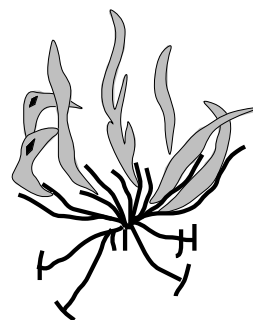

Geological Society of Zimbabwe



Newsletter



September 2006



'Mbare' – Tarka Forest 'Gold Rush' July, 2006

Collins Mwatahwa

THE GEOLOGICAL SOCIETY OF ZIMBABWE, P.O. BOX CY 1719, CAUSEWAY, HARARE

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Editorial

Welcome to the second Newsletter under the 2006 Committee. We have some interesting feedback on some of our activities, specifically the field trip to Chimanimani and the Marange Kimberlites and a summary of Nick Beuke's talk on iron-ores, but there is a dearth of what might be termed the 'hard stuff' in the form of abstracts and contributions. Usually the Summer Symposium rectifies this, but if you have anything relevant and of interest, please keep us in mind for our next edition in January 2007. Our thanks are extended to those who have contributed for this issue. We note the passing of Tizirai Nhezvure and point to his obituary towards the end.

Those who wish to reach our Membership, please make use of our advertising space. This will be at the rate of \$5,000.00 per full page; \$2,000.00 per half page and at \$1,000.00 for a business card. These days you can't get cheaper than that, so support us.

Nyikadzino Matura and Tim Broderick



Chairman's Chat

H.N. Gumbo

This is the second of three planned newsletters intended for this year. The first issue in May was well received both here and abroad and I would like to thank both editors and contributors for a job well done.

To date the Committee has managed to organise 5 talks, two of which were presented in Bulawayo, and a field trip was made to the Chimanimani gold field and the Marange kimberlites. We are working hard to facilitate more field trips, which are still below the number we had anticipated. The one to Murowa Diamonds, which most members look forward to, may still happen this year. In the meantime we are trying to organise an excursion to Mimosa and Inyala mines in the next few weeks. Other planned trips are to How Mine, Sternblick Quarry and the Antech Laboratory in Kwekwe. If there is anyone interested in hosting us at their mine or project, please come forward and assist.

In other areas, we are actively engaged with the Chamber of Mines to encourage its members and industry as a whole to contribute in cash or kind to the well being of the UZ Geology Department, which is now seriously understaffed due to a mass exodus of academic staff in the last few years. The Department is in dire need of assistance, not only to retain existing staff, but also to recruit others. If any of our members can come forth with assistance, which may include fuel coupons for their field trips, cash, computers or items such as a camera, your contribution will go a long way towards keeping the Department open and capable of providing the new staff you need.

The Society is also working with the Zimbabwe Geological Survey to get assistance to publish a new edition of the 1:1 million Geological Map of Zimbabwe. The current edition was published in 1977 and no post-Independence work has been incorporated into a composite map!

Thanks to our Member's enthusiasm, paid up membership to date has hit the magic number of 100 Ordinary Members with 3 Associates and 15 Institutional Members. Well done to all.

Our Summer Symposium on 1st December needs your support. We are very short of papers and are making an urgent plea to our members to contribute and make it a success. It is the one time we can all get together, and the stimulation is well worthwhile.

Thank you for your support and enthusiasm. I hope you will find this issue better than the previous one.

Articles and Reports

The Geological Society Field Trip to the Chimanimani Goldfield and Marange Kimberlites 29 - 30 July, 2006

Fred Hlasi

Tarka Forest, Chimanimani

The Geological Society of Zimbabwe organized a two-day field trip to Chimanimani and Marange over the weekend of 29 - 30 July 2006. Society members met in Mutare and at Wengezi on the morning of 29 July en route to Chimanimani. A total of 8 geologists were able to participate on the trip. We arrived at the Zimbao Exploration Camp situated at Tarka Forest shortly before 11.00am and were met by Andrew Chiseya, who immediately gave us a brief introduction to the geology of the area and a history of the Chimanimani 'Gold Rush'.

The Chimanimani eluvial gold deposits are associated with the Umkondo Group, composed mostly of argillite and quartzite and intruded by dolerite. These units normally do not host any gold but after a nugget, about 4 kg in weight, was found in the Tarka Forest, a gold rush was precipitated with 'panners' coming from as far afield as Shurugwi. The visitors were taken to the scene of the main artisanal workings, known locally as Mbare. Here, as can be seen from the cover illustration, the commercial pine forest has now been destroyed and a stream has been diverted to facilitate access. The mining activity is focused on a block of ground approximately 800m by 500m in extent. Approximately 200 panners were on site and were very keen to show us their 'mines'.

The gold nuggets are found in a thin rubble layer, up to 50cm thick, associated with the laterite front occurring between the overburden and the bedrock. Panners dig pits to this rubble layer and mine the rubble that they then pan to recover the gold nuggets. A stream that passes through the workings has been used as a source of water for this purpose.

At 4.00p.m the group left for Mutare, where they stayed overnight

Marange

On Sunday morning we left Mutare at 8.00am for our trip to see the Marange kimberlites. We were hosted by geologists from De Beers. The kimberlites are located about 90 km south by road from Mutare in the Marange Communal Land. They were discovered through routine prospecting by De Beers in the course of their EPO tenure. We were taken to the Marange No. 1 Kimberlite, which is part of a cluster of 7 kimberlites that were identified and are considered to

be uneconomic with respect to diamonds. The Marange No. 1 Kimberlite outcrops as a small koppie, as seen from the accompanying photograph. The local people have piled the rocks on the edges of their fields, oblivious of their potential wealth.



The group left Marange at 12.00 noon and dispersed.

The Geological Society of Zimbabwe thanks the management and staff of Zimbao and De Beers for their generosity and for affording the time to show fellow geologists these sites of topical interest.

A New Meteorite Impact Structure?

Here is an interesting occurrence for someone to investigate. Perhaps we can persuade the geologists at Renco Mine to take a Sunday outing and, on the strength of their findings, we might encourage Sharad Master to set up another meteorite impact expedition.

As the map figure shows, there is a distinct circular feature imprinted across the east-north-east trending magnetite quartzite and metabasite bands that define the regional Limpopo structure in the vicinity of Fumure trigonometrical beacon in Ndanga Communal Land. The feature, which is clearly visible on aerial photographs, is about 1.8 km in diameter and situated a similar distance south of the Mutirikwe River upstream of Bangala Dam, some 8 km north-east of the wall and 9 to 10 km due east of Renco Mine. The UTM grid reference for Fumure beacon on 1 : 50 000 map sheet 2031C2 (Chivamba) is UN183187. The anomaly was noted when the undersigned was compiling an aerial photograph interpretation of Mshawasha Small Scale Farming Area to facilitate water borehole location. However, the opportunity to visit the location in order to investigate has not arisen, hence the open challenge. *Hapana ma diesel!*

Tim Broderick

jpaa@mweb.co.zw



Geology and Genesis of BIF-Hosted High-grade Hematite Iron-ore Deposits

Professor Nic Beukes, acknowledged internationally as the leading scientist in his field of study, presented his lecture on iron ore to the Geological Society on 8th September at the Geology Department, UZ. As Regional Vice President Lecturer for 2006 to the Society of Economic Geology (SEG), Nic chose to visit Zimbabwe at his own expense in order to enhance an awareness in economic geology and to stimulate enthusiasm in his own subject relating to iron and manganese ore deposits.

The World produces about 1000Mt of iron ore a year and China is the fastest growing consumer, producing upwards of 260Mt of steel annually. There is a current boom in iron, and consequently manganese, mining and exploration and this has become a \$30 billion industry, not to be considered in Zimbabwe terms. The main known large high-grade iron ore deposits are in the Hamersley Ranges of the Pilbara of Western Australia, at Carajos and the Iron Quadrangle of Brazil, at Sishen and Thabazimbi in South Africa, on the Indian cratons, and at Mount Nimba in West Africa where the mining of this ore is controlled by three major companies, BHP, Rio Tinto and a Brazilian giant.

The upgrading of a primary sedimentary BIF deposit to 65% Fe has commonly been regarded as being by either supergene or hydrothermal enrichment through the dissolution of silica and the

concentration of iron. New ideas have emerged over the past four years. The supergene deposits are really large, in the range of 2 to 17 billion tones in extent. Supergene enrichment extends downwards beneath an unconformity by way of leaching whereas the hydrothermal process develops upwards due to ascending fluids of meteoric origin. The descending meteoric fluids are acidic and are often associated with a tropical, high organic environment. They leach carbonate in a reducing situation whilst the warmer ascending hydrothermal fluids are, in consequence, alkaline and they tend to dissolve silica, precipitate carbonate and transform the iron.

Urucum in Brazil occurs on a high massif representing a relict landsurface. The weathering profile is 30 to 40 metres deep from which the silica has been leached by supergene processes to form a friable ore. A hydrothermal ore body is best illustrated by the Mount Tom Price deposit in the Pilbara. The ore is concentrated in a synclinal structure and along faults and dykes in a sedimentary sequence comprising carbonates and shales. The ore against the shale is hard and lumpy and, significantly, a carbonate facies ore occurs at depth. Thabazimbi has a similar expression in relation to folded Penge BIF, the Transvaal Dolomite and the African Landsurface. Again carbonate ore occurs at depth below the weathering front.

Ore bodies in the Brazillian Iron Quadrangle both have hydrothermal and supergene genesis. They occur in folded BIF in a 2450Ma greenstone belt and at elevations of 1600 metres across an old landsurface. The ore is called itabirite, forming as lumpy blocks in a friable hematite beneath a laterite capping. The Aquas Claras deposit in this field occurs beneath a peak capped by goethite. Weathering reaches a depth of 500 metres and the ore body is largely friable with some lumpy itabirite development. Again there is a sharp contact at depth where the BIF is replaced by carbonate and it is this that is leached above to provide the upgraded ore.

Carajos in the Amazon Basin also occupies relicts of an elevated land surface, which are clear on Landsat imagery due to a distinct, treeless anomaly. This is a mine with some 75Mt in iron ore reserves. Ore bodies in India are associated with altered BIF in greenstone belts of the Singlbhum, Bastan and Dharwar cratons. An age of a granite body intruded into this altered BIF is 3660Ma. The mines are hand dug and there is a great underestimation of resources due to a failure to drill to any great depth. India has great potential for the future production of iron ore.

Sishen and Beeshoek in the North-West Province of South Africa have always been thought of as being true supergene deposits as they underlie a cover of 2200Ma red beds and are associated with karst features in the underlying dolomite. However, hard pebbles of hematite in the friable ore suggest that hydrothermal alteration has also been a feature, a phenomenon noted in some Indian deposits as well. Thus the transformation to ore has taken place over geological time and has often been the result of more than one alteration event. Palaeomagnetism indicates the apparent historic climatic influences in a shifting Gondwanaland. Brazil has largely been subjected to an aggressive tropical climate over time, South Africa has moved from temperate to hot and dry conditions whilst Australia and India have shifted from a temperate towards a tropical environment.

With the price of iron ore doubling in the past three years, it is the large easily mined deposits that command good transport infrastructure that will drive this economy. Lumpy, low phosphorus ores are most sought after. In South Africa the greatest cost is that of the dedicated rail transport from Sishen to Saldanha Bay.

TJB

Recent Earthquake Activity

Notes by T.J. Broderick

EARTHQUAKES OF MAGNITUDE 4.0 OR GREATER CENTRED IN OR ADJACENT TO ZIMBABWE – May–August, 2006

CAT	YEAR	MO	DA	ORIG TIME	LAT	LONG	DEP	MAGNITUDE
PDE-W	2006	05	21	215503.68	-19.16	31.75	10	4.50 mb GS
PDE-W	2006	05	27	053324.45	-21.33	33.18	10	4.30 mb GS
PDE-W	2006	06	08	061725.31	-21.35	33.42	9	4.90 mb GS
PDE-W	2006	06	08	094019.84	-21.42	33.39	10	
PDE-W	2006	06	11	103016.92	-21.38	33.25	10	4.20 mb GS
PDE-W	2006	06	30	010728.06	-21.11	33.26	10	5.10 mb GS
PDE-W	2006	06	30	011155.47	-20.99	33.48	10	4.60 mb GS
PDE-W	2006	07	04	190856.31	-21.29	33.11	10	4.40 mb GS
PDE-W	2006	07	08	161238	-21.47	33.05	10	4.60 mb GS
PDE-W	2006	07	11	184814.91	-21.10	33.31	10	5.00 mb GS
PDE-W	2006	07	19	235106.18	-20.95	32.95	10	4.30 mb GS
PDE-Q	2006	08	03	120928.77	-21.34	33.10	10	4.70 mb GS
PDE-Q	2006	08	21	132151.34	-21.50	33.22	10	
PDE-Q	2006	08	23	005332.54	-21.23	33.26	10	5.20 mb GS
PDE-Q	2006	08	23	015943.59	-21.29	33.25	18	4.50 mb GS

Source: NEIC/USGS

A total of 14 seismic events have been recorded by NEIC for the Zimbabwe region since the felt shock near Shawa/Dorowa on 21st May 2006. All have their epicentres along the Save Valley in Mozambique, but with the frequency markedly down on the period February to May this year.

China View reported that a tremor was felt in Khumalo, Paddonhurst and the Central Business District of Bulawayo at 2:54 p.m. (0054 GMT) on the morning of 9th September. This event is yet to be recorded by NEIC. Goertz Observatory instrumentation was reported as being erratic due to power cuts.

News



Geology Department, University of Zimbabwe

Nyikadzino Matura

The 2005-2006 academic year ended at the end of June 2006 and the first semester of the new year started on the 29th August 2006 and will close on the 11th December 2006. Eighteen students completed their geology studies successfully. Six of the students got upper second class passes, 8 have lower second class and 4 third class degrees. I urge the industry to employ our students. Those who do employ them should be patient when it comes to field work as it will take a while for them to get to grips with the demands of the industry. As I have highlighted in my previous news, the Department has a very small budget for field work and this has unfortunately led to a reduced number of field days and hence field experience for

our students. I want to urge all mining houses to engage our students on attachment as we believe this will improve their appreciation to what is expected of them when they complete their studies. In order to have students for attachment could you please contact the Department before the 11th December 2006. The student numbers for this academic year are as follows: Part one – 75, part two- 17 and part three 15.

Staff members in the Department have been involved in a number of research activities, some of which have already resulted in publication and their attendance at local and international conferences and workshops. Mr William Moyce went to Stockholm, Sweden to attend and present at the Water Week event in August, Mr Mangeya attended and presented at the CGIAR scientific workshop on water and food for improved livelihoods in the Limpopo Basin at Matopos, Research Station. Mr Matura attended and presented at the Waternet CP17 Limpopo Basin scientific workshop in Johannesburg in September 2006.

Geological Survey Department



ZIMBABWE

F.B. Mupaya

The Directorate attends the Head of Departments meeting regularly on Mondays, where the main concern is to review the mining industry and assess means to increase mineral production. Due to resource limitations, the recent activities of the Geological Survey Department have not concentrated on its key duties such as mine evaluation and regional mapping. Work on geoscientific information dissemination, geological research and the production of relevant maps and documents has, however, continued. There is an urgent need for intervention measures to take advantage of any possible opportunity to revamp the economy of the country through mining activities, which usually starts with the encouragement of exploration. Though our resources are limited, the recent recruitment of technical staff, including geologists, geophysicists and cartographic technicians to the Department, is showing the way forward.

Mine Visits

About 50 small-scale mines were visited between January and August in order to provide technical advice on exploration and development, and to assess production potential in respect of loan applications. Although an average of 300 kg of boulder corundum is being produced from O'Brien's Mine, Concession each month, the mine is not operating in a sustainable way, as it is unable to meet demand due to poor mining practice. The corundum is exported to several countries including South Africa and the United Arab Emirates. Mining tenements granted to African Consolidated Resources in the Chegutu District around Pickstone and the Giant gold mines were visited by a Geological Survey team comprising the Director, Acting Chief Economic Geologist, the Chief Mining Geologist for Harare and a geologist in order to assess their exploration activities. Extensive exploration is in progress, but illegal mining activities are of concern in the areas. The 50 visits to small-scale mines in the past 8 months is low, considering the large number of miners requiring technical assistance. The ability to undertake these visits is curtailed by departmental resource shortages. Some miners are failing to pay the Institute for

Mining Research for sample analyses, thus hindering the complete evaluation of their deposits. Therefore, resuscitation of the analytical facility at the Department of Metallurgy is urgently required.

Mineral Exploration

Companies still continue to submit applications for EPOs, despite the apparent freeze in the granting of these orders. There are continuous queries regarding the status of these applications. Such a development is detrimental to the success of our mining industry, as the country is covered by several applications meaning that the ground is virtually frozen to investment. Such issues were highlighted at the 527th MAB meeting attended by the Director and Acting Chief Economic Geologist. Our geophysical equipment has been repaired and a reconnaissance survey was conducted at a gold prospect in the Christonbank area.

Production of Geological Maps and Publications and the Dissemination of information

Compilation of the Binga and Lonely geological maps is now at an advanced stage. Out of print documents have been scanned and printed for clients. Several visitors came to the Department for consultation on prospecting, including research in the library. This shows a continued interest by prospectors and miners in the search for mineral deposits in Zimbabwe, despite the low generation of new information.

Research

A first draft report on potential of the nickel komatiite in Tsholotsho has been completed. Other articles in preparation are on the geochemical analysis of kimberlites in Zimbabwe, guidelines for the development of small-scale mining in Zimbabwe and on bauxite development in the regolith of the Eastern Highlands of Zimbabwe. Some of these articles will be published in the forthcoming Annals of the Geological Survey.

Mining Industry News

Irene Goromonzi

The failing economy prevailing in the country over the past five years has introduced hardships to the Mining Industry. Commodity market prices have strengthened internationally, but locally the shortage of foreign currency has impacted negatively on the industry as companies have been unable to purchase critical mining inputs and the spiralling hyperinflation has continuously increased production costs, thus forcing some mining companies to cut down on their exploration activities and others even to abandon their tenements completely. The persistent power cuts by ZESA have also affected the productivity of many mining companies.

The new concessions announced for the Mining Industry by the Central Bank Governor, Dr Gideon Gono in his half year monetary policy review statement on gold pricing, the exchange rate and foreign currency account (FCA) retention periods, was welcomed across the board. The gold mining sector is likely to see an increase in ore exploration and development as some of the much needed foreign currency for capital development will now become available. Given that the companies can now retain 75% of their foreign currency earnings in their FCAs puts them in a better position to apply their exploration plans and increase production.

Apart from the above problems, the industry continued at a slow pace. However, there has been a lot of interest shown by foreign investors such as the Chinese, Russians, Indians and Australians. Some of these investors have gone into joint ventures with local companies. The

Zimbabwe Mining Development Corporation has six operational joint ventures on the ground with Chinese and Russian counterparts, three in chrome mining, two in platinum development along the Great Dyke and one for gold and copper at Tarka Forest in Chimanimani and at Sanyati respectively.

The Zimbabwe Mining Development Corporation has also acquired a majority share holding of 55% in Sandawana Emerald Mines and they hope to resume mining operations in the near future. This is a most welcome development since Sandawana emeralds enjoy great demand, especial in the Middle East.

African Consolidated Resources, a subsidiary of Canapé Investments listed on the Australian Exchange, is carrying out an extensive exploration programme around the Pickstone and Giant mines near Chegutu.

Some diamondiferous conglomerates located in the Marange area of the Mutare Mining District were identified by De Beers in 2003, but were never reported on. The discovery became known this year when villagers from that area were reported to be recovering diamonds, leading the Geological Survey Department to investigate. The diamonds occur as detrital grains in a locally derived, fault-related conglomerate. They are extensively abraded, fractured and altered, and their precise source has not been identified. The Ministry of Mines and Mining Development has reserved the area to allow for further investigation.

Recently there has been a shift in interest away from traditional diamond and metals exploration to energy mineral exploration. This is due to an increased international demand for these commodities and a consequent firming of prices, especially for uranium. This has seen a rush by companies in submitting applications for coal, coal-bed methane gas and uranium Special Grants. A few of these have been granted for coal. The general delay in the granting of new Exclusive Prospecting Orders and Special Grants is having a negative effect on exploration in the country.

It is reported that RioZim has identified a partner and signed a memorandum of understanding to construct a multi-billion dollar thermal power station at its Sengwa Coalfield.

Letter from Dar es Salaam

Oysterbay, Tanzania

Email: bbarber@cats-net.com

Dear All,

As a lowly consultant, my main jobs recently have involved site visits to gold projects in northern Mozambique and southern Tanzania. It has been ten years since I last visited the Lago Gold Field in Mozzieland,, which was when I took in a field party just after the end of the civil war. While there have been enormous improvements in the country [the roads have been de-mined and you can now get a clean hotel room with running hot water and a good meal in Lichinga, the Provincial Capital of Niassa Province] nothing much has happened in the countryside. To get to Lupaliche, the remote north-western corner of Niassa just over the Livingstone Mountains from Lake Malawi, it involves three days of travel. On the last of these it took us 10 hours to cover some 200 kilometres - braving Simel Pits [the 4x4 truck in the photo] en route. We were proud to learn that the vehicles in our convoy were the first to have reached the area this year, while the last time a truck had been seen was 1998. Its the perfect place to live

if you don't like visitors - unreachable by road from November, when the rains commence, until around July the following year, when the Machinge River can again be forded. How do people survive? Well, with trade goods ranging from paraffin, through clothing, to crates of 'bottle sandwiches' [vital as a 7-tonne Simel obviously cannot carry enough rehydration fluid for a fortnight], which are brought in by bicycle from neighbouring Tanzania, a round trip of about 140 km that [tragically] increases the cost of a beer by about US\$0.50. Not that Carlisto, the satellite phone-endowed head of the local mining Mafiosi, didn't do his best to exacerbate this scandalous affair by inflating prices even more. It seems that he was really serious about the matter, which he did more out of habit than anything else, especially as our potential contribution to his income was paltry in comparison to that derived from his compulsory purchase of the local gold at about half price and his control of the water, booze and prostitute supply, etc.

With best regards,
Brent



Research Funding Opportunities



GSZ Research and Development Fund

N. Matura

The objective of the Research and Development Fund is to give financial assistance for the development of earth science research and training in Zimbabwe. This financial assistance shall be in the form of annual Grants. Grants shall be made for activities over the course of up to one year. Those wishing to continue beyond one year must make subsequent and separate applications. The purpose of the Fund is to support:-

- Research projects on earth science topics of interest (Note that grants from the Fund will not be made to support projects which result in results that are not available to all members of the geological community in Zimbabwe);
- Scholarships for postgraduate study in earth sciences;
- Field trips and short courses for the training of Zimbabweans in earth sciences; and
- Travel to conferences to present earth science results.

In recommending the award of Grants, the following shall be considered:-

- The objective and purpose of the Fund;
- Potential benefits of the proposed activity to the geological and mining communities in Zimbabwe, in terms of development and/or the generation of new knowledge;
- The availability of matching funds, source or provided by the applicants; and
- The aim of awarding more than one Grant in a given year.

Grants made from the Fund shall be on condition that:-

- Results from the supported activity will be presented to the Society via a talk and an item or items in the Newsletter;
- Submission to the Fund Subcommittee of an annual report by 31 December of the year in which funding is granted; and
- Submission of a financial report to the Fund Subcommittee, with copies of receipts, by 31 December of the year in which funding is granted

All applicants for the award of Grants from the Fund shall be Members in good standing for the current membership year. Normally, the principal applicant should have been a member in good standing for at least twelve months.

Applicants for Grants should submit to the Research and Development Fund Subcommittee an application containing details of the applicants, summary of the activity, justification of the activity, proposed methodology, timeframe, budget for application and details of matching funds, if any. If you would like to apply for support, please contact the Research and Development Fund Subcommittee Secretary, N. Matura (nematura@science.uz.ac.zw) Applications for this year should be made by 30 November, 2006.



SEG Timothy Nutt Memorial Fund

David Love and Nyikadzino Matura

A fund in memory of Timothy Nutt has been established by the SEG Foundation at the request of his family and close friends. Tim was a prominent consulting economic geologist, a SEG Member and contributor to the Exploration Reviews pages of the SEG Newsletter. He worked extensively throughout Africa and had strong professional and emotional ties to the country of Zimbabwe. He was attacked and killed on April 12, 2003, while carrying out exploration work in Eritrea. He was 49.

In accordance with the wishes of Tim's widow, Jacquie, the fund is to provide financial support for students and young economic geologists located in Zimbabwe or in southern Africa with ties to Zimbabwe. The fund may be used to support travel to technical meetings, field trips, research grants, technical lectures, SEG student chapter activities or any other activities approved by the SEG Regional

Vice President for Africa. SEG members resident in Zimbabwe will aid the Vice President in selecting recipients.

The Fund is now soliciting applications. If you would like to apply for support, please contact either Nyikadzino Matura (nematura@science.uz.ac.zw) or David Love (davidlove@science.uz.ac.zw). Applications for this year should be made by 30 November, 2006.

Society Activities

Talks Presented

Dr Andrey Bekker (Carnegie Institution of Washington – Geophysical Laboratory) presented a talk at the Geology Department, UZ on 21st July, 2006 entitled **“On the Redox State of the Precambrian Ocean and Atmosphere: Implications for Mineral Deposits”**.

Dr Dennis Shoko (UNDP/University of Zimbabwe) presented a talk entitled **“Environmental and Health implications of mercury use in Small Scale Gold mining”** at the Zimbabwe School of Mines, Bulawayo at 17.30 on Friday 28th July 2006.

Dr Oliver Maponga of Hwange Colliery presented his talk entitled **“Karoo Geology - with particular reference to the Hwange Coalfields”** at the geology Department, UZ, Harare on Friday 25th August, 2006.

Come Join Us for These Exciting Events

Forthcoming Field Trips

VENUE	DATE	CONTACT
Sternblick Quarry, Circle Cement, Harare	Saturday, 14 th October, 2006	Kudzie Musiwa, Mining Engineering, UZ kudzie@science.uz.ac.zw
How Mine, Bulawayo – Limited to 16 people	To be announced	
Eureka Mine, Snakes Head, Guruve	To be announced	
Antech Laboratory/Mine visit, Kwekwe	To be announced	
Mimosa Mine trip	Early 2007, to be announced	

Society Talks

Monday, 16th October, 2006
Geology Department, UZ, Harare

Mr John Flynn, Genalysis, Australia
Modern chemical analytical methods for Au and PGEs and an Introduction to Partial Geochemistry

- 1) A brief introduction to a commercial laboratory
- 2) Analytical methods for Au – the options, their applications and limitations
- 3) Analytical Methods for PGEs
- 4) Introduction to Partial Digest geochemistry

Friday 27th October

Dr Thomas Oberthur, BGR, Germany

Geology Department, UZ, Harare

Research on oxide ores of the MSZ

Summer Symposium

This is a call for papers and presentations for the Summer Symposium, which will be held on the 1st December 2006 in Harare. Papers should be submitted to Mr Kudzie Musiwa on e-mail kudzie@science.uz.ac.zw Please diarise this event.

The A.E. Phaup Award, 2006

Please could members submit any articles on Zimbabwean geology published in 2005/2006 for consideration for the Phaup Award, or let us know if there are any refereed papers that you know of that are suitable for consideration. Please either post a copy to P O Box CY1719, Causeway, or e-mail Gayle Hannsen (dms@zol.co.zw) or any other member of the committee with a PDF format copy.

Obituary

Tizirai Nhesvure, 1966 - 2006

The geological fraternity is sad to announce the death of a highly experienced mining and exploration geologist, Mr Tizirai Nhesvure. He was born 40 years ago in 1966 in the Mtikizizi area of Bikita District in Masvingo Province. He died on 2nd September 2006 after battling with illness and was laid to rest in his new found home town of Kwekwe. Tizzy left behind a wife and two children, aged 8 and 9 years.

Tizirai attended Victoria High School in Masvingo for his A-levels and soon after this joined the Zimbabwe Government as a statistical clerk with the Central Statistical Office in Harare where he served from March 1987 to March 1989. In 1989 he attended the University of Zimbabwe to study geology and chemistry, graduating with a Bachelor of Science Degree in those subjects in 1991.

From January 1992 to December 1992 he was with the Institute of Mining Research at the University of Zimbabwe as Assistant Mineralogist, when he became a member of the Geological Society of Zimbabwe and a graduate member of the Institution of Mining and Metallurgy, London (IMM). His real career as a mining and exploration geologist began when he joined the then Lonrho Zimbabwe at Arcturus Mine as a trainee geologist from January 1993 to May 1994. He trained under veteran Resident Geologist Stanley Muranda. After having had enough of underground mining and becoming tired of working on a functioning mine, he decided to join Pan African Mining (Pvt) Ltd, a young company that had interests in the Banket area and on the Midlands Greenstone Belt around Kwekwe. This was from 1994 to 1995, mostly in the development phase of the Indarama Mine ore bodies. Tizirai had an opportunity to brush shoulders with geological greats like the late Dr Wolfgang Fabiani, Dr R.P. Foster, Edmore Maripakwenda and Luckstone Saungweme. The above-mentioned were the operators involved in the Indarama Mine resource development project. In January 1996 he moved to Rio Tinto's Renco Mine where he again became involved with underground mining, this time under the stewardship of Sheherd Kadziti the Resident Geologist at the mine. He left Renco in January 1997 to resume the work he had left at Indarama Mine, now managed by Trillion Resources of Canada. This time he had another opportunity to work closely with expatriate and local geologists, including David Rigg, Pat Donovan, Pascal Marqui, Paul Chimbodza, the late Collin Nharara, Luckstone Saungweme, Trust Muzondo, Tembani Zvinoira, Mutezo, Felix Walraven, Steve Watt, Nhamo Manenji and Diana Mudimbu. In 2001 Tizirai moved again to join the new and vibrant Homestake Mining and Technical

Services on their Tiger Reef Mine owned by a Mr L.W. John, and he worked with the likes of Luckstone Saungweme, Tevie Paji and Chiedza Nematadzira. Finally in February 2006 he joined African Consolidated Resources, a new British AIM-listed company, as contract geologist under the stewardship of Mike Kellow. His fellow geologists in this venture included Dirk Benade, Luckstone Saungweme, Desmond Shoko, Farai Manenji, Archibald Patsanza, Tichaona Mukhuhlane, Simon Kahovera and Amanda Smith.

Tizirai was a geologist to whom one could give a task and walk away from it, knowing that that task would be accomplished without supervision. It takes 30 years or more to create a professional like him. His understanding and grasp of new concepts was amazing and over the years he had developed himself into a geological-software professional who could drive *Gemcom*, *Vulcan*, *Surpac* or, for that matter, any other computer package developed for mineral resource evaluation. His death has been a blow to the mining industry of Zimbabwe. May his soul rest in peace.

Luckstone Saungweme Project Manager, African Consolidated Resources – Pickstone-Peerless Project - Chegutu

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