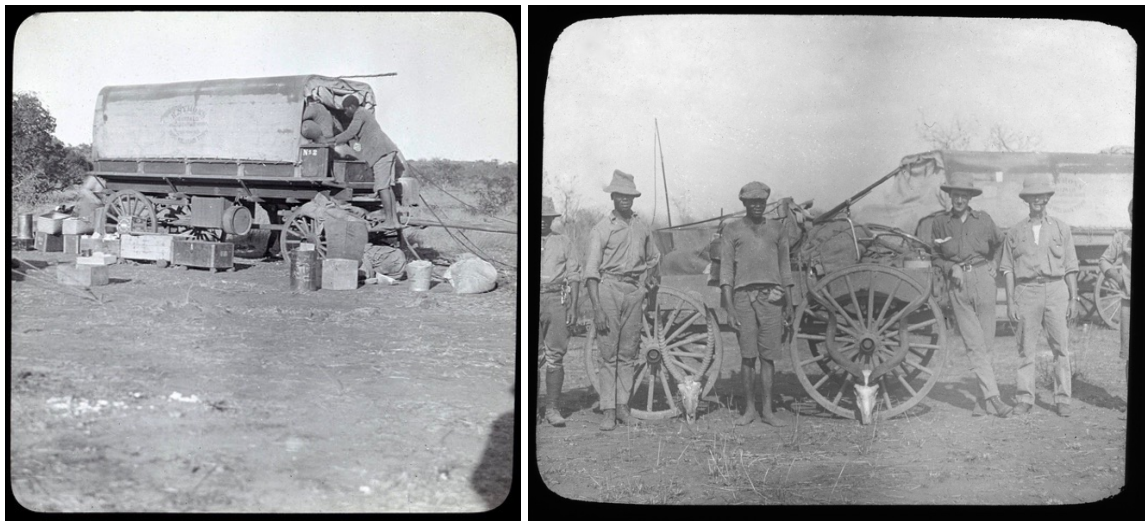
*Compiled by Tim Broderick*



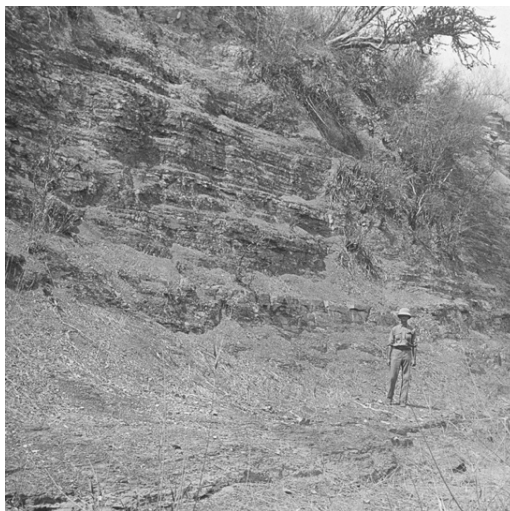
A collection of old photographs was bought on a David Mann Auction in the UK recently and the buyer, wishing to establish the association with Zimbabwe, shared the scanned album anomalously with Rob Burrett (historian and archaeologist) in Bulawayo. Realizing that they had a geological bent, Rob then shared the photos with Peter Fey and the writer in order to try and sort them into events and locations. They represent Ben Lightfoot's photograph collection, our own early geologist in the Geological Survey. There are selections that can be associated with Hwange, early field work and transport, the Great Dyke and early mining in Zimbabwe. The cover piece and those below probably depict the only known images of A.E.V. Zealley who worked with Lightfoot in the original geological mapping around Shurugwi and then Kadoma. Zealley had been described by Alex L. du Toit in his 1946 reminiscences as being "debonair, dark and rather saturnine, whose promising career was cut short [at age] 32 [during the 1918 influenza epidemic]". The photographs further indicate the original field transport used by the Geological Survey in 1912-1914, including the first 'Landrover' buggy. They would have been mule or donkey-drawn, the drivers and 'voor looper' being recorded. Lightfoot later was the first geologist to use motor transport when he traversed the Great Dyke using a Ford 1-ton truck in 1925, later to be replaced by Chevrolet half-tonners.

The picture above is one of Lightfoot with his plane table, the means with an aneroid barometer, used to map the topography upon which to plot observed geology. The ridge behind appears to be that of Escarpment Grit, undoubtedly taken whilst Lightfoot was mapping the Wankie Coalfield in 1912 and then later in 1920. The coal seam, apparently exposed in the bed of the Kamandama River, would appear to be Lightfoot's record of the Wankie Main Seam.

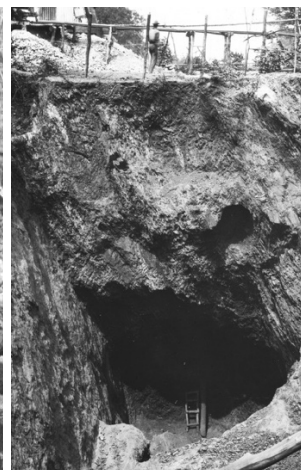




Field work was adventurous 110 years ago.



Wankie Main Seam, Kamandama River, 1912



Has mining in Zimbabwe really changed in a hundred years?





## Obituary

**MAJOR  
B. LIGHTFOOT,**  
M.C., O.B.E., M.A.

by A. E. PHAUP

Ben Lightfoot was a Yorkshireman and proud of it, and like all Yorkshiremen he was forthright, calling a spade a spade. He could not stand affectation, self-conceit or ostentation, especially among those in authority, and as a result was often regarded as a bit of a rebel. Actually he was a friendly, genial and lively minded man with a well-developed dry sense of humour. When telling stories of his adventures and experiences, which was often, he was not modest. These stories were always extremely colourful, funny and not without exaggeration, and frequently at his own expense. He liked meeting and talking to people of all classes and his friendliness was contagious. He tried to help everyone, especially his colleagues in the Geological Survey, though he did not spare their shortcomings.

He was quite an accomplished musician. In the early days he played instruments, following the Yorkshire tradition, in the Bulawayo and Salisbury town bands. Later he played the piano and sang. When radio broadcasting first began in Rhodesia, with an old corrugated iron building opposite the then Geological Survey Office as studio, he was one of the enthusiastic group of amateurs who helped to relieve gramophone record programmes with live performances.

With the mining community he stood in high repute and esteem, and was always a welcome visitor to their mines, both as a man and an advisor. Over the years he visited most of the mines in Rhodesia and rendered an outstanding service to the mining industry, for which he was awarded an O.B.E. in 1946. Unfortunately he did not like writing mine reports and has left an unjustifiably poor record of his achievements in this field. In his work as a field-geologist he was a pioneer, working under difficulties and conditions that are hard to appreciate today. In it he showed remarkable enthusiasm and initiative, and his mapping was both accurate and meticulous. His account of the Wankie Coal-field which he mapped in 1912 and revised in 1920, is an excellent piece of work. In a few months he examined the Great Dyke from end to end, almost 400 miles, and produced a pioneer account of this unique geological feature of Rhodesia. He enjoyed attending geological and mining congresses and meetings and his somewhat unorthodox accounts of them make amusing and enter-

taining reading. He considered himself a practical, rather than an academic geologist, but in fact, he was a good sound, all-round geologist with a liking and flair for mine geology.

Ben Lightfoot was born at Bingley on January 30, 1888, and went to the neighbouring Bradford Grammar School. In 1906 he entered Peterhouse College, Cambridge, and graduated as B.A. with Honours in Geology, winning the Harkness Prize in 1909. Later he was awarded the degree of M.A. He joined the Geological Survey of Great Britain and from the Edinburgh Office he mapped parts of Mull and the Lanarkshire Coal-field.

H. B. Maufe founded the Southern Rhodesia Geological Survey in Bulawayo in September, 1909, and recruited A. E. V. Zealley on May 1, and B. Lightfoot on May 26, 1911, as geologists. Lightfoot resigned on September 9, 1914, to take up the Sorby Fellowship at the University of Leeds where he was to do five years research work on the Yorkshire Coal-field, but soon after arriving in England he joined the Topographical Section of the General Staff. He served right through the 1914-18 War rising to the rank of Major in the Royal Engineers. He was awarded the MC in 1915 and was twice mentioned in dispatches. After the War he went to India on a coal prospecting expedition for Messrs. Perin and Marshall.

In 1921 Maufe invited him to re-join the Southern Rhodesian Geological Survey which he did on September 5, 1921. On the retirement of H. B. Maufe he was appointed Director on August 23, 1934, and held this post through the difficult war years until he, in turn, retired on June 12, 1946. He returned to England and joined his family at Maidenhead, Berkshire. After a much needed rest he accepted, in 1947, an appointment with the War Office in London. He stayed there for several years before really retiring to Barton-on-Sea in Hampshire where he died at the age of 78 years on November 18, 1966. He is survived by his wife Elsie whom he married in Yorkshire in July, 1921, and two daughters.

Ben Lightfoot was elected a Fellow of the Geological Society, London, in 1912 and was honoured by the Society with the Proceeds of the Lyell Geological Fund in 1928 "in recognition of the value of his researches on the Geology of Southern Rhodesia." He became an Associate of the Institution of Mining and Metallurgy in 1932 and a Member in 1949. For many years he took an active part in the affairs of the Southern Rhodesia Branch of the Institute. He joined the Geological Society of South Africa in 1923, was a Member of Council from 1936 to 1946 and a Vice-President from 1937 to 1942. In 1939 he was President, and in 1942 the Society awarded him its highest honour, the Draper Medal.

When Lightfoot arrived in Bulawayo in 1911 conditions were very difficult and the country was just recovering from the effects of the fighting in South Africa. There were very few earth roads and most places were reached by mere tracks. Transport was by mule waggon, which was slow and troublesome, and the maps available showed only farm beacons and names, and a little inaccurate topography. The geology of the country was known in very broad outline while the complex metamorphic and structural geology of the very ancient Precambrian gold belts was quite unknown. In June, 1911, Maufe, Zealley and Lightfoot set out to map by plane table the country around Selukwe. They found the geology very difficult and largely outside their experience, while the mountainous country handicapped their movements. With the advent of the wet season in November, they returned to Bulawayo and Lightfoot proceeded to examine and report on part of the Lower Sabi Coal-field. The dry season of 1912 he spent mapping the Wankie Coal-field. Although the colliery had been producing since 1904 the area was still in a wild, primitive state. The following year he was diverted to map the gold-mining area around Gatooma from the Golden Valley Mine in the north to the Umsweswe River in the south. Part of 1914 was spent mapping the Karroo and Basement-schists of the Shiloh area (Queens Mine) north of Bulawayo.

After his return to Rhodesia in 1921 he did geological mapping and reconnaissance around Mount Darwin. From February until November, 1924, he was in London at the Rhodesian Section of the British Empire Exhibition, Wembley.

Platinoids were discovered in the Bushveld Igneous Complex near Lydenburg in 1924 and in the similar rocks of the Great Dyke. Lightfoot visited the Lydenburg area early in 1925 and began a rapid mapping of the Great Dyke from the Hunyani River southwards to the Belingwe area. The following year he completed the mapping of its northern and southern ends. Although the Great Dyke had been vaguely known for over 60 years this was the first real study of it.

During 1925 he used motor transport in the field for the first time, and found it so much more advantageous than mule waggon or cart that in 1926 the Geological Survey was fully equipped with motor vehicles

A new geological map of Rhodesia was being prepared and to collect information from the more remote area, Lightfoot did a great deal of reconnaissance in 1926-27. He visited the Nuanetsi Ranch area, the country between Gwanda and the Limpopo River, the gold belts around Fort Victoria and Mazoe, the country north and east of Mount Darwin, the Ngondoma-Gokwe area and parts of the Charter and Buhera Districts where he saw, but did not recognize as such, the Dorowa and Shawa carbonatite complexes.

In August, 1927 he attended the Empire Mining and Metallurgical Congress in Ottawa and visited many of the Canadian mines. In the years that followed he spent most of his time visiting and assisting mines all over Rhodesia. He returned to the Wankie Coal-field in 1928 and wrote a new account of it. He also assisted in the preparatory work for the International Geological Congress which visited Rhodesia in 1929. For it he acted as a guide on several of the excursions. The following year the Empire Mining and Metallurgical Congress visited Rhodesia, and again he took an important part in their activities and excursions. In 1932 he had a break from mine work and mapped 200 square miles of country south of Bulawayo.

He was appointed Director of the Geological Survey in 1934, and in spite of his administrative duties, managed to visit several mines each year. He also carried out reconnaissance surveys in the south-east corner of Rhodesia (1938), the Mphoengs area (1939), the Mwanesi Hills (1940) and the Ghoko and Longwe ranges (1940). For his Presidential Address to the Geological Society of South Africa in March, 1940, he chose the subject of the Great Dyke. This address stimulated great interest and resulted in geophysical studies to determine its downward shape and petrological studies of its rocks.

The latter part of his period as Director from 1939 to 1946 was one of great strain, worry and overwork. The staff and much of the equipment left in 1939 to take part in the war, and in October, 1940, the Survey moved completely to a new building which he helped to design. This building has been named in his honour, the Lightfoot Wing of the Maufe Building. During this strenuous period he threw himself whole-heartedly into assisting the mining industry which was also suffering from shortages of men and supplies. Much of his time was taken up by work connected with the Royalty Review Committee. At the end of the War, in 1945, the staff began to return and there were the problems of reorganizing the Survey and equipping it again with everything in short supply. The Director also had to take a major part in the huge Government Ex-Servicemen's Rehabilitation Scheme for the mining industry. The strain of the war years began to tell. He was not well, became despondent and quite unlike his normal self. He was allowed to retire early and left for England in June, 1946, to join his wife and family who had been there since 1939. In London he worked as a consulting geologist to the War Office for several years.

Originally for a Christmas card sent to his Smallworker friends many years ago, he summed up prospecting in Rhodesia in the following verse:

*"After miles and miles of granite Lies a tiny patch of schist  
Where the poor Rhodesian miner Digs for what the Ancients missed."*

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 (b) Notes on mining in the Victoria District. *S. Rhod. geol. Surv.* Short Report. No. 28.
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The obituary to Major Ben Lightfoot is reproduced through the expressed permission of the Geological Society of South Africa, with thanks. It provides a concise record of Lightfoot's life and especially his contribution to the understanding of geology in Zimbabwe as we know it. The original publication is referenced:

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Coming into town from the field – a rare occasion!

## African Geotourism – Part 2

### 10<sup>th</sup> Global Geoparks Network Conference, Marrakech

*Patrick James*

Another 24 hours of flying from Harare to Doha (via Lusaka) and then on to Marrakech (via Casablanca) led me to the main reason for my African adventure being the 10<sup>th</sup> International Conference of UNESCO Global Geoparks (UGGp) from 4<sup>th</sup> to 11<sup>th</sup> September. And what an unexpected adventure this proved to be! This was my sixth such UGG International conference following Belfast in 2004, Langkawi 2007, Osnabrook 2008 and the Italian Dolomites in 2018 and including the 9<sup>th</sup>, unfortunately zoom-only, UGGp conference in Korea (Jeju Island) in 2020. I soon met up with our small Australian delegation, which included Dr Young Ng (Chair of NGS WG6) and Mark Williams (Chair of NGS WG1–Digital) as we looked forward to this exciting event.

More than 1000 participants came together for the opening ceremony at the 10<sup>th</sup> GGN Conference in Marrakech (<https://www.mgounggn2023.com/en>) where 3 days of intensive sessions and almost 500 presentations were offered within the grand “Complex des Habous” Conference Centre. This was a magnificent venue with tall arched columns and mosaic floors and walls including more than a dozen lecture halls and meeting rooms.



*The magnificent Marrakech Habous Conference Centre and its adjacent giant dining marquee - before the earthquake. (The conference venue moved into this marquee after the earthquake).*

It was wonderful to meet again colleagues from many previous Geopark conferences and visits – mainly in Europe, China and SE Asia. But also, to meet the many new excited groups of more recently established Geopark staff from the UGGp numbers which have steadily grown and almost doubled in the last 10 years, to the current 195 UGGp's in 48 countries on all continents (since course Waitaki Whitestone UGG was established recently in New Zealand).

The first two days of presentations were excellent, but with 9 parallel sessions and 8-10 15-minute talks per session, I could only skim the surface of the almost 500 talks which were included in the program. Sessions included topics on Geodiversity and Biodiversity Management, Geoheritage and Cultural Heritage, Geoconservation, Public Education, Sustainable Development, Climate Change and Natural Disaster Management, plus Cooperation between Geoparks and Aspiring Geoparks. Interestingly, with such a large, full and complex program, the papers were ordered within each session alphabetically by author – a system I had not come across before, but in fact one which worked splendidly. In hindsight of course due to my surname, I was able to make my own presentation, but unfortunately as we shall see, Dr Young and Mark Williams were listed on the last day of proceedings, which of course did not eventuate.



Thus unlike previous similar conferences, where I would dip in and out of different sessions, this arrangement led me to sit through complete sessions with a “cornucopia” of mostly excellent talks and with some outstanding examples demonstrating the great range and variety of topics, the infectious excitement and enthusiasm of staff presenting these activities and the high degree of collaboration and cooperation within and between their Geoparks from most countries and continents around the world.

There were too many highlights to report fully or adequately but a few shining examples (for abstracts, see <https://www.mgounggn2023.com/en/abstract>) included the following:

Joao Alves presented on behalf of the five Geoparks from Portugal (Terras de Cavaleiros, Naturtejo, Azores, Estrela and Arouca UGGp's), who have developed a very useful “Code of conduct and good Practices” (e.g., keep to trails, appropriate footwear, respect all signage etc.) for their geoparks which included the sensational “Paiva Walkways” geotrail in Arouca UGGp (see Alexander Paz' abstract).

Azmil Bukhariand from the sensational 99 Island Langkawi UGGp explained their comprehensive co-management model, which involved a collaborative approach with local communities, government agencies, and NGOs involved – to create a sense of ownership and responsibility among community and to promote sustainable (geo)tourism.



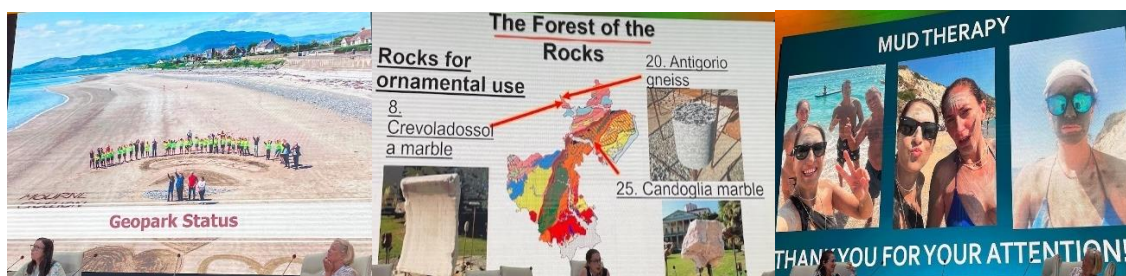
*UGGP management strategies and Geofood examples from three UGGp's*

Two following and most interesting and inspirational talks emphasized the importance of (geo)food tourism in UGGp's, with Anna Bergengren (the only Swedish contributor at the conference), describing “the Flavours of the Table Mountain Landscape” eg. how to explain/interpret what limestones taste like? and what local ingredients were sourced from their unique local landscape. Meanwhile Valerija Bozic (Idrija UGG) described creating the “Idrija Breakfast” with boxed and UGGp-branded local delicacies (dairy, meat honey tea etc.) highlighting local producers designed to promote the “connection between local food and geological heritage”.

More traditional geointerpretation included, 3-D underground mapping and laser scanning of old mine galleries in Greece being developed by Isidoros Kampolis (Lavriotiki UGGp). Christophe Lansigau (Massif de Bauges UGGp) demonstrated a brilliant new video with mountain building and plate tectonic reconstructions, which later won best prize of the UGGp Film Festival. Other talks emphasized the role of geoparks in targeting children (Konstantina Bentana - Lesvos UGGp), and working closely with local schools in Finland (Mikko Kiuttu - Rokua UGGp).

There were many more highlights covering topics of Climate Change, Geoeducation, and inspirational presentations from the most excited participants coming from UGGp's which had just received their UNESCO Global Geopark status, (eg. Michelle Boyle - Mourne Gullion UGGp, Lisa Heinz - Waitaki Whitestone UGGp) and others that were aspiring UGGp status (eg. Greg Taylor – Trans Manche Aspiring UGGp and Michael Hegarty Joyce Country aspiring Geoparkproject, Ireland).





*Mourne geopark staff celebrated their UGGp status on a local beach; Sesia UGGp highlight the “Forest of Rocks” geointerpretive sculpture whilst Nicolina Bourli described “mud therapy” as a tool for sustainable geotourism in the Kefalonia UGGp, Greece.*

And of course, the large Indonesian delegation (who I met at the 4<sup>th</sup> Geofestival in Lombok the previous month) were most enthusiastic about their now 10 UGGp’s and many more aspiring geopark projects.

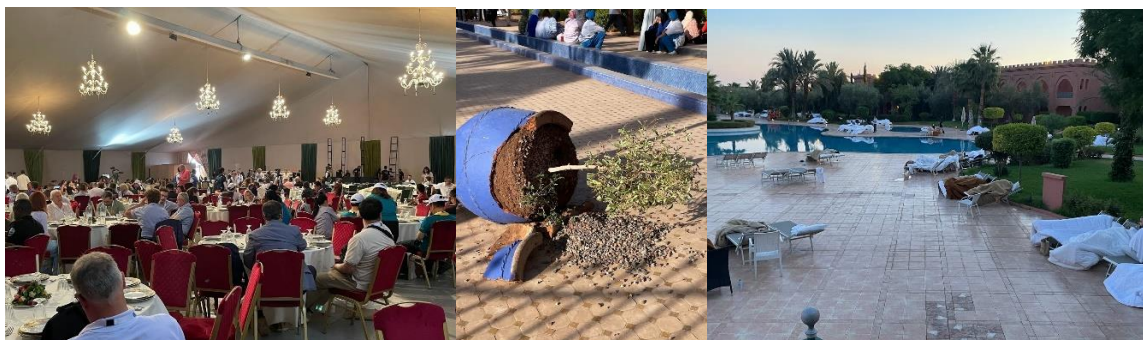
For me the most important messages that came across about UGGp’s were the obvious enthusiasm of participants and their great camaraderie – I recall that typically less than half of the participants have any significant (ie. undergraduate) geological training. Also, the Global, Regional and local Networks to which they all belong provide fabulous cooperative and collaborative support for each UGGp. These include the many GGN events that include World Geodiversity Day every October, Geopark’s Weeks at the EGN, many regular conferences, meetings and training workshops (Lesvos UGGp), grant-funded activities, collaboration with other related agencies such as museums and universities, and most importantly the sharing of ideas.

Thus after 2 days of intense talks (including my own) and discussions, many participants joined the organized tour of the “old Marrakech” city centre and market on Friday afternoon 8<sup>th</sup> September. It was a wonderful bustling Moroccan, Arabic, French mix of cultures, languages, architecture, smells, goods, history, colour etc. We all returned to our many hotels.



*GGN field trip to the central Marrakech Old City and Market Square – approximately 6 hours later this whole area was devastated by the Marrakech earthquake.*

And, after an exhausting couple of days, I dozed in my hotel room, watched the French team surprisingly defeat the All Blacks in the World Cup Rugby and fell into a deep sleep only to be awoken about 30 minutes later by the violent swaying of not just the curtains, but of the walls behind them. This was my first experience of a magnitude 7 quake, epicentred only 70km south of the city. Our hotel was not severely damaged and we were evacuated very quickly, but I was surprised to see so much plaster debris on the floors. Whilst some participants in central Marrakech had to abandon their hotels, most people in ours brought out beds to sleep around the swimming pool area.



Next morning, supposedly Day 3 of presentations, we all returned to the Haboush to find all buildings closed and where there was general shock and chaos. Eventually we were all allowed into the enormous dining marquee where the UGG organizing and executive committees were magnificent and explained to us all decisions that had been made carefully but quickly. The Lecture halls were closed (with some considerable but mostly superficial damage), so all further talks were cancelled. The upcoming 2-day prepaid field trips to the M’Goun Geopark in the Anti-Atlas mountains were obviously cancelled – and all monies were donated to the earthquake relief effort, where eventually more than 3000 deaths had occurred near the epicentre.

However, with activity able to continue in the marquee all final speeches, new UGGp Certification Presentations and revalidations of new UGGp’s went ahead as did the awards of the 2<sup>nd</sup> Geopark Field Festival – Massif de Bauges won with Christoffe Lansigau. There was much discussion and sharing of experiences between UGGp groups and we had the ability to visit and investigate the many booths at the Conference Exhibition, which allowed for much needed and valued engagement.



*The many booths of the Conference Exhibition and Thailand’s booth*

We all left Marrakech, saddened by the disruption of the last day of the conference and our inability to join the planned excursion, but also very concerned for the effect on this beautiful country. Hotels and flights were rearranged and, other than a much busier than usual airport, there was general agreement that the conference had successfully achieved its aims of continuing to grow and develop the Global Geopark movement.

### **African Geotourism – Part 3 – The Ngorongoro UGGp, Tanzania**

To be continued and completed, describes a following (post Marrakech) 10-day excursion to the Ngorongoro UGGp in Tanzania and some of the highlights and challenges of Geotourism in Africa.

# News



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

*Dr Maideyi Meck with a contribution from Fadzanai Bornwell Mupaya*

### **Department in General**

- The Department is up and running.
- **The thin-section making facility is also now fully operational.** For those who need the service, please feel free to contact either Ms Hama or Mr Mupambo.
- The Mineral Resources Centre is still to be launched.
- The Department, through the University of Zimbabwe, is in the process of establishing a National Centre for Groundwater Research and Training. The Government of Zimbabwe received a grant to carry out groundwater research under the Adaptation Fund project on "Strengthening Local Communities' Adaptive Capacity and Resilience to Climate Change Through Sustainable Groundwater Exploitation in Zimbabwe". The implementing entity is the United Nations Education, Scientific and Cultural Organisation (UNESCO) and the executing entity is the Ministry of Lands, Agriculture, Water and Rural Resettlement. The Department will host the centre.

### **Teaching in the Department**

- The old Geology programme is expected to be phased out by year-end. A few repeating students are winding up their degrees under this programme. The new degree is *Geological Sciences* under the Department of Chemistry and Earth Sciences.
- Customized courses for banks and mining organizations are on-going. 16 bank managers completed a short course on mining project appraisal and minerals identification in December 2023, a move meant to promote their understanding of mining industry document submissions to their institutions.
- The Pan-African Minerals University of Science and Technology (PAMUST) taught Masters Degree students are now due for their field courses. Thanks are due to the mining industry for supporting us.
- Russian lecturers visited the university and taught our MSc students for a week.

### **Staff update**

Ms **Liane Lisa Mugariri** has joined the Department. She specialized in engineering geology in Algeria.

**Research in Geology**

Research projects by students have shifted from the traditional gold and base metals emphasis to those associated with green and energy minerals and hydrogeology. Some of the current ongoing projects in the department where industry partners are welcome to join are:

1. Genesis and provenance of the diamondiferous sediments at the Chimanimani Deposits: implications for exploration in the Umkondo Basin, Zimbabwe.
2. Re-appraisal of the Umkondo Basin, southeast of the Zimbabwe Craton: Implications relating to landslides initiation.
3. An assessment of geothermal wellhead power generation potential and the nexus with local seismic activity and geotechnical setting.
4. Coal appraisal in the Zambezi Valley.
5. Critical raw materials appraisal.

**Staff Contact details as of October 2023:**

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Ms S. Gorogodo	Messenger/Cleaner		0772390026		15029





## The Mennell Geological Society

Fadzanayi Mupaya (Patron)

[fbmupaya@gmail.com](mailto:fbmupaya@gmail.com)

The year 2023 ended well. Staff in the Chemistry & Earth Sciences Department worked hard to mark our December exam papers over the holidays and by early January the results were submitted to the Faculty of Science. It is pleasing to note that more than 95% of students passed their exams. 14 students did not manage to complete their project assignments, but more than 80% passed. Most students worked on gold projects but quite a number of lithium projects were presented due to the heightened interest in the commodity over the past year. We thank the mining industry as more than 25 students in our Part 3 class got placements for industrial attachment with only a few remaining unattached.

Geologists from the department are working with their students who collectively have been improving our understanding of lithium mineralization in the country. This January, most of the modules for the Pan African Minerals Institute will be completed so that students may start their major project work, hopefully researching within some important gaps relating to our mining industry.

The Mennell Geological Society continues to strive towards achieving its goals and objectives in order to nurture skills development through the participation in field trips and educational workshops. In the final quarter of 2023, the Society carried out their 3<sup>rd</sup> successful field trip of the year by visiting the Pope pegmatites in Chishawasha. The objectives of this field excursion were: to produce a detailed surface geological map of the Pope pegmatites at a scale of 1:10,000 showing contacts, faults, joints as well as the different lithologies in the area; to identify various lithium-bearing minerals in pegmatite; and to perfect our sample collection skills. Currently, the Society is organizing a field trip to Mutorashanga and surrounding areas to take place in March. The trip aims at appreciating the economic geology of the region, which involves visiting chrome deposits, eluvial chrome processing plants and the Ethel asbestos pit. The second trip for this calendar year is scheduled to take place in June and will target the Mutare Greenstone Belt.

In order to further our cause and to increase participation from students, the Mennell Geological Society would like to encourage well-wishers willing to sponsor field trips and workshops. Feel free to contact the Patron or our chairperson from the details provided in the executive list. Those who are working in or near proposed field areas may be happy to assist as field guides on these trips and your participation will be appreciated.

**The Mennell Geological Society Executive – February 2023**

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FACULTY OF ENGINEERING & GEOSCIENCES  
ZVISHAVANE CAMPUS

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

As the MSU Department of Geosciences finalises a new format for future newsletter contributions, this instalment presents a general overview of the department. We expect that the next MSU contribution to the newsletter would be in the new format, with the approval of the departmental chairperson.

**Programmes**

The Department of Geosciences currently offers the following programmes

1. Bachelor of Science Honours Degree in Exploration Geophysics
2. Bachelor of Science Honours Degree Applied Geology
3. Bachelor of Science Special Honours Degree in Applied Geology
4. Master of Philosophy Degree in Exploration Geophysics
5. Master of Philosophy Degree in Applied Geology



The Special Honours Degree in Applied Geology is being offered to industry personnel who hold diplomas or 3-year degrees in geology. The Master of Philosophy degrees are only offered where the department can secure sufficient supervisory and equipment requirements internally or in collaboration with external partners.

**Staffing**

The Department of Geosciences currently has 12 lecturers, 4 teaching assistants and 4 technicians, constituting more than 90% of the staffing establishment.

**Students**

With a maximum enrolment figure of 30 students for each undergraduate programme, the department hosts a sizable number of students with a diversity of talents and interests. We have several vibrant student associations with one of them, the MSU Students Geological Society, affiliated to the Zimbabwe Geological Society.

**Conclusion**

It is expected that the proposed new format for newsletter contributions will allow for more comprehensive coverage with respect to departmental activities.

Contributed by Antony Mamuse

[mamusea@staff.msu.ac.zw](mailto:mamusea@staff.msu.ac.zw)

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**ZIMBABWE SCHOOL OF MINES**

*Serving the SADC mining industry*

We at the Zimbabwe School of Mines are excited to share our yearly vision and goals with our valued stakeholders and with the wider community as the year 2024 begins. ZSM is committed to delivering high-quality services and solutions that meet client needs and expectations for 2024 and beyond. The Geology Department achieved a 78% pass-rate for 2022 and the results for 2023 are out whilst analysis of the pass-mark is being assessed. Once again, thank you to the our Industry support over the years in helping to mentor our ZSM students.

The department started the year with three courses: the Diploma in Gemmology, a Certificate in Gemstone Cutting and Polishing, and the Diploma in Mining Geology for first and third-year students). We in the department overwhelmingly thank industry hosts for attaching 60 of our students in 2023. We are now seeking industry support to provide internship opportunities for 61 second-year geo-technicians in 2024, and to facilitate study and field visits during the year.

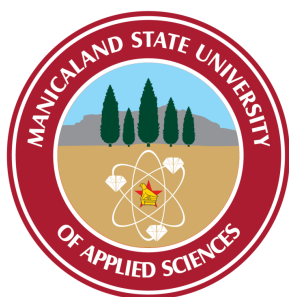
The department has planned two field trips for each course in the first semester. The first-year students will learn field mapping skills in Umguza for three days and then at a venue in the mid-Zambezi basin for one week, where they will also be given insights to structural geology, mineralogy and petrology. The third-year students will visit two mines and learn

about mine valuation and best practices. The cutting and polishing and the Gemmology classes will visit a diamond mine.

The Geology department is establishing a core-shed project and we need help. If anyone has any intact core samples that are past their relevance, please consider donating them to us.

ZSM is going to be reviewing its curricula during the first quarter of the year. Industry involvement and participation is important to make the courses more relevant to the needs of industry. Some of the topics the department is interested in are 'How to use and apply new geological field instruments and how to adapt artificial intelligence (AI) in our field'. If you have any suggestions or feedback, please email [fndebele@zsm.co.zw](mailto:fndebele@zsm.co.zw) or WhatsApp her on 0716219376.

*Submitted by Fyrence Ndebele*



## MANICALAND STATE UNIVERSITY OF APPLIED SCIENCES

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Department of Mining and Processing Engineering

*Research.*

*Innovation.*

*Sustainable Development.*



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

*Are there any aspiring correspondents from Manicaland State and NUST willing to participate in news gathering from their Departments? We would be grateful to have you on board. Enquiries to Shephard Mabhanga at UZ - [smabhanga@gmail.com](mailto:smabhanga@gmail.com)*



## Geological Survey Department

*Ernest T. Mugandani*  
[etmugandani@gmail.com](mailto:etmugandani@gmail.com)

- The Zimbabwe Geological Survey staff congratulates the duo, **Brian Muteta** and **Mangwiro Sibanda**, for being awarded 1<sup>st</sup> position in the Japan Organisation for Metals and Energy Security (JOGMEC) and Southern Africa Development Community (SADC) remote sensing competitions held in Gaborone, Botswana from 27<sup>th</sup> November to 1<sup>st</sup> December 2023. Fourteen SADC countries participated in the remote sensing week, which included a workshop and a seminar.



Congratulations to **Brian Muteta** and **Mangwiro Sibanda** for scooping the prestigious trophy during the JOGMEC & SADC Remote Sensing week in Gaborone, Botswana - 27<sup>th</sup> Nov - 1<sup>st</sup> Dec 2023.

- Ms Esnath Mupomhori** and **Ms Tatenda Tavarera**, geologist and geological technician also participated in the Workshop and Seminar on Remote Sensing in Botswana during the same period 27<sup>th</sup> November to 1<sup>st</sup> December 2023.
- Forbes Mugumbate**, the Director, gave a pre-recorded presentation on the activities of JOGMEC in Zimbabwe to the JOGMEC seminar.

- Prior to the JOGMEC Competition and Seminar, **Mangwiro** attended the MineEntra exhibitions held in Bulawayo from 1<sup>st</sup> to 3<sup>rd</sup> November 2023.
  - **Ernest Mugandani**, Deputy Director, attended the Organisation of African Geological Surveys (OAGS) Annual General Assembly and Conference held in Luanda, Angola from 15<sup>th</sup> to 17<sup>th</sup> November 2023. Twenty-seven (27) African countries were represented at the General Assembly.
  - Prior to this, **Forbes and Ernest** had also attended the Ministry of Mines and Mining Development Strategic Workshop to review the 2023 performance and to plan for 2024. The workshop was held at Clevers Resort Hotel in Masvingo from 23<sup>rd</sup> to 27<sup>th</sup> October 2023.
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## Mining News and Commentary

*Forbes Mugumbate*

[fmugumbate@gmail.com](mailto:fmugumbate@gmail.com)

### New Mines' Minister Appointed



Hon. Zhemu Soda (MP)

Following his party's victory in the August 2023 General Elections, President E.D. Mnangagwa replaced Winston Chitando with Zhemu Soda as Minister of Mines and Mining Development. Honourable Soda is member of parliament for Muzarabani North. He is said to be the holder of a Bachelor's degree in Commerce from the Zimbabwe Open University, and an MBA. Polite Kambamira was retained as the Deputy Minister.

### Small-scale mining accidents

Barely a month after his inauguration, Minister Soda got the taste of the nature of small-scale mining in Zimbabwe when nine miners died, four remained missing and 21 survived following the collapse of a mine shaft at the Bay Horse Mine north of Chegutu. The Minister immediately made the startling [and honest] revelation that the tragedy was a result of haphazard extraction methods under the supervision of unqualified personnel. This is in fact what is happening at most mines owned [and invaded] by artisanal miners

that are touted as contributing about 60% of the national gold output. This goes to show how vulnerable the country's gold sector is.

As if to consolidate the Minister's statement, the world breathed a sigh of relief when all 15 artisanal miners who had been trapped in an underground shaft following a ground collapse at Redwing Mine in Penhalonga were rescued with no injuries.

The Ministry has reacted to these accidents by rolling out safety and health awareness and training campaigns in all provinces between 5<sup>th</sup> February and 1<sup>st</sup> March 2024. The awareness campaigns will also cover such issues as the formalisation of mining operations.

These campaigns will be complimented by an increase in the routine work of mine's inspectors, and implementation of 'Responsible Mining Initiatives' launched by President Mnangagwa in May 2023. This Initiative involves occasional visits to mining areas by inter-ministerial teams to enforce all compliances including health, safety, labour, and taxation.

### **Exclusive Prospecting Orders (EPOs)**

EPOs, which basically can be described as defined areas issued to companies in order to search for minerals over a period of time, has been topical in recent years with both negative and positive opinions being expressed about the system. What has triggered this is the apparent reluctance by government to process EPO applications, which has resulted in virtually all areas of the country being covered by the pending applications. While the EPO applicants cannot commence exploration, other players such as small-scale miners cannot access the areas. This has led to some stakeholders, including some geologists, believing that the EPO system is bad. This writer made a presentation at the Summer Symposium at the University of Zimbabwe in September 2023 to lead discussions on the subject.

Currently there are only 38 current EPOs, and over 200 applications awaiting processing and subsequent issue. Some applications have taken over 5 years pending adjudication. This obviously does not give a good picture of the country's mining jurisdiction. No wonder Zimbabwe has, for the past three years, been at the bottom of the Fraser Institute ranking of mining jurisdictions despite the our favourable geological real estate.

The main worry about the moribund state of exploration in Zimbabwe is that there are only five large gold-producing mines, some of which are nearing the end of their life. There are no medium-scale mines operating. Closure of one of the five large mines, for whatever reason, will be disastrous, as there are no mines in the middle tier to replace them. There are also no new discoveries since there is no regional exploration.

### **Lithium**

Inspired by the ever-rising prices of lithium, it's great geological potential and local discoveries, Zimbabwe declared lithium a strategic mineral through the Finance Act. This places some restrictions as to accessing and exploiting the commodity. For instance, one will have to invest money in excess of US\$100 million to exploit a strategic mineral.

How many lithium deposits in Zimbabwe could be developed through an investment of less than US\$5 million? The provision gives room for those arguing that they have smaller deposits in order to obtain an exception from the Minister. This literally means that every prospective miner of lithium will have to get the exemption. This will obviously make the management of that process very cumbersome.

Meanwhile, Zimbabwe has given lithium miners up to March 2024 to submit plans for the local production of battery-grade lithium in a bid for the country to benefit from the growing demand for the mineral. Any lithium value addition process that does not result in the production of lithium carbonate will not be regarded as beneficiation. Lithium concentrates will be banned.

And now that lithium and lithium product prices are plunging? Let us wait and see!

Kuvimba Mining House has already suspended operations at its 200 million tonne lithium deposit at Sandawana, and has retrenched 300 workers!

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## MINING NEWS

gleaned from <https://www.mining.com/>  
by Kennedy Mtetwa

### **Zimbabwe lithium export earnings treble as projects take off**

[Reuters](#) | November 1, 2023 | 1:24 pm [Battery Metals](#) [Intelligence](#) [Africa](#) [Lithium](#)

Zimbabwe is one of the top 10 lithium producers but currently produces only a fraction of the worldwide total. However, the country earned \$209 million from lithium exports in the first nine months of 2023, nearly treble the previous year's earnings, Mines Minister Zhemu Soda said, as Chinese-driven mining and processing projects take off.

Zimbabwe, Africa's top lithium producer, hopes that demand for the mineral, which is key for renewable energy storage, will help revive its ailing economy. Lithium is set to become Zimbabwe's third biggest mineral export after gold and platinum group metals, which registered \$2.46 billion and \$2.27 billion in export receipts in 2022. "The revenue generated from the export of lithium grew from \$1.8 million in 2018 to \$70 million in 2022. By September 2023, a total of \$209 million had been realized from lithium exports," Soda said at a mining conference in Bulawayo.

Chinese firms, including Zhejiang Huayou Cobalt, Sinomine Resource Group, Chengxin Lithium Group, Yahua Group and Canmax Technologies, have spent more than \$1 billion over the past two years to acquire and develop lithium projects in Zimbabwe. Most of these companies have built processing plants that were commissioned in 2023 and are shipping lithium concentrates to China for further processing. Zimbabwe's government banned raw lithium exports in 2022, as it seeks to get more value from the mineral.



Other major producers are expected to start operations in Zimbabwe in 2024 as the country seeks to expand output, Soda said.

Lithium prices in China, the top consumer of the battery metal, have been on a downtrend for much of this year.

*(By Nyasha Chingono; Editing by Nelson Banya and Mark Potter)*

### **China to invest \$2.8 billion in Zimbabwe in lithium, energy**

[Bloomberg News](#) | November 1, 2023 | 4:16 am [Battery Metals](#) [Energy](#) [Africa](#) [China](#) [Lithium](#)

China Mining Resources bought Bikita Minerals in 2022 and has spent \$300 million to expand petalite, a lithium aluminum phyllosilicate mineral, and spodumene capacity. Chinese companies were awarded licenses in the third quarter that could see \$2.79 billion of investment flow into Zimbabwe, mostly in mining and energy as the government pushes to develop some of Africa's biggest [hard-rock] lithium deposits and end power outages.

The planned investment, a tenfold increase on the \$271 million pledged in the same period last year, dwarfs that of its closest rival, the United Arab Emirates, which aim to invest \$498.5 million. The total value of investment licenses awarded was \$3.41 billion. Chinese applications "were the most by number and investment value with mining being their most preferred sector followed by the manufacturing sector," the Zimbabwe Development Agency, the state-owned unit tasked with securing investment, said in a report on Wednesday. China accounted for more than two thirds of the 180 applications.

Chinese companies have been buying lithium mines, which supply a key component for the batteries used in electric vehicles. They are also involved in revamping and building power plants in the country. Of the planned investment \$2.8 billion is slated for energy projects and \$411 million for mining. One China-backed project is a \$2.3 billion planned energy and mining complex that will process minerals in Mapinga while another is a 500 megawatt solar energy project.

*(By Ray Ndlovu and Godfrey Marawanyika)*

### **Zimbabwe orders lithium miners to submit refinery plans by March 2024**

[Reuters](#) | November 30, 2023 | 9:52 am [Battery Metals](#) [Africa](#) [Lithium](#)

Zimbabwe has given lithium miners up to March 2024 to submit plans for the local production of battery-grade lithium in a bid to benefit from growing demand for the clean energy mineral, Finance Minister Mthuli Ncube said. Africa's top lithium producer banned the export of lithium ore in 2022 and has now imposed a 5% export tax on concentrates.

Lithium, used in electric vehicle batteries and to store renewable energy, has become foreign-currency starved Zimbabwe's third biggest mineral export after platinum group metals (PGM) and gold, earning \$209 million in the first nine months of 2023. Presenting the 2024 national budget, Ncube said the government does not regard the current production of concentrates by miners in the country as beneficiation, a process in which raw minerals are improved to add value.

“Any lithium value addition process that does not result in the production of lithium carbonate is not regarded as beneficiation. Lithium producing companies should submit their beneficiation plans no later than 31 March 2024,” Ncube said. He added that no new licences would be granted to prospective lithium miners without approved beneficiation plans.

Zimbabwe’s hard-rock lithium reserves, some of the world’s biggest, have attracted over \$1 billion of investment from Chinese miners including Zhejiang Huayou Cobalt, Sinomine Resource Group, Chengxin Lithium Group, Yahua Group and Canmax Technologies. Sinomine, which recently commissioned a \$300 million spodumene concentrator at its Bikita mine in southern Zimbabwe, said on Thursday it had started feasibility studies on producing battery-grade lithium in the country. Its peer Huayou, which bought Arcadia mine just outside Harare in 2022 and built a concentrator, which started production earlier this year, has said it would explore local production of lithium sulphate “only when the construction and economic conditions are right”. Huayou has previously said Zimbabwe lacks reliable renewable energy, natural gas, sulphuric acid and other key inputs needed to produce battery-grade lithium.

Zimbabwe has also struggled for years to get PGM miners to refine the metals locally. The PGM miners, who ship concentrates to South African refineries, say Zimbabwe does not generate enough electricity or minerals to support the huge capital outlay for building refineries.

*(By Nelson Banya; Editing by Richard Chang)*

### **MetalsGrove shares jump on Zimbabwe lithium assets acquisition**

[Cecilia Jamasmie](#) | December 11, 2023 | 6:13 am

[Battery Metals](#) [Exploration](#) [Markets](#) [News](#) [Africa](#) [Australia](#) [Lithium](#)

Shares in MetalsGrove Mining (ASX: MGA) jumped 16% on Monday after the diversified Australian explorer said it had entered into a strategic agreement to buy six contiguous and highly prospective lithium-tin-tantalum claims in Zimbabwe. The company, which said it considers the acquisition a “transformational” opportunity, will pay \$60,000 for the claims. They are close to Zhejiang Huayou Cobalt’s Arcadia lithium mine, one of the world’s largest lithium-producing operations with capacity of up to 450,000 tonnes of lithium concentrate per year. The new claims spanning 510 hectares are situated across the Arcturus and Beatrice projects, where recent rock chip samples have returned grades up to 2.5% and 2.1% lithium respectively.

MetalsGrove noted they are located close to Harare, to the east and to the south of the capital, about 35km-55km away. The junior said it was finalizing plans for an initial exploration campaign, due to kick off in the March quarter of 2024. The company’s stock rose on the news, closing at A\$0.087 each on Monday, capitalizing MetalsGrove at A\$3.03 million (about \$2m).

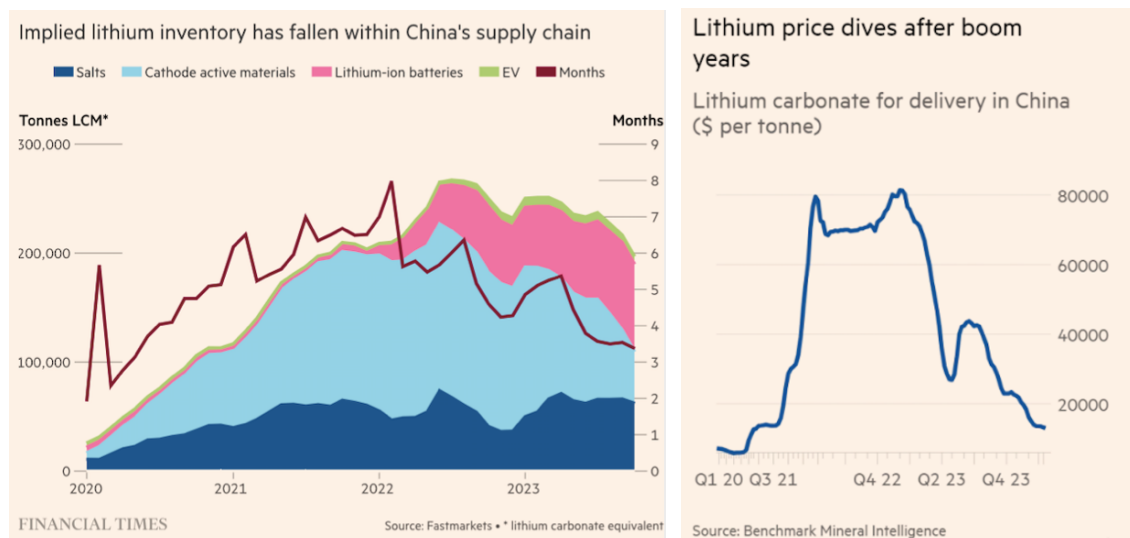
The lithium industry in Zimbabwe has expanded over the past two years, thanks to about \$1 billion in investments brought in by Chinese companies including Zhejiang Huayou Cobalt, Sinomine Resource Group, Chengxin Lithium Group and Yahua Group. The country is now the world’s fifth biggest primary producer of the material, key in the manufacturing of the batteries that power electric vehicles and high tech devices.

## Lithium price plunges on slowing Chinese demand for electric vehicles

Financial Times, January 25, 2024

Lithium miners are cutting costs and scaling back plans to expand production after slowing demand in China for electric vehicles crushed the price of the battery metal. The price of lithium has tumbled more than 80% in the past year to \$13,200 per tonne, its lowest level since 2020, after excessive levels of supply hit the market, according to data group Bench Mineral Intelligence. The fallout has pushed miners – mainly in Australia, which produces 40% of the world’s supplies – to constrain production as decelerating demand for electrical vehicles leaves stockpiles of half-processed material through the supply chain.

“We are going through a period where too many new projects came on line in too short a space of time,” said William Adams, head of commodity markets research at Fastmarkets, a price reporting agency. “We’ve just started to see the pullback.”



## Zimbabwe platinum miners ask government to defer export tax

[Bloomberg News](#) | November 14, 2023 | 7:59 am [Africa Platinum](#)

Zimbabwe platinum miners have asked the government to defer its planned 5% export tax on concentrates, pending the completion of smelters and the refurbishment of a refinery. The producers want the tax deferred until 2025, according to a proposal submitted by the Chamber of Mines of Zimbabwe to the finance ministry before the 2024 budget presentation in November. After announcing the tax in 2020, the Treasury initially gave miners two years to prepare, before later deferring it until January 2024. The government is introducing the levy on shipments of platinum group metals’ concentrates to spur the development of processing facilities in Zimbabwe. Impala Platinum Holdings Ltd.’s Zimplats unit is on track to refurbish its base metal refinery and other smelters by 2025, the chamber said. “To this end, we are appealing for further deferment of export tax on PGMs concentrates to align with Zimplats timelines for completion of their beneficiation projects,” it said.

Zimplats plans to spend \$1.8 billion expanding mining and processing, including rehabilitating an old base-metals refinery built by the BHP Group. The Chamber also said that an increase in the royalty on PGMs to 7%, from a previous rate of 2.5%, was impacting the viability of projects, especially after a decline in [metal] prices. It appealed for a lower royalty that could be adjusted with prices. “We appeal for a royalty of around 3%,” the chamber said. “The royalty can be reviewed in line with movements in platinum prices up to a maximum of 5%.”

Zimbabwe holds the world’s third-largest known reserves of platinum.

*(By Godfrey Marawanyika)*

### **Zimbabwean miners set for big profit slump next year – report**

[Reuters](#) | November 6, 2023 | 6:43 am [Intelligence](#) [Africa](#) [Gold](#) [Lithium](#) [Platinum](#)

Zimbabwean miners, among the country’s top export revenue earners, are likely to see profits drop almost 15% in 2024, with half expected to report a loss, according to a report released on Monday.

The Southern African country is known for abundant deposits of platinum group metals (PGMs), gold and lithium. But a confluence of global and local factors will eat into the mining industry’s revenue and profit in 2024, the Mining Prospects for 2024 report by the Zimbabwe Chamber of Mines said. “Executives are generally pessimistic,” the report said, noting they had expressed concern over the investment outlook next year and called on the government to revise royalty payments and adjust foreign exchange retention rules. Last year Zimbabwe tripled the royalties platinum miners must pay the government to 7% and more than doubled those for lithium to 5%.

Miners said these hikes alone would drive costs up by 5%, and when the impact of higher taxes and tariffs are added the cost of production would spike by almost 10%, the report said. Mining companies also want to retain up to 90% of their foreign currency earnings, up from 75% currently, according to the Chamber of Mines.

The local issues are compounded by global mining infrastructure bottlenecks and subdued commodity prices, mostly for PGMs and base metals. Mineral revenues for 2023 are likely to fall by approximately a fifth and by another tenth in 2024, the report said, with the Chamber of Mines only expecting gold miners to remain profitable.

*(By Nyasha Chingono; Editing by Promit Mukherjee and Kirsten Donovan)*

### **Zimbabwe gold output declines 15% amid electricity, forex shortages**

[Reuters](#) | January 8, 2024 | 3:09 am [News](#) [Africa](#) [Gold](#)

Zimbabwe produced 30 metric tons of gold in 2023, 15% less than the previous year, official data showed on Monday, as electricity cuts and currency volatility impacted output. The southern African country was once among the top gold producers on the continent but has fallen far behind regional peers Ghana, Mali, Burkina Faso, Guinea and Tanzania as an extended economic crisis kept investors away. Zimbabwe remains largely under-explored and its operating mines struggle to raise capital due to concerns over government policy and property rights, especially after the seizure of white-owned farms at the turn of the century. [Gold] output plunged to a mere 3 tons in 2008, at the height of Zimbabwe’s

political and hyperinflation crisis. Although production has recovered in recent years, reaching an all-time high of 35 tons in 2022, the country still lags behind its regional peers, despite its significant potential.

The country's 2023 gold haul of 30.11 tons fell short of the government's target of 40 tons for the year, showed data from Fidelity Refineries, the state-owned agency which solely processes all the gold produced in the country. Zimbabwean gold producers, along with all other exporters from the country, receive 75% of their earnings in US dollars and the balance in a local currency that lost more than 80% of its value last year alone. The country also experienced intensified power cuts due to the frequent breakdown of its ageing coal-fired plants, while generation at the Kariba hydropower station continues to be throttled by low water levels.

Most of Zimbabwe's gold is produced by small-scale operators and artisanal miners, a highly fragmented structure that lacks the advantages and efficiencies of scale. Some of the country's top gold producers include the state-owned Kuvimba Mining House, Caledonia Mining Corporation, Padenga and RioZim.

*(By Nyasha Chingono; Editing by Nelson Banya and Louise Heavens)*

### **First Quantum to fast-track Zambia project after Panama blow**

[Cecilia Jamasmie](#) | December 4, 2023 | 6:56 am [News](#) [Africa](#) [Canada](#) [Copper](#) [Gold](#) [Nickel](#)

Canada's First Quantum Minerals (TSX: FM) has inked a deal with Zambia's Mimosa Resources to fast-track their joint development of the Fishtie copper project in the African country's Central Province, near the border with the Democratic Republic of Congo. The companies, which have been exploring the asset since 2012, now see Fishtie kicking off production in 2026, ramping up production to 30,000 tonnes of copper a year by the end of the decade.

Mimosa currently owns 37.5% of Kashime Copper Ltd, which holds the Fishtie project. The agreement with First Quantum will see Mimosa's stake grow to 75% through the completion of a feasibility study and the raising of the necessary financing to take the project to technical completion, the companies said. Each stage of development is time-bound to ensure the project is brought into operations within a reasonable timeframe, they noted.

First Quantum has also committed to finance and conduct exploration within the wider licence area, outside of Fishtie. Mimosa Resources will lead the raising of a total investment of \$200 million for the project.

The agreement comes at a time when First Quantum is being asked to close its giant copper mine in Panamar, which accounts for about 1.5% of the world's production of the metal. The operation makes up about 5% of Panama's GDP and 75% of its export of goods.

Zambia, which has unveiled plans to triple its copper output by the end of the decade, recently reviewed its tax policy to increase investment in the sector. "We are determined that this resource should be developed now that the investment climate in Zambia has improved," First Quantum Minerals country manager, Godwim Beene, said in the statement. "In the search for a genuine 'social licence to operate', we believe that Zambians need to play a leading role in the country's future mining development," Mimosa



Resources executive chairman, Jordan Soko, said. “As such, we believe this will not only be a step forward for the Fishtie project, but also for mining in Zambia more generally.” First Quantum’s presence in Zambia, Africa’s second-largest copper producer, also includes the Kansanshi mine and smelter in Solwezi and the Sentinel mine in Kalumbila.

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## 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.

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# 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](http://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

Phone: +1.720.981.7882/Fax: +1.720.981.7874



## 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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## **A GREAT OPPORTUNITY EXISTS TO CREATE ADDITIONAL AWARENESS**

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Please contact Andrew du Toit at [andrewdutoitzim@gmail.com](mailto:andrewdutoitzim@gmail.com), or the Honorary Secretary at [geol.soc.zimbabwe@gmail.com](mailto:geol.soc.zimbabwe@gmail.com), for more information.

You can also advertise in this Newsletter through these contacts, where the cost for an A4 page size will be \$50 in any one issue.

## **Conferences**



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Geological Society Of South Africa		2024 Events	
DATE	EVENT	LOCATION	
20-Feb	UNFC	Workshop Online	
12-Mar	CPD	Workshop Online	
09-Apr	3D Geological Modelling (TECT)	Online	
16-Apr	Advanced Excel for Geoscientists (Earthlab)	Online	
26-Apr	of Industry	Jhb	
02-03 May	Sampling & Data Management	Online	
25-26 May	KZN Brittle Deformation Field trip	KZN North Coast	
04-Jun	GIS for Exploration	Online	
23-Jun	Project Management for Geologists	Online	
2-3 Jul	Map Making (MINROM)	Online	
16-Jul	Review of Developments in Impact Geology	Hybrid	
20-Jul	Marine Geology of Southern Africa	TBD	
06-Aug	Intro to Drilling workshop	Online	
12-Aug	Vertical trip through the bushveld	Online	
15-18 Aug	100yr Merensky (Roger Scoon)	Rustenburg	
19-23 Aug	100yr Merensky Main Event	Hunters Rest (Rustenburg)	
3-24 Sep (4 x ½ days)	Drilling Methods and Techniques (Colin Rice)	Online	
3 Sep	Professionalism & Ethics	Online	
Sep	Data Analytics / Machine learning Hybrid	(Jhb)	
01-Oct	ESG Update Workshop	Online	
08-Oct	New SACNASP Bill (Webinar)	Online	
23-24 Oct	Mineral Economics (MR Classification, financial valuation, sustainability)	Online	
07-Nov	Mineralogical Instrumentation (MINSAs)	Hybrid (Jhb)	
21-22	Nov African Exploration Showcase	Jhb	

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

## 12<sup>th</sup> International Kimberlite Conference

*30 Years of Diamonds in Canada*

8-12 July 2024, Yellowknife

<https://12ikc.ca/>

## Society of Economic Geologists

SEG conference 2024

Windhoek, Namibia

## Colloquium of African Geology

Nairobi, Kenya – 2025

Biennial Conference organized by the Geological Society of Africa

**GEOLOGICAL SOCIETY OF ZIMBABWE:  
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COMMITTEE FOR 2023**

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