

# Geological Society of Zimbabwe



## *Newsletter*

February 2019

No. 1 of 3 of 2019



*Over the Kafue Flats Wetland, Zambia with FAAM's (Facility for Airborne Atmospheric Measurement) fully equipped BA146 research aircraft. Photo: Tim Broderick*

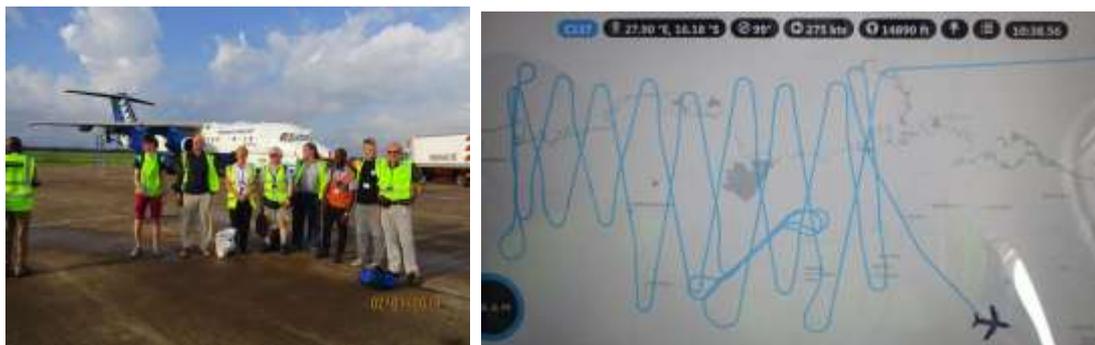
[www.geologicalsociety.org.zw](http://www.geologicalsociety.org.zw)

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

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*The FAAM BA146 Research Aircraft, Lusaka and the route of the Kafue Flats sortie, including a diversion over hot springs ranged along a boundary fault to the basin. Tim Broderick.*

## Editorial

Tim and Trish Broderick had the privilege of being invited by Prof Euan Nisbet of Royal Holloway University of London, to be a part of the ZWAMPS (Zambia Wetlands and Methane Producing Sources) Project based out of Lusaka in late January and early February this year. The project forms a part of a Memorandum of Understanding between Oxford University and the Zambian Geological Survey spearheaded by Mike Daly who has made a considerable contribution to the geological understanding of that country, notably in the Irumide Belt of Northern Province. The main thrust of this MoU is to enhance the geological information base in Zambia, specifically through the Hydrocarbons Branch headed by Francis Chibesakunda. Although the focus of the ZWAMPS project is to help build up a signature model for methane isotope emissions from the tropics over Africa and South America and to understand the rapid increase of these greenhouse gases in the atmosphere since 2007, the focus over wetlands in Zambia also sets out to assess if some of these emissions are related to hydrocarbon seeps. There is a relationship between methane and ethane concentrations in this respect. Helium gas assessment from the air and collection on the ground at hot springs was also taken in within the context of a geothermal project in the Lochinvar National Park in the south-central Kafue Flats. Mike Daly headed the helium collection in flasks whilst Tim and Trish with colleagues from Royal Holloway and our counterpart from the Zambian Geological Survey, Musa Lambakasa, collected air samples in Tedlar bags wherever we could gain access to the wetland margins north and south of the Kafue Flats and west of Kabwe on the Lukanga Swamp. Later in the year we hope to plan an expedition to access the Bangweulu Swamp for the purpose of air sampling.

The visit to Zambia coincided with the deployment of the Natural Environment Research Council (NERC)-funded FAAM (Facility for Airborne Atmospheric Measurement) BA146 research plane that had covered wetlands, bush fires and a portion of Lake Victoria in Uganda before reaching Zambia. With a bevy of world-class scientists from Royal Holloway, Manchester, Leeds, Oxford and elsewhere in the UK, the aircraft flew planned sorties over the Bangweulu Swamp returning to Lusaka along the Muchinga Escarpment, the Kafue Flats with a diversion over the Gwisho and Bwanda hot springs in Lochinvar, and the Lukanga Swamp. Tim had the privilege of accompanying the flight over the Kafue Flats (see cover photo and those above). This was an exciting experience for apart from seeing the Flats from a fairly low level, one could monitor the real-time analysis of data being accumulated from the array of instrumentation manned by the

scientists. Significantly important methane anomalies (in ppb) were recorded over the pristine parts of both Bangweulu and Lukanga swamps, the data from which should assist greatly in the generation of a methane emission model for the tropics.

It remains for me to thank our regular contributors for the news coverage in this Newsletter, the last under the Chairmanship of Steve Duma. We will welcome Nevison Chikandiwa and his new Committee at the AGM on 8<sup>th</sup> March (see details below) and we look forward to seeing you all at the Borrowdale Country Club.

*Tim Broderick*



## Chairperson's Chat

*Steven Duma*

The Annual General Meeting (AGM) of the Geological Society of Zimbabwe  
1700 hours on 8<sup>th</sup> March 2019  
The Borrowdale Country Club, Helensvale, Harare

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### AGENDA

1. *Convening of Meeting*
2. *Obituaries and Minute of Silence*
3. *Apologies*
4. *Minutes of Previous AGM*
  - *Consideration and approval of the minutes*
  - *Matters arising not covered elsewhere in the agenda*
5. *Chairman's Statement – Steven Duma*
6. *Treasurer's report – Collins Mwatahwa*
7. *Any Other Business*
8. *Announcement of the next committee 2019 – 2020 - Nevison Chikandiwa*
9. *Dinner at 1900hrs*

10. *Talk by Guest Speaker*

11. *Awards and Presentations*

➤ *Phaup Award*

➤ *Vinyu Award*

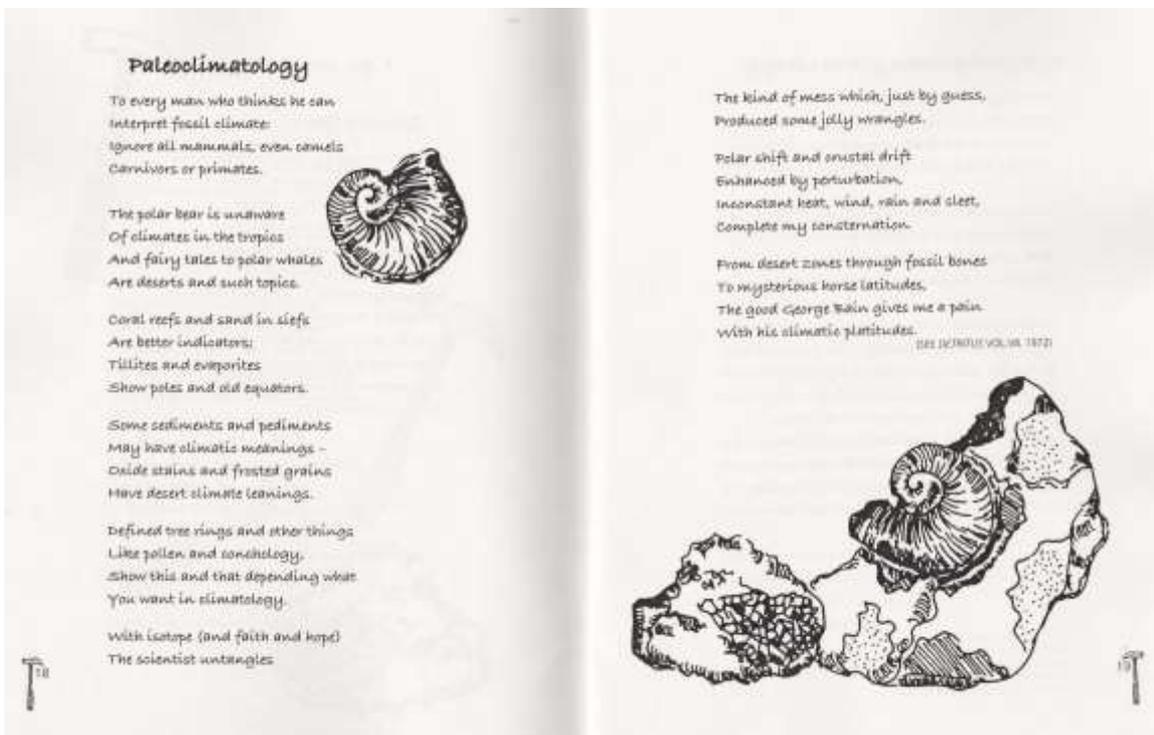
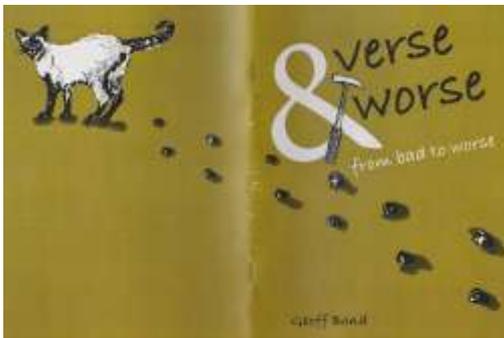
➤ *Viewing Award*

➤ *Bond Award*

# Articles and Reports

## A tribute to Geoff Bond

Marina Bond, widow to Professor Geoffrey Bond (1912-1983), and their now extended family have compiled a compendium of light-hearted notes, often poetic, left by Geoff. He was the inaugural head of the Geology Department from March 1961 at what was then called the University College of Rhodesia and Nyasaland. Many a geologist passed through his hands and were influenced by his gently persuasive manner. The Mennell Society journal, *Detritus*, provides a record of the adventures of 'Fred Crynge', a character who accompanied students on all field trips and who's adventures and mischief became legend. Fred is eluded to in the booklet as are numerous students who subsequently made their names in the industry. Illustrations for the booklet are by Geoff's grandson, Nicholas. Thanks are extended to Marina and family for their permission to share this snippet.



## **Gold mineralization styles in Zimbabwe and reporting of Exploration Results**

This short course was held in the Jan Kramers Museum, Geology Department at UZ between 31st January and 1st February 2019. The course was registered with SACNASP and the GSSA and attracted CPD points.

Course presentation was by Forbes Mugumbate, Gayle Hanssen, Godfrey Chagondah, Billmore Nemahwe and Tania Marshall.

**Day 1:** covered the importance of gold in the Zimbabwe mining scene; an overview of gold deposits and mineralization styles (as applicable to Zimbabwe); gold exploration of greenstone-hosted lode gold deposits; and gold mining of greenstone-hosted lode gold deposits.

**Day 2:** involved the mining of sulphide-hosted gold deposits; QAQC of exploration results; the importance of codes in the minerals industry; and the concept of a competent person

## **News**



### **Geology Department, University of Zimbabwe**

*Maideyi Meck*

The Department of Geology fared well under the period. Teaching progressed and we managed to present 14 new graduates and we have 30 who are ready for industrial attachment. As always we appreciate the mining houses that have facilitated industrial attachments in the past, especially in our current unstable environment. The department hopes the mining industry will once again accommodate our students for the crucial experience that they need during the coming year.

The Department received a donation of two mountable projectors from Invictus Energy, which were sourced through the Geological Society of Zimbabwe. The handing over ceremony was attended by representatives from the Geological Society, the School of Mineral and Earth Sciences and staff from the Geology Department. We are most grateful for this wonderful gesture that will greatly benefit students, lecture presentation and Geological Society meetings.

The Department is still reviewing its curriculum and we still expect to receive constructive input and suggestions from geologists within the Mining Industry of Zimbabwe. The new Semester will commence on 25<sup>th</sup> February and will include three field courses comprising two 2-day field trips around the Harare-Shamva Greenstone

Belt, one 4-day field trip around Murehwa and a 10-day field trip to the Mberengwa and Mushandike areas. Geologists are free to join these field trips whilst participating in the training of our future geologists. Those who would like to be part of these trips are welcome to contact Dr Tony Martin or Dr Maideyi Meck.

The staff of the Department of Geology would like to inform Society Members of the passing on Wednesday 13<sup>th</sup> February of our Chief Technician, Mr Douglas Maguze, who has been a stalwart and long serving member of our team.

### **Obituary - Douglas Maguze**

**Douglas Maguze was born in 1954 in the Honde Valley north of Mutare. He attended primary school at Chavhanga and his secondary education was at Marist Brothers, Nyanga. He joined the University of Zimbabwe on 3<sup>rd</sup> February 1984 as an assistant Science Laboratory Technician, was then appointed in an acting capacity to the post of Technician, being then promoted to the post of Senior Technician on 3<sup>rd</sup> May 1989. He rose to the position of Chief Technician on 11<sup>th</sup> December 1991, which post he held until the time of his death. He was buried in his home area of the Honde Valley on February 16<sup>th</sup> 2019. He will be fondly remembered by most geologists who passed through the Department between 1984 and 2018, and also by so many who's lives he touched.**

Contact details as of February 2019:

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Ms. S. Gorogodo	Messenger/Cleaner		0772390026		15029



## The Mennell Geological Society

Audious Kashesha (Chairperson)      Bernatrix Makenah (Secretary)  
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### The Professor Tom Blenkinsop UZ Geology Field Trip Fund

Following the successful presentation of the 2013 A.M. Macgregor Memorial Lecture in Harare and Bulawayo, and his lead of the field trip in the Renco Mine area, Professor Tom Blenkinsop made a generous donation of \$200 to the Geological Society of Zimbabwe (GSZ). This was in support of University of Zimbabwe (UZ) geology student field trips. Over the years the UZ Geology Department has been under funded, resulting in their failure to raise sufficient money to conduct the mandatory field trips for its students. The GSZ responded by donating funds and materials from its own resources as well as from members. This assistance went towards the welfare of the geology students, especially in meeting costs for field trips.

Using the donation from Prof. Blenkinsop as seed money, the GSZ has now established the “*Professor Tom Blenkinsop UZ Geology Field Trip Fund*” to be administered by its Executive Committee. Tom has indicated an interest in supporting the Geology Department on a long term basis, not only to help in mobilizing funds for various activities, but by also providing moral and material support. Annually the students go on their main field trip, which lasts around 2 weeks with direct costs being in the range of \$6000 per class. Therefore we are appealing to all our members to donate generously to this worthy cause both in cash or in kind. Materials such as fuel and food are most welcome.

The direct benefits that accrue to the geological profession are that it ensures a properly trained graduate. Referring to the adage that the best geologist is the one who has seen the most rocks, our students need quality field trips. From these field excursions we also want to develop the Zimbabwe Geology Atlas.

Your donations, either in cash or in kind, should be forwarded to our Treasurer, Collins Mwatahwa – E-mail: [cmwatahwa@Angloplat.com](mailto:cmwatahwa@Angloplat.com) or to our Administrator, Julie Kuhn - E-mail: [geol.soc.zimbabwe@gmail.com](mailto:geol.soc.zimbabwe@gmail.com)

THANK YOU FOR YOUR GENEROSITY

H. N. Gumbo



## **MIDLANDS STATE UNIVERSITY**

### **FACULTY OF MINING AND MINERAL PROCESSING ENGINEERING**

### **ZVISHAVANE CAMPUS**

#### **Introduction**

Classes resume on 25<sup>th</sup> February at MSU and the Faculty is geared to receive new and returning students in our five programmes: Mining Engineering, Metallurgical Engineering, Materials Engineering, Applied Geology and Exploration Geophysics. With mechanical engineering equipment already in stock the Faculty hopes to get necessary approvals to start offering BEng (Mechanical Engineering) during 2019. As the Faculty continues to grow, it is in a staff recruitment drive. Other items to report are the Royal Academy of Engineering project being spearheaded by the Faculty, and industrial placements for our students.

#### **Staff Recruitment**

Towards the end of 2018, MSU advertised several posts to fill new vacancies in the Faculty. The posts include Rock Mechanics Engineer, Materials Engineer, Igneous Petrologist, Metamorphic Petrologist, Mineralogist, Mathematician and Physicist. Interviews will be held during February 2019.

#### **Royal Academy of Engineering Project**

The Faculty is undertaking the project “*Assessment of Zimbabwe’s industrial minerals and coloured gemstones*” in collaboration with 2 local universities, one local research institution, one industry partner, one Soth African university and two UK universities. An inception workshop for the programme, involving all project partners and other invitees, will be held at MSU Gweru on the 26<sup>th</sup> February 2019. After the workshop, participants will spend two days on a field excursion to appreciate the industrial minerals of Zimbabwe, including graphite, limestone, garnet, kyanite, mica and dimension stones, as well as the gemstones aquamarine, citrine, tourmaline, and sapphire, among others.

As part of the RAEng project activities in the packed fortnight, Professor Tom Blenkinsop of Cardiff University, UK, will deliver a short course in Structural Geology to MSU Geology students and industry participants from 1<sup>st</sup> to 5<sup>th</sup> March 2019.

#### **Student Industrial Placement**

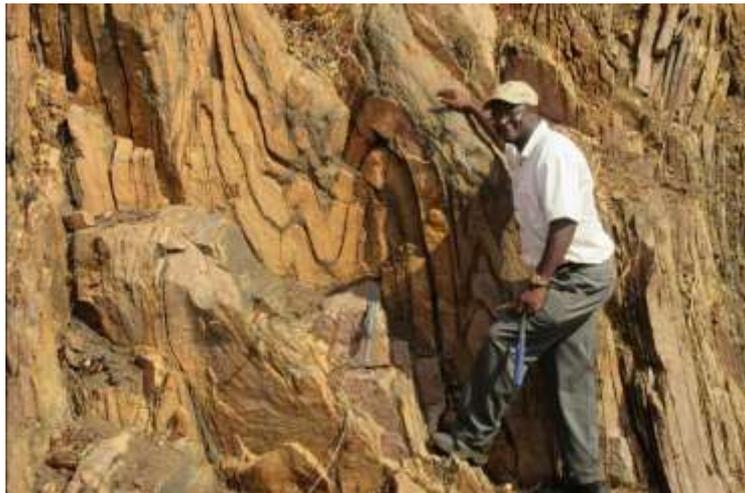
The Faculty would like to thank industry and other stakeholders for assisting our students with industrial placement places. Some of our Level 4.1 students have already been

placed. We ask industry and stakeholders to continue assisting us as we try to ensure that every student gets appropriate placement.

**Conclusions**

The Faculty continues to value partnerships in research and development with local and international entities and government to advance the sustainable exploitation and utilisation of Zimbabwe's resources for the country's maximum equitable socio-economic benefit.

*Submitted by Dr Antony Mamuse, Executive Dean*  
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## *Geological Survey*

*Benedict Ncube*

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### STAFFING MATTERS

**Forbes Mugumbate** was appointed Director of the department with effect from 1<sup>st</sup> January 2019. This follows the expiry of Temba Mabasa Hawadi's contract on 31<sup>st</sup> December 2018. The former director had reached the mandatory retirement age of the Public Service Commission in 2017.

### Other professional staff

Name	Position	Comments
Sokesimbone Lunga	Deputy Director	
Ernst Mugandani	Chief Geologist	Seconded to Midlands as acting Deputy Director
Frank Muzanenhmo	Chief Geologist	Seconded to Manicaland as acting Deputy Director
Lloyd Magombedze	Senior Geologist	On partial secondment to the Principal Director's office
Tapiwa Magidi	Geologist	Currently a beneficiary of the Pan African Geoscience (PanAfGeo) training courses aimed at restoring the skills gaps that exist in African Geological Surveys. Attending a month-long training course in Field Geological Mapping in Ethiopia.
Brian Muteta	Geologist	On Manpower Development Leave pursuing an MSc degree in Japan.
Vimbai Takawira	Geologist	
Vimbayi Gengezha	Geologist	
Benedict Ncube	Geologist	
Amicable Hove	Geologist	
Rumbidzai Shereni	Geologist	

Evelyn Marumisa	Geologist	
Lloyd Shawarira	Chief Geophysicist	
Admire Charumbira	Geophysicist	
Mathias Ndoro	Geophysicist	
Anenezel Makuvaza	Geophysicist	

Our contribution in the next issue of the Newsletter will cover information on geologists in the Provincial offices. In terms of the new structure of the Ministry, these members are not part of the Geological Survey, but report directly to their Provincial Mining Director.

## PROJECTS

### China Geological Survey

The Geological Survey is in an agreement with the China Geological Survey to conduct systematic geochemical mapping of the country. So far three areas have been covered around Chimanimani, Harare and Gweru. A team from the Henan Province branch of the China Geological Survey visited in January 2019 to discuss implementation of the 4<sup>th</sup> phase of the geochemical mapping. The team also expressed willingness in assisting the ZGS with the establishment of the Geoparks concept in some tourist areas, particularly the Victoria Falls.

### Japan International Co-operation Agency (JICA)

A delegation from the Japanese International Co-operation Agency (JICA) led by Professor Yoshitaka Hosoi, the organization's Senior Advisor for Natural Resources, visited for discussions mainly focussing on training needs in the department. JICA is keen to see Geological Survey staff improve their educational qualifications. It is through JICA sponsorship that one of the department's staff members is pursuing an MSc degree at a Japanese university

### Japan Oil, Gas and Metals National Corporation (JOGMEC)

The Zimbabwe Geological Survey has a Memorandum of Understanding (MoU) with JOGMEC, which is a Japanese government parastatal company responsible for ensuring the security of supply of strategic minerals to Japan. JOGMEC fulfils its mandate in several ways including entering into joint venture partnerships with private companies to explore and develop mineral deposits, and through empowering geological surveys in countries with good geological potential. Zimbabwe and other SADC countries are benefitting from the latter relationship. JOGMEC has a Remote Sensing training institute based in Botswana where several geoscientists from the ZGS have received comprehensive training. JOGMEC's approach is to undertake geoscientific data generating projects jointly with geological surveys. The Corporation will have the first right of refusal to pursue any economic mineral anomalies discovered during the surveys. This way JOGMEC's approach can be said to have three advantages - imparting knowledge to participating geological survey staff; the generation of new geological information; and the potential to make new mineral discoveries.

The General Manager at JOGMEC, Botswana, visited the ZGS on 26 February 2019 for a wide range of discussions regarding our relationship into the future.

## NEW PUBLICATIONS AT THE ZIMBABWE GEOLOGICAL SURVEY

*Forbes Mugumbate, Director,*

*Zimbabwe Geological Survey (ZGS)*



Under the Governance Institutional Strengthening Project (GISP), ZGS managed to have 12 new publications printed with 18 being reprinted. Four new maps were printed and 14 were reprinted as listed below. All were delivered in early October, 2018 and are now on sale. The support came through the African Development Bank (AfDB) who facilitated the editing of the new publications under the auspices of Tailjet Consultancy. The printing was done by Kadimah Print Global in the Republic of South Africa. In the table B = Bulletin, SR = Short Report and MRS = Mineral Resource Series.

No.	Status	Title	Author(s)	Editor
B 95 text	New	The Geology of the Country around Dorowa-Shawa	J. N. LAUDERDALE	<i>Mr. D. E. H. Murangari</i>
B 99 + map	New	The Geology of the Western Portion of the Chewore Inliers, Zambezi Valley	P. FEY	<i>Prof. Tom Blenkinsop</i>
B 103	New	The National Gravity Dataset of Zimbabwe	K. P. FISK; M. T. HAWADI	
B 104 text	New	The Geology of the country South of Mataga, Mberengwa, Mwenezi, Gwanda and Beitbridge Districts	N. E. H. BOUAMMAR	<i>Mr Tim J. Broderick</i>
B 105 + map	New	The Geology of the Country between Chireya and Goredema, Gokwe North and Gokwe South Districts	A. AIT- KACI AHMED	<i>Dr Dennis S. M. Shoko</i>
B 107 text	New	Review of the Geology and Summary of the Known Fossil Fuel Potential of the Karoo and Younger rocks in Zimbabwe	B. BARBER; P. M. OESTERLEN; A. AIT-KACI AHMED; M. A. MUKANDI.	<i>Dr Dennis S. M. Shoko</i>
Map	New	Gravity Map of Zimbabwe	K. P. FISK; M. T. HAWADI	
MRS 26	New	An Assesment of the Lesser Known Coal Localities IN North Western Zimbabwe	B. BARBER	<i>Dr Dennis S. M. Shoko</i>
MRS 28	New	Tantalum and Niobium in Zimbabwe	G. NASCHEL- WESCHKE	<i>Mr Peter Fey</i>
MRS 29	New	Copper Deposits in Zimbabwe	F. B. MUPAYA	<i>Dr Kosmas</i>

				<i>Chenjerai</i>
MRS 30	New	Gemstone Deposits of Zimbabwe	M.T. HAWADI; L. S. MAFARA	<i>Dr Maideyi Mabvira- Meck</i>
SR 51 text	New	The Geology of the country around Belingwe Peak.	J. L. ORPEN ; A. MARTIN; F. MUGUMBATE.	<i>Dr Kosmas Chenjerai</i>
SR 55 + map	New	Geology of the Country Southwest of the Chewore Inliers, Hurungwe District	P.T. ZIZHOU; S. LUNGA	<i>Mr Peter Fey</i>
B 32	Reprint	The Geology of the Mutare Gold belt	A. E. PHAUP	
B 40 + map	Reprint	The Geology of the lower Sabi Coal Field	W. H. SWIFT; W.C. WHITE; J. W. WILES; B. G. WORST.	
B 44/2 + map	Reprint	Gold Deposits and Mines	J. W. WILES	
B 46 + map	Reprint	The Geology of the Country around Mangula Mines, Makonde and Hurungwe Districts	J. G. STAGMAN	
B 47 + 1 sheet (Snake Head)	Reprint	The Great Dyke of Zimbabwe	B. G. WORST	
B 49 + map	Reprint	The Geology of the Country around Chinhoyi and Banket Makonde District	J. G. STAGMAN	
B 52 + map	Reprint	The Geology Middle Sabi Valley	W. H. SWIFT	
B 58 + map	Reprint	The Geology of the Country around Masvingo & The Bikita Tinfield	J. F. WILSON	
B 59 + map	Reprint	The Geology of the Country south and West of Shurugwi	C. W. STOWE	
B 64 text	Reprint	THE Geology of the Country around Kadoma	N. W. BLISS	
B 67/1 + map	Reprint	Geology of the Country around Kwekwe	N. M. HARRISON	
B 69 text	Reprint	Check List of the Minerals of Zimbabwe	SUSAN M. WARNER	
B 80 text	Reprint	An Outlook of the Geological History of Zimbabwe	J. G. STAGMAN; N. M. HARRISON; T. J. BRODERICK; V. R. STOCKLMAYER.	
B 83 + map	Reprint	The Geology of the Belingwe- Shabani Schist Belt	A. MARTIN	
MRS 22 map	Reprint	Base Metal and industrial Mineral Deposits of Zimbabwe	D. S. BARTHOLOMEW	
MRS 23 map	Reprint	Gold Deposits of Zimbabwe	D. S. BARTHOLOMEW	
SR 43 + map	Reprint	Explanation of the Geological map of the Country east of Kariba	T. J. BRODERICK	
SR 45 text	Reprint	Explanation of the Geological Map of the country West of Beitbridge	M. K. WATKEYS	
SR 46 text	Reprint	Explanation of the Geological Map of the country South of Mwenezi, Mwenezi and Beitbridge Districts	T. J. BRODERICK	

SR 48 text	Reprint	Explanation of the Geological Map Vungu and Gweru river Valleys, Gweru , wekwe and Bubi districts	N.M. HARRISON	
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## NEWS from the MINING INDUSTRY

*Forbes Mugumbate*  
fmugumbate@gmail.com

### **A new Director at the Geological Survey**

Forbes Mugumbate is now the substantive Director of the Zimbabwe Geological Survey, taking effect from January 2019. He moved from Mashonaland East on lateral transfer following the mandatory retirement of Temba Hawadi. Forbes is not new to the Geological Survey having started there as a geologist in 1987, becoming Acting Director between 1997 and 2002 before becoming the department's Deputy Director until 2014.

The Geological Survey has literally been decimated by transfers of senior professional staff to the Provinces following restructuring of the Ministry of Mines and Mining Development.

### **Battlefields Mining Disaster and potential consequences**

It is with sadness that we report on a heart-rending story of a disaster that occurred at Battlefields, about 175km SW of Harare. Several artisanal miners were trapped underground when shafts they were working in at the Silver Moon and Cricket mines were flooded after heavy rainfall resulting in the burst of a nearby dam. Estimates of the number of trapped miners were put as high as 70 although this figure is now being questioned. Eight lucky survivors were unbelievably rescued after having spent three days in muddy water underground. Twenty-four bodies have been recovered. The Civil Protection Unit assisted by major mining companies in Mashonaland West and the Ministry of Mines and Mining Development were busy searching for more bodies at the time of writing of this report. The Battlefields accident came only a few months after several artisanal miners lost their lives at Eldorado Mine near Chinhoyi.

Small-scale gold producers, including illegal miners, are hyped to have accounted for nearly 60 percent of the record 33 tonnes of gold produced in Zimbabwe in 2018. If this assertion is correct, then the future of gold production does not look good when the major contributor is prone to ill-discipline and so many accidents. This should be a wake-up call for government to revamp the small-scale mining sector so that it gets back to its past glory when the Mining Industry Loan Fund played a major catalytic role in the development of the sector.

The issue of accidents has to be addressed urgently otherwise the country's gold sector faces jeopardy. The country might face a tougher time selling gold legitimately under new guidelines from the London Bullion Market Association. Gold produced outside any safety or environmental rules could be classified as "blood gold" under the guidelines.

### **Zimbabwe is Open for Mining Business?**

President Emerson Mnangagwa and his Ministers have been busy promoting investment in the country's minerals industry since the November 2017 demise of the Mugabe

regime. While the amendment of the ‘repulsive’ Indigenisation and Economic Empowerment Act brought some hope to the revival of the mining industry, tangible results of this are still to be felt. The revised law is not applicable to diamond and platinum mines, which could theoretically deter investors. The platinum sector has, however, attracted significant investments by Karo Holdings and Great Dyke Investments (GDI). Platinum production is expected to increase significantly once the projects come on stream in 2020. Observers have also lauded the Mnangagwa administration’s willingness to engage with the private sector as demonstrated by its co-operation with South Africa’s Impala Platinum (Implats).

The President’s visit to Russia has reportedly unlocked funds for platinum mining at Darwendale, in Zimbabwe’s Great Dyke, and marked the return to the country of Russia’s state diamond company, Alrosa. Geologists from Alrosa are already in the country scouting for information on how to go forward with investment in the diamond sector. Alrosa, which says it is responsible for 27% of the global rough diamond production in terms of carats, already has operations in Angola and Botswana.

In Cape Town at the Mining Indaba, the Minister of Mines and Mining Development, Winston Chitando, is reported to have indicated that de Beers and Vast Resources will be allowed to explore for diamonds in Zimbabwe. De Beers holds extensive information on the diamond potential of Zimbabwe, having historically conducted extensive exploration across much of the country. The Minister also indicated that his government was coming up with development policies specific to minerals, and encouraged the private sector to contribute to the policies in this regard.

The granting of 9 Exclusive Prospecting Orders (EPOs) towards the end of 2018 suggests that things may be moving in the right direction. At the time of compilation of this report, 33 EPO applications had been gazetted for objections before they can be granted. Also several Special Grants for the exploration of coal and coal bed methane had been issued. These developments are encouraging considering that the country has lost over a decade with no systematic mineral exploration.

What is, however, infuriating companies is the perceived slow pace at which the Mining Affairs Board is processing EPO and SG applications. There are applications that were submitted as far back as 2010 that are still to be processed. Companies are also questioning the transparency of the criteria used to prioritise applications for issuance. The expectation is that the processing of applications should be based on the principle of first come first served. These observations may appear minor, but could be major obstacles to investment and development in the mining industry.

Another potential obstruction to investment in the mining industry is the campaigning that is being waged by various groups of Artisanal and Small-scale Miners (ASM) to block issuance of EPOs to large companies. Apparently there is a belief among these groups that EPOs are not good for the development of the mining industry, and have approached various stakeholders for help to stop the Mining Affairs Board from issuing EPOs. Although the Minister of Mines and Mining Development acknowledged the need for systematic mineral exploration in Zimbabwe, he argued during a presentation to miners at a workshop in Harare organised by Polaris Geophysics of Canada, that it would not be wise for government to threaten the livelihoods of hundreds of ASM in certain areas through the issuance of EPOs. Why this issue is now becoming polemical

when the two sectors have coexisted since the start of modern mining is a wonder. It is a symptom of the small-scale mining sector being in disorder. Perhaps it is time a policy clarifying how the country intends to develop the minerals industry is enacted. In the meantime one can only hope that the recent mining accidents, though very unfortunate, will make the authorities realise the irrationality of always favouring the opinion of the ASM at the expense of the requirements of the more organised large-scale mining sector.

The Diamond Policy will be published any time soon. Only time will tell whether the main provisions of the Policy will make the country more attractive for investment or not. The following will be allowed to undertake diamond exploration and mining according to the policy:-

- Zimbabwe Consolidated Diamond Company (ZCDC), as a State entity;
- Murowa Diamonds, which is already operational; and
- Two other companies approved by Government.

The question that arises obviously is whether this is the right time to implement such a restrictive policy given the country's potential for diamond occurrences, and the poor state of exploration and development within the diamond sector. Also projection of the future of the diamond industry can be useful in crafting a beneficial policy. For instance, de Beers has set up a formidable infrastructure for manufacturing synthetic diamonds in the US state of Oregon. The factory will produce more than half a million rough carats a year when fully operational in 2020. Already this development has had an impact on the price of synthetic diamonds. There has been up to 60% fall in the wholesale price of synthetic diamonds, and the slide is expected to continue with improved technology and increases in the quality and volume of laboratory-grown diamonds. Such information should certainly be a cause for concern.

### **Foreign currency crisis**

The shortage of foreign currency in the country is threatening survival of the mining industry. For instance RioZim had to, for the second time in four months, suspend production at its three mines because the central bank had failed to pay it in US dollars for part of its gold deliveries. Fidelity Printers and Refiners were supposed to have paid 55 percent of the company's earnings in US dollars. RioZim, which is Zimbabwe's second biggest gold producer, threatened legal action to force the Reserve Bank to pay it in dollars for part of its output in October 2018.

The acute shortage of dollars, which has also sapped supplies of fuel and medicines, is hampering the ability of large companies to expand production and start new projects. This again could be an obstacle to new investment if not addressed. The government has responded to this challenge by coming up with a new monetary policy that has liberalised the trading of foreign currency. The effectiveness the new policy remains to be seen.

### **A disintegrating Empire?**

The unbundling of Metallon Gold's mines into separate entities appears to be having negative consequences on some of the company's mines. Massive retrenchments took place at Mazowe Mine before the company was put on care and maintenance. This comes despite the mining group having recently announced plans to invest \$260 million on Gold Fields of Shamva and the Mazowe Mine. The gold mining group has been facing massive challenges which include non-payment of salaries for employees and

alleged externalisation of mining proceeds. Some of the company's properties, including plant, have been auctioned to recover an estimated US\$30 million owed to various creditors and workers.

United Families International Church leader and founder Emmanuel Makandiwa is reported showing interest in taking over the Shamva Gold Mine, taking advantage of the problems faced by the mine. The mine has been facing operational challenges for some time which have left it in financial distress. The cleric has, however, denied the allegation.

### **Un-packaging and re-packaging of the ZMDC**

The Zimbabwe Mining and Development Corporation (ZMDC), the State-owned mining company, holds the largest portfolio of mineral resources in Zimbabwe, and yet is struggling due to under-capitalization. The question has always been how this is possible when capital is available out there. It was in this regard that Cabinet allowed partial privatization of selected ZMDC entities through competitive tenders at the beginning of 2018. Elvington Gold Mine, Jena Gold Mine, Lynx Graphite, Sandawana mines, Mbungu CBM and Gwayi CBM were put up for grabs to interested private investors. The tenders were oversubscribed with 151 bids, which presented hope for the resuscitation of the ailing projects. However, when the bidders and other interested parties were holding their breaths for the opening of the tenders, Cabinet dropped a bombshell this February stating that the tendering process had been cancelled. Mines and Mining Development Minister Winston Chitando said the bidders had failed to meet required standards.

What is interesting is that the Cabinet had just approved the unbundling of ZMDC into four mineral-specific units as a way of improving efficiency. There had been concerns that the previous order was too bloated for one organisation. A specific subsidiary is to be established for each of the mineral groups. The partial privatization would have easily resolved the issue of capitalization and associated efficiencies. With the cancellation of the tenders, it is back to the drawing board for the company that holds so much potential.

By the way the ZMDC still does not have a substantive CEO.

### **Prospect Resources shine at Indaba in Cape Town**

We congratulate Prospect Resources for winning the 2019 Mining Indaba Investment Battlefield for its lithium project located in Zimbabwe. The company scooped the first prize at the *Investing in African Mining Indaba* in Cape Town, after pitching the project to a panel of judges made up of leading analysts and investors. The Arcadia lithium venture represents Prospect Resources' flagship project. Prospect Resources was chosen as the most promising of junior companies that participated in the competition. The competition is open to mining companies with a market capital of up to \$50 million. Among several prizes, the company won a free exhibition stand, three free passes and a ten-minute speaking slot at next year's Mining Indaba.

### **JICA mining experts visit Zimbabwe**

A delegation from the Japanese International Co-operation Agency (JICA) led by Professor Yoshitaka Hosoi, the organization's Senior Advisor for Natural Resources, visited to familiarise with the mining industry in Zimbabwe with particular attention being placed on human resources development. Professor Yoshitaka's organization

offers short- and long-term courses and scholarship programmes to personnel from the mining industries of various countries around the region and the world. JICA is keen to see an improvement in qualifications of mining personnel in Zimbabwe. The team visited various government and academic institutions, and also had familiarization tours of selected operating mines.

### **Polaris Seismic International visits Zimbabwe**

Polaris Seismics International Ltd of Canada, led by its President and CEO, William 'Bill' Mooney, visited to familiarise with the local mining environment ahead of possible establishment of an office in Zimbabwe. The company together with local partner, Vahosi (Pvt) Ltd, organised a workshop at the Cresta Lodge Hotel, Harare, where captains of the mining industry were invited to exchange ideas. The well attended workshop was also addressed by the Minister of Mines and Mining Development, Winston Chitando. The Director of Geological Survey, Forbes Mugumbate, made a presentation on the state of mineral exploration in Zimbabwe.

### **Exploration for hydrocarbons in Muzarabani on course**

Invictus Energy / Geo-Associates visited the Ministry of Mines and Mining Development to give an update of their exploration for oil in the Cabora Bassa basin. The briefing follows the decoding of 9 lines of seismic data from old tapes generated by Mobil during previous exploration efforts in the 1990's. Processing and re-processing of the decoded data is still in progress and is expected to be completed by the end of March 2019. Results are reported to be encouraging. Invictus has promised to make a presentation to the Geological Society of Zimbabwe at the end of March 2019.

### **Dishonourable Members of Parliament.**

The Acting Minister of Mines and Mining Development, Joram Gumbo, the Deputy Minister, Polite Kambamura, and senior Ministry officials had to scurry out of parliament when some members of the Parliamentary Portfolio Committee on Mines started exchanging insults and threats just before the acting minister presented his oral evidence on various issues requested by the Portfolio Committee. Trouble started when one MP proposed that the former Chairperson of the Committee, who is under investigations for allegedly demanding \$400,000 from a local businessman keen do contract mining at Hwange Colliery, recuse himself from the business of the Committee. The manner in which the MPs started hurling insults and threats despite the presence of visitors is disgraceful. One wonders if meaningful laws will come from such a group. The hearing had to be aborted.

Two of the MPs have escalated their feud outside of Parliament, thus further tarnishing the image of the august house.



## GSZ Research and Development Fund

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

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## SEG Timothy Nutt Memorial Fund (Up to US\$1500.00 available for 2018)

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](http://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](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

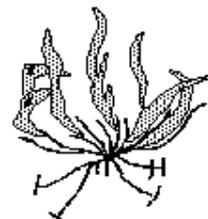
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## Conferences



**Geological Society of Zimbabwe**

PO Box 1719  
Causeway, Harare  
Zimbabwe



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### **Zimbabwe Mineral Resource Conference HARARE - 2020**

**Dates:** To be Announced

The postponement of the ZMR Conference to, provisionally, June 2020 was made necessary due to the uncertainty in Zimbabwe's economic situation and the need for clarity in the monetary policy, which will make budgeting for the event possible. The incoming Committee will await the implications of the February Monetary Policy Statement to clarify and settle before finalizing arrangements beyond the AGM.

The Zimbabwe Mineral Resource Conference – 2020, which will be preceded and followed by geological field trips, will be sub-divided into two morning and two afternoon sessions. It will focus on highlighting the exploration and mining potential in the country.

**The four Conference sessions planned are:**

- Base Metals and IRMs: Moderators - Drs Tony Martin & Sharad Master
- Chrome and Platinum: Moderators – Drs Martin Prendergast & Allan Wilson
- Gold: Moderators – Dr Paul Dirks & Mark Tsomondo
- Carbon – Diamonds + Fossil Fuels: Moderators - Drs Rosemary Falcon & Hielke Jelsma

Keynote speakers will include Allan Wilson, Hilke Jelsma, Mark Tsomondo, Martin Prendergast, Paul Dirks, Rosemary Falcon, Sharad Master and others.

**Interested contributors are requested to submit abstracts of their proposed papers to: [barber.brent@gmail.com](mailto:barber.brent@gmail.com)**

GEOLOGICAL SOCIETY OF ZIMBABWE: CONTACT DETAILS OF MEMBERS OF THE EXECUTIVE COMMITTEE FOR 2018		
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Chikandiwa, Nevison	Vice Chairman & Mennell Society	<a href="mailto:wchikandiwa@yahoo.co.uk">wchikandiwa@yahoo.co.uk</a>
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Kuhn, Julie	Administrator	<a href="mailto:geol.soc.zimbabwe@gmail.com">geol.soc.zimbabwe@gmail.com</a>
Mwatahwa, Collins	Hon. Treasurer	<a href="mailto:collinsm885@gmail.com">collinsm885@gmail.com</a>
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Bouammar, Houda	Talks & Field Trips	<a href="mailto:houda.bouammar@gmail.com">houda.bouammar@gmail.com</a>
du Toit, Andrew	Summer Symposium	<a href="mailto:andrewdutoitzim@gmail.com">andrewdutoitzim@gmail.com</a>
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Meck, Maideyi	GSA Representative	<a href="mailto:maideyimeck@yahoo.com">maideyimeck@yahoo.com</a>
Muchemwa, Ellah	International Conference	<a href="mailto:ellah.muchemwa@outlook.com">ellah.muchemwa@outlook.com</a>
Mugumbate, Forbes	Regional Representatives	<a href="mailto:fmugumbate@gmail.com">fmugumbate@gmail.com</a>
Mugandani, Ernest	ZGS Representative	<a href="mailto:etmugandani@gmail.com">etmugandani@gmail.com</a>

## Institutional Membership, 2018

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 Chamber of Mines of Zimbabwe  
 Freda Rebecca Mine  
 Goldsearch Technical Services  
 Metallon Gold  
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 Samrec Vermiculite Zimbabwe (Pvt) Limited  
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Vast Resources

Zimbabwe Geological Survey

Zimbabwe Mining Development Corporation

Zimbabwe Mining Investments

Zimbabwe Platinum Mines Limited