

Geological Society of Zimbabwe



Newsletter



February 2006



Recorded earthquakes in southern Africa and faults associated with the Great East African Rift Valley.

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

Institutional Members: Blanket Mines (1983), Chamber of Mines of Zimbabwe, Circle Cement, De Beers Zimbabwe Prospecting, Jeremy Prince & Associates, Pan African Mining, Samsec Vermiculite, University of Zimbabwe Geology Department, Zimplats.

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Did the earth move for you, darling?

David Love

The earthquake that struck southern Africa generated a huge amount of interest – not least among those who were confused by questions like the above. And how many people rushed outside to see if burglars were trying to break down the door? We start this Newsletter with an account of the quake. How soon will East Africa separate off as a new continent? Who will own the new sea and will it improve our rainfall? Watch this space: I am sure we will have all the answers for you in the next issue – plus or minus a few million years...

Elsewhere this Newsletter issue, we showcase some of the papers that were presented at the annual Summer Symposium in December of last year – starting with a volcano, as a natural follow up to the quake. How soon will we have volcanoes in Zimbabwe or Mozambique?

We also present a synopsis of the summer symposium and two society trips. However, this newsletter should carry more news and views than just on official society activities. What have you or your company been doing that is exciting? Tell us about it!

Articles

The Espungabera Earthquake of February 2006

compiled by Andrew du Toit and David Love

The earthquake occurred near the southern end of the East African rift system. The East African rift system is a diffuse zone of crustal extension that passes through eastern Africa from Djibouti and Eritrea on the north to Malawi and Mozambique on the south and that constitutes the boundary between the Africa plate on the west and the Somalia plate on the east. At the earthquake's latitude, the Africa and Somalia plates are spreading apart at a rate of several millimeters per year. The largest earthquake to have occurred in the rift system since 1900 had a magnitude of about 7.6. Most earthquakes within the East African rift system occur as the result of either normal faulting or strike-slip faulting.

The quake had a magnitude of 7.5 on the Richter Scale and occurred at 10 km depth. Aftershocks of up to 5.4 on the Richter Scale were recorded the following day.

Large Quaternary Eruptions at Mt. Meru, Northern Tanzania

Martin Roberts

Roberts, M. 2005. Large Quaternary Eruptions at Mt. Meru, Northern Tanzania. 4th Geological Society of Zimbabwe Summer Symposium, Bulawayo, Zimbabwe, 2 December 2005.

The Mt. Meru pumice and ash deposits, and the Mt. Meru debris avalanche deposit represent two of the largest eruptive episodes of Mt. Meru. Eruption from a magma chamber strongly zoned due to fractional crystallization produced the pumice and ash deposits. This eruptive phase consisted of numerous individual eruptions, and the climactic phase of the eruption (represented by Units A through C) produced a minimum estimated tephra volume of ~ 2.1 km³. Reconstruction of this climactic phase suggests variable eruption column heights up to 23 km, and a easterly wind speed of ~ 16 ms⁻¹ during the eruption, and suggests that primary fall deposits several mm in thickness would have been deposited in the main rift. Units A and C represent Plinian eruptions comparable in size to the 18 May 1980 Mt. St. Helens eruption. The Mt. Meru debris avalanche deposit (~ 8600 BP; Heckey, 1971; in Wilkinson et al., 1983, 1986) has produced the spectacular 5 km wide, 10 km long and 1.3 km high scar which characterizes the edifice. The debris avalanche flowed eastwards and up the lower slopes of Mt. Kilimanjaro, with a run out length of ~ 33 km and an aerial extent of ~ 390 km². Both block facies and matrix facies deposits are preserved. By reconstructing Mt. Meru's morphology prior to the debris avalanche collapse event and then subtracting the post-collapse morphology (present-day morphology minus the ash cone and Kitoto lava flows), a debris avalanche volume of ~ 28 km³ is obtained, making the Mt. Meru debris avalanche one of the largest sub-aerial debris avalanches yet described. This volume requires an average debris avalanche deposit thickness of ~ 70 m, which is argued to be reasonable for the Mt. Meru debris avalanche. The trigger for the Mt. Meru debris avalanche is unclear, but a tectonic control is thought to be the most likely, with the orientation of the Mt. Meru and Mawenzi (Mt. Kilimanjaro) collapses consistent with the regional stress fields. Although Wilkinson et al. (1983 and 1986) suggest a genetic (and close temporal) link between the tephra deposits and the debris avalanche deposits, it is rather thought that they are unrelated, and that the tephra deposits preceded the collapse.

Exploration Strategies in Arid Settings

Joseph Chimvinga

Chimvinga, J. 2005. Geology of base metal deposits of the Bushmanland group of South Africa: implications for exploration strategies with special emphasis on arid settings. 4th Geological Society of Zimbabwe Summer Symposium, Bulawayo, Zimbabwe, 2 December 2005.

A 3 day field visit was carried out on the Aggeneys mining district of South Africa to familiarise with the geology of the base metal deposits in this area. The area consists of 3 massive sulphide deposits from east to west: Gamsberg, Broken hill and Black mountain. The massive sulphides are host to Zinc (Zn), Lead (Pb), Copper (Cu) and Silver (Ag). Mineralisation is hosted in the mid-Proterozoic Bushmanland Group of metasediments and metavolcanics which is part of the broad Namaqualand metamorphic complex. The rocks have been metamorphosed to amphibolite facies.

The regional stratigraphic sequence, from base to top, consists of a leucocratic gneiss, an aluminous schist unit, crystalline quartzite, the Aggeneys ore formation which hosts the massive sulphide ore bodies, and the hangingwall formation of amphibolites, gneisses and conglomerates. In the ore formation, banded iron formation (BIF), consisting of magnetite and ferruginous quartzite form envelopes around the massive sulphide ore bodies.

The Gamsberg deposit is rich in Zn and Pb at average grades 5.8% and 0.5% respectively. At Broken Hill the massive sulphide deposit has 0.45% Cu, 6.35% Pb, 2.87% Zn and 82g/tonne Ag. The Black mountain is sub-economic and has 0.75% Cu, 2.67% Pb, 0.59% Zn and 30g/t Ag. These metal content trends show that there is a general regional zonation of base metal mineralization in this area, from Gamsberg to Black Mountain. There is a general decrease in Zn mineralization from Gamsberg to Black Mountain and a notable increase in Cu mineralization for the same trend. Pb decreases away from the Broken hill deposit in both directions.

Initial reconnaissance work in the area involved regional aeromagnetics which picked up high magnetic anomalies caused by the banded iron formations and ferruginous quartzites associated with the massive sulphide ore bodies. Induced polarisation was used as a follow up on these anomalies to establish drill test targets. Geochemical sampling involved assaying of gossanous material found at the surface on each of these three deposits. In low lying pans gossanous fragments trapped in calcretes were also analysed in search of base metal signatures. In stream sediments indicator minerals which are associated with these base metal deposits were used to trace back to their source. These indicator minerals include Zn spinels like chromium, gahnite and ilmenite.

History of Gold Exploration in the Gwanda Greenstone Belt

J Nyagumbo

Nyagumbo, J. 2005. Past systematic gold exploration activities on the Gwanda Greenstone Belt (implications on recent discoveries by partners and small scale miners). 4th Geological Society of Zimbabwe Summer Symposium, Bulawayo, Zimbabwe, 2 December 2005.

Despite the Gwanda greenstone belt having gone through various gold EPO tenures there has been limited amount of detailed systematic exploration activities carried out on this belt. Rhodesia Stratmore (Pvt) Ltd, Blanket Mine (1983) (Pvt) Ltd, Oversea, Trillion Resources, Antares, Masasa mines, Cluff Resources and Prospecting Ventures have carried out notable amount of work. Of late new organizations have applied for EPO ground on the Gwanda greenstone belt. In most cases little or no fieldwork has been done under the tenures of these EPOs (possibly due to the location of Gwanda?). Very few projects have been developed to

reach to the one resource definition stage. In some cases there has been no single fieldwork done under certain EPOs.

High powered "consultants and earth practitioners" have visited and wrote papers and books on the Gwanda greenstone but there has been little or no follow up work on recommendations made.

Interestingly recent "random" surface to sub-surface exploration by gold panners (& small scale miners) has identified virgin vein deposits. New deposits have been picked up especially on the Central Gwanda and Collen Bawn Deformation zones. Such deposits are only being exploited to the upper horizons (leaving deeper sections untapped). Lack of expertise and resources to mine deeper make these "new mines" die closer to surface. Discoveries of this magnitude, although small in certain instances could be the tip of huge gold deposits underneath. As earth scientists gold panners and small scale miners are posing a serious challenge to us. In certain instances gold panners have discovered deposits where some of the "so called" multinational companies have walked through.

Cross Section Modelling of the Main Sulphide Zone

Andrew Du Toit

Du Toit, A. 2005. Cross section modelling of the Main Sulphide Zone, Great Dyke, Zimbabwe. 4th Geological Society of Zimbabwe Summer Symposium, Bulawayo, Zimbabwe, 2 December 2005.

The Great Dyke is a layered mafic-ultramafic intrusion that transects the Zimbabwean Archaean Craton in a north-north-east trending direction. The Dyke is highly elongate, slightly sinuous, 550km long, with a maximum width of 12 km.

The Main Sulphide Zone (MSZ) of the Hartley Complex of the Great Dyke contains a large resource of platinum group elements. The MSZ forms a doubly plunging synform, often described as an open canoe shape some 100km long and up to 12km wide and 1.2km deep.

Resource drilling has been carried out on wide spaced grids, with drill spacings of 250m, 500m, 1km and wider. This paper outlines one approach to gaining the most information from this drilling.

Zimplats is currently mining platinum near to southern end of the complex, by open pit methods to depths up to 50m and by room and pillar extraction in the axis of the synform. As mining progresses northwards the extent to which room and pillar mining is appropriate is limited by the dip of the MSZ. The location and characterization of faults on all scales is an ongoing challenge.

Three dimensional computer models of the MSZ in areas with sparse drilling are distorted by drill spacing and positioning. This leads to significant errors and uncertainty in the positioning of dip contours. In areas of relatively dense drilling even significant faults are difficult to detect on these models.

Manual interpolation gives a more intuitive cross sectional shape but does not highlight where the changes in dip are due to faults rather than the synformal structure of the zone making the interpretation of faults difficult and subjective.

In order to overcome these limitations, a mathematically describable model of the shape was investigated. This model would allow quantitative comparison of the structure in different areas and provide a reference against which to compare the intersections in order to increase the resolution with which faults can be detected.

As a result it was found that the cross sectional shape of the MSZ approximates to an arc of a circle. Having such a simple, mathematically describable curve has a number of useful applications.

Fitting an arc to the drill intersected elevations allows the dimensions of the curve to be estimated for a particular area. Once the centre of the circle and radius of curvature are known, the position of a particular dip contour can be calculated even in areas where there is sparse drilling data. This increases to the confidence with which dip contours can be modeled.

The shape of the curve described simply by the radius of curvature is a parameter that is easily visualized, understood and communicated and allows quantitative comparison of different areas of the MSZ.

Where groups of holes along a cross-section fit circles with different centres, the position and throw of otherwise subtle faults can be deduced.

A simple mathematical model of the shape of the MSZ has proved useful in analyzing and communicating the cross sectional structure. Work is now focused on finding similar mathematical descriptions of the long range trends in the thickness and metal content of the MSZ over the whole complex.



Chairman's Chat

Andrew du Toit

The last six months have been tough with raging inflation, in particular scarce and expensive fuel. Despite this the society remained active with talks, field trips and the Summer Symposium.

The 8th A.M. MacGregor Memorial Lecture was delivered in Harare at the end of November and Bulawayo early in December. This is a biennial event that has been running for 20 years now. This year we were honoured to have Tim Broderick deliver a fascinating and well illustrated talk on "130 Years of Regional Geological Mapping – Zimbabwe's Heritage and a Challenge for the Future". He focused on the history of the Geological Survey and on the ongoing importance of its fundamental role; regional geological mapping. Both talks were well supported and it was good to see number of the people that Tim mentioned present or represented by their wives.

The Summer Symposium was success once again this year with 35 geologists meeting in Bulawayo for a day of excellent talks. This was followed by a weekend trip to Hwange Colliery, which also well attended. Thanks to Oliver Maponga and his team for enthusiastically showing us the colliery and nearby geology.

We also had an informative visit to the granite cutting and polishing works at Southern Granite in Chitungwisa and a stimulating talk by Prof Alan Wilson.

The Atlas Project is starting to take shape. The idea is to collect submissions about informative and interesting outcrops. Hilary Gumbo gave an update at the Summer Symposium that was enthusiastically received - please continue to send in your submissions.

I look forward to seeing you at the AGM in early March.

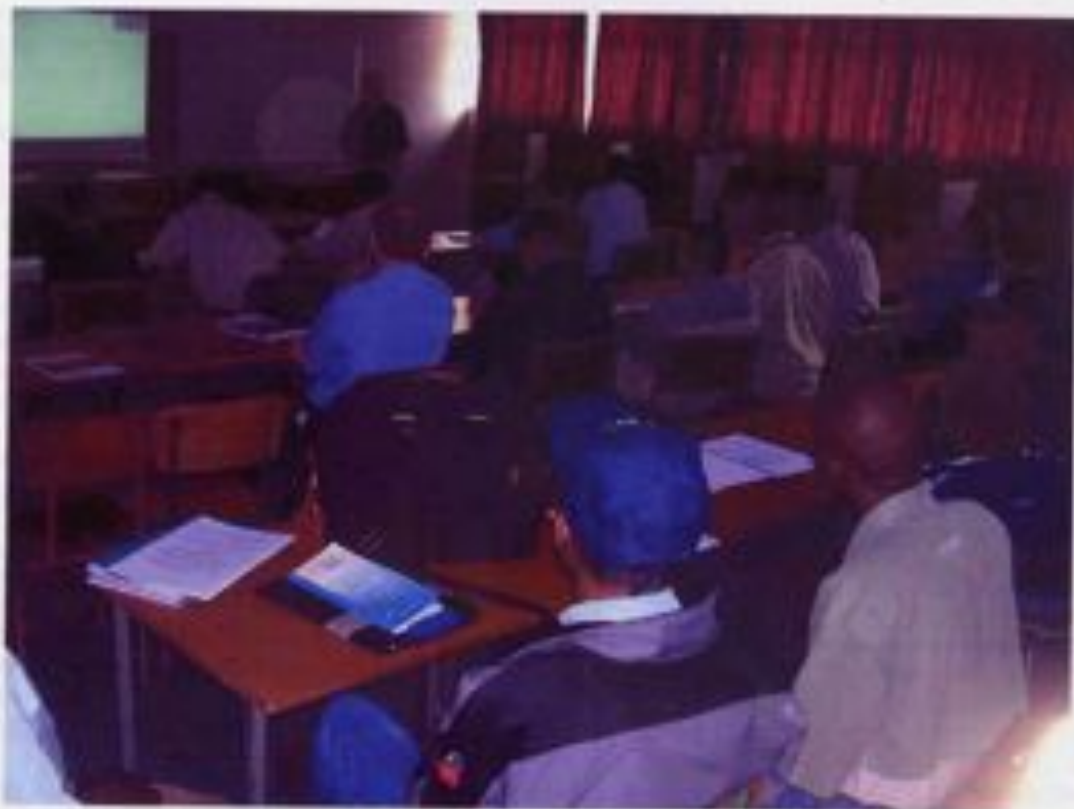
News

GSZ 2005 Summer Symposium

Martin Roberts

The Summer Symposium was held at the Bulawayo School of Mines on the 2nd Dec 2005. It was well attended with approximately 30 delegates.

Andrew Du Toit opened the proceedings with a welcome address and thanked Zimplats and De Beers for their financial contribution to the Symposium. The first speaker was Mr. Tusai from the Bulawayo School of Mines where he outlined the programs being operated by the school, and encouraged industry to support the school. He also made a special request for display rock samples for the school.



Dr. M. Roberts presented some work that has been done on the reconstruction of large Quaternary Eruptions at Mt. Meru, Northern Tanzania. He showed how variations in thickness of pumice/ash deposits may be used to reconstruct the size of plinian volcanic eruptions, and how the distribution of pumice clasts provides insight into the eruption column height and prevailing wind direction/speed at the time of eruption. He also presented an analysis of the large cataclysmic debris avalanche deposit.

Mr. H. Gumbo then presented the work that is being done on the Atlas Project, which is an initiative of the Geological Society of Zimbabwe to produce an atlas of the country's best outcrop (geological heritage) sites, with information on the geology together with logistical

information regarding locality access etc. He stressed the need for member contributions to the atlas which will be vital to ensure the success of this Atlas.

Mr. G. Pybus from De Beers gave a presentation of the use of Remote Sensing in Mineral Exploration. This included a general introduction into remote sensing theory and was followed by a more thorough review of the new developments in Hyperspectral Remote Sensing and how this can be particularly useful in mapping your hydroxyl mineral species. He stressed the need to know what one is looking for and choosing a technique that is suitable for your needs and budget.

Mr. M. Moyo presented an overview of the application of SURPAC at Blanket Mine describing the main features of surveying, digitizing, modeling, grade estimation and cross sectioning together with resource estimation and mapping. The benefits of SURPAC were identified as the speed at which reports may be generated, fewer human errors and the improved accessibility of data. The main challenges of this package were suggested to be the cumbersome nature of the data capture exercise.

Mr. I. Murimba reviewed the cover sequence stratigraphy in Western Zimbabwe, and its implications for diamond exploration. The Karoo, Cretaceous and Kalahari stratigraphy were reviewed, with particular reference to how to identify different units when drilling.

Mr. S. Ravengai reviewed the development of groundwater flow modeling, by looking at certain old tailings dumps and the passage of contaminants through the dump sub-strata with time to produce a contaminated aquifer. The importance of managing the environmental risks by correct lining of dumps was stressed in light of the new environmental legislation.

Mr. J. Chimvinga presented on base metal exploration in Bushmanland. This was a review of base metal metallogenesis in this area of South Africa, together with a review of the prospecting techniques that are best suited to finding these structurally complex deposits. Much emphasis was placed on the understanding of different elements mobility in the near-surface environment and the impact this may have on geochemical sampling and the interpretation thereof.

Mr. J. Nyagumbo reviewed gold exploration in Gwanda. He took the audience on a historical review of the various historical review of the work that has been performed in the Gwanda Greenstone Belt, and made note of the little work that is currently being done by ground holders.

Mr. A. Du Toit presented some of the latest work by Zimplats in their effort to accurately model the cross sectional distribution of the MSZ. The mathematical modeling produced a series of large circular arcs which best defines the position of the MSZ between drill points. Where more than one circular arc is needed to explain portions of a profile, this may be used to infer the throw of subtle faults.

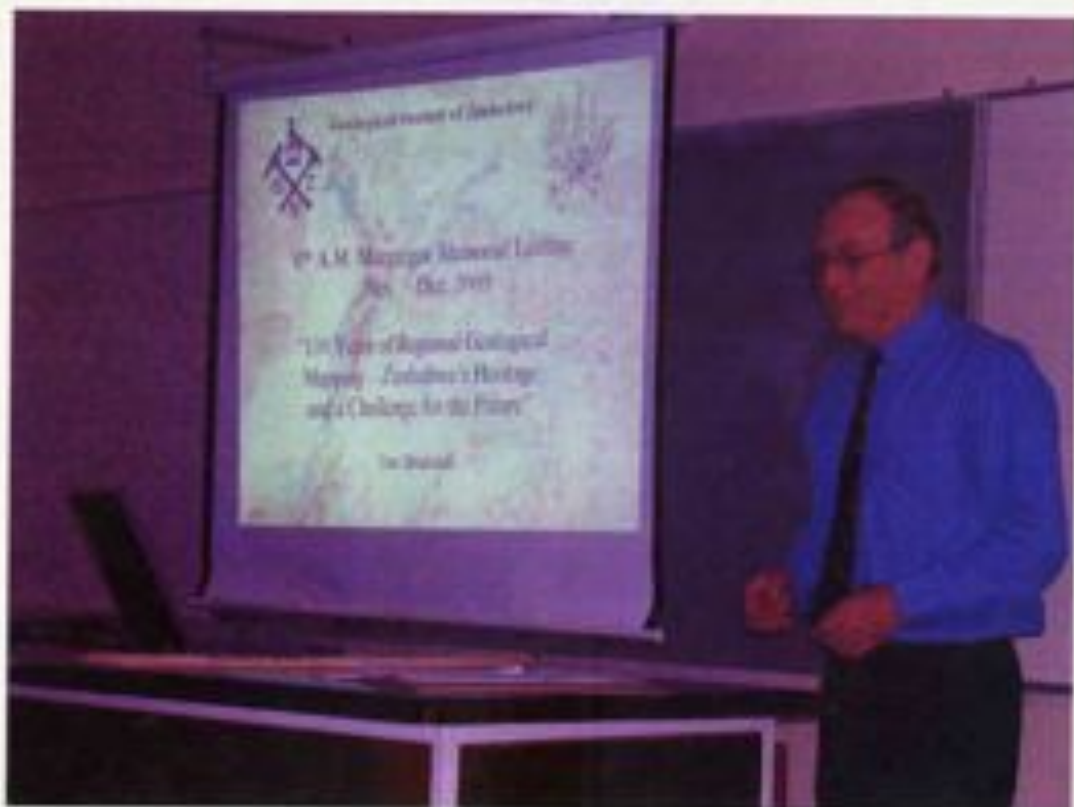
Mr. P. Zizhou highlighted the detrimental effects of small scale mining. He reviewed the techniques that are used by the small scale miners in prospecting and ore extraction with particular reference to the safety risks involved and the environmental scarring that results. He suggested that better communication between the small and large scale miners could mitigate the effects of these small scale miners.

Mr. D. Love reviewed the effects of local granitic geology on the sustainability of the communal lands in Zimbabwe. He explained the direct impact of the poor granitic soils on crop yields and highlighted the fact that the highest population density in communal lands is in areas where the poorest soils are located. The conclusions were that although some practical techniques may be applied by small scale farmers to improve their yields and manage the water supply,

ultimately this system is unsustainable. New solutions to accommodating the poor communal inhabitants need to be found.

Mr. W. Dube presented on the problems that face small scale miners. He highlighted the increased proportion of the population that is now engaged in legal and illegal small scale mining. The virtually zero starting capital of these miners was identified as the main problem facing these miners, and as such, many are living hand to mouth even though they are producing processed ore. The environmental impact of these activities was also again highlighted with dramatic photos.

Dr. M. Roberts finally summarized the proceedings of the day and concluded that the standard and breadth of presentations were encouraging signs for the health of this Geological Society.



Mr T. Broderick presented the 8th A. M. Macgregor Memorial Lecture. This proved to be an epic voyage through the pioneering days of the Geological Survey of Zimbabwe where regional geological mapping slowly started to put together the foundations of the current 1:1000000 geological map. He brought attention to the fact that currently virtually no regional mapping is taking place in Zimbabwe, and suggested that this is currently the greatest challenge facing the Geological Survey. He also announced the imminent arrival of the newly revised 1:1000000 geological map.

Society field trip to Hwange

Seedweel Ravengai

I am very happy to say that the Geological Society of Zimbabwe managed to organise a trip to Hwange. It was the most exciting trip for the year 2005 which saw 21 Geologists participating namely: Seedweel Ravengai (the writer), Andrew Du Toit, Mavwa Tavashavira, Collins

Mwatawa, Joseph Hwata, Simon Kahovera, Iyanai Murimba, Edgar Chiteka, Tim Broderick, Coniace Madamombe, Faith Love, David Love, Nyikadzino Matura, Steven Duma, Peter Zizhou, Jonathan Nyagumbo, Jones Bishi, Raymond Juru, Joseph Chimvinga, Freddy Hlasi and Hillary Gumbo. We left Bulawayo on the 3rd of December 2005 at 0600 hrs.

We drove from the Bulawayo greenstone belt into the Karoo sandstones at 13 km peg and then into the basalts that form the upper most unit of the Karoo sequence as first mapped by Macgregor at 32 km peg. At 41 km peg we entered into the Karoo sandstones and were back into the basalts at km 55 km peg and then into the Kalahari Sands, which are post Karoo at 62 km peg, and back into the basalts again at 69 km peg. From basalts, we were back again into the Kalahari sands (77 km peg) which stretched up to 114 km where the basalts re-appeared before disappearing at 124 km peg into the Kalahari Sands. At 134 km peg, there was re-appearance of the Karoo sandstones followed by Kalahari sands at 154 km peg. These sands continued up to 241 km peg after which we entered into the Mudstones of the Lower Karoo. At 245 km peg we began seeing paragneisses, meta-sediments (phyllites and quartzites which have been correlated to the Pirwiri Group of the Magondi Belt), amphibolites and Proterozoic intrusive granites of the Dete Kamative Inlier, which stretched up to 301 km, after which the Lower Karoo Mudstones re-emerged. At 305 km peg, we were back into sandstones of the Upper Karoo. These stretched up to 323 km after which we entered into the Mudstones and Coal measures of the Lower Karoo within and around Hwange.



We arrived in Hwange at 1000 hrs and we were welcomed by Stewart Mandwele of the Wankie Colliery Company, who described to us all the processes that involved in coal mining at their open cast pit as well as underground mining. Later on we toured their mining concession area where we met Mr Maponga who is the Technical Services Manager. We then had a late lunch at their Golf Club after which we proceeded to the Deka Fault where there is a very large displacement. Mr Maponga gave us a lecture on the geology of the area and their mining

operations at the mine. We proceeded for dinner after which we went for bed. The participants left on the 4th of December 2005.

I would like to take this opportunity to thank the people of Wankie for their hospitality and all the participants who took part in this excursion. It was brilliant and it is my hope that you will continue to support your society (a society of geologists) in the year 2006. We urge all these institutions and distinguished members that they should pay for their membership for 2006.

Society field trip to Southern Granites Company in Chitungwiza

Seedwe! Ravengai and Andrew Du toit

The trip was organised by the Geological Society of Zimbabwe. Members met at the Geology department University of Zimbabwe at 1300 hrs and departed at 1330 for Chitungwiza. It was a fabulous September afternoon in which only eleven people attended with the majority of people coming from the Geology Department. We arrived at the site at about 1430 and were met by Mr. Chengeta who took us through the plant and explained to us how the granites from various regions are processed.



The company receives various types of granites from different regions: black granites from Mutoko and Mt. Darwin, pink granites from Zambia and Romantic Blue granites from Mozambique. A block of granite normally measures 2.8x1.5x1.5 and weighs 30-40 tonnes. Big haulage trucks are used to bring the granites to the site and the granites are off-loaded using a crane and are put in trolleys. Each trolley can hold two blocks at a time. The blocks are then cut into 2-3 cm (width or height) slabs by the use of steel grits that they import from South Africa. In the past, they used to import the grits from Italy. The cutting of blocks takes 4-5 days. To

prevent the cutting blades from rusting, slurry of steel grits + lime + water is always run during the cutting process.

The concentration of each of the slurry constituents is monitored by the use of a control board. The control board also monitors the cutting height within the blocks. The wastewater that emanates from the cutting process is discharged into settling tanks where it is pumped into separation tanks. In the separation tanks, mud is separated from wastewater and the wastewater is pumped to the polishing section where the quality of water used is not necessary. In the polishing section, polishing bricks are used and these are arranged from coarse to fine in the polishing machine.



The time for polishing depends on the size of the slab and also on whether the slab is fine or coarse. Thus, the slabs are polished on one side until they are shiny! After the polishing process, the slabs are packed in the warehouse for export. The company sells their products to South Africa, Brazil, Argentina, America, England, Israel, Australia, Bulgaria and Italy. The major costs of the company are the steel grits, electricity and the blades.



News from the Geology Department, University of Zimbabwe

Nyikadzino Matura

Two M.Phil. students registered for 2006. Thanks to WaterNet (The Limpopo Challenge programme) and the Faculty of Science Research board for providing the initial funds for the researches. More funding from the corporate world to facilitate the smooth completion of these researches will be very welcome. The titles of the projects are:

- "Structural controls of groundwater occurrence in crystalline aquifers of the Umzingwane catchment, Limpopo Basin" – by G. Chinoda.

- *"Alluvial aquifers in the Mzingwane Catchment: their distribution properties, current usage and potential expansion risk"* - by W. Moyce.

This is an important development as we hope that on completion these two candidates will join our academic staff as lecturers.

The Honours programme will be running this year after a two year break. We call upon the industry to support the potential candidates.

Mr Matura attended a two months training course (October and November 2005) on "Mineral Deposits Exploration" in China at the China University of Geosciences and was awarded a certificate.

Mr Seedwel Ravengai who is a member of the International Geological Correlation Programme Project No. 478, attended the "2nd Symposium on Neoproterozoic - Early Paleozoic Events in South western Gondwana" in Windhoek, Namibia on the 10-11th October 2005. He presented some preliminary work on the Sijaria and Tengwe Groups as part of the correlation of Neoproterozoic to Ordovician Sedimentary Successions and tectonomagmatic events in SW-Gondwana.



Mr Seedwel Ravengai and Mr William Moyce, attended the "6th Annual WARP/SA/WaterNet/GWP Symposium", Ezulwini, Swaziland from 1-4 November 2005, which was hosted by the Land Use and Mechanisation Department of the Faculty of Agriculture, University of Swaziland. The theme of the Symposium was Water for Sustainable Social-Economic Development, Good Health for all and Gender Equity. Mr Seedwel Ravengai presented a paper entitled: "Groundwater Flow and Contaminant Transport Model of the Zimpos Factory Site, Harare, Zimbabwe". Mr William Moyce presented a paper entitled: "Alluvial aquifers in the Mzingwane Catchment: their distribution, properties, current usage and potential expansion and risk". Mr Moyce was awarded a prize to go and present his paper in Stockholm, Sweden in 2006.

Finally the department requests all practising geologists with interesting findings from their work which they are willing to share with the department of geology staff and students to come forward. We believe this will help us keep together as a geology fraternity and updated on what is happening around us and find ways of assisting each other in times of need.

Activities of the SEG Timothy Nutt Memorial Fund

Brian Thomson

In late 2003 and early 2004 the Fund advertised locally within Zimbabwe (Zimbabwe Geological Society Newsletter and at Geological Society meetings). It received four applications for

financial support from Zimbabwean geologists and geology students. Of these, two were approved, as follows:

Nyikadzino Matura

Mr Matura is a lecturer at the Geology Department of the University of Zimbabwe. The Fund provided financial support totaling US\$1,205 to enable Mr Matura to attend a conference on Exploration and Environmental Geochemistry in the Czech Republic in September 2004. The SEG members in Zimbabwe agreed that it was important to provide all possible support to the few professional staff remaining at the Geology Department. The knowledge gained by Mr Matura through his exposure at the conference to the latest thinking in geochemistry will help him in his academic work but will also directly benefit the geology students he teaches.

Simon Kahovera

Mr Kahovera was a third year Geology and Geography student at the University of Zimbabwe. He applied to the Fund for support to attend the Student Geocongress 2004 at the University of the Witwatersrand in July 2004. Due to time constraints the Fund was unable to provide the money to support Mr Kahovera directly. However Prof Laurie Robb, then the SEG Regional VP for Africa, kindly met his costs (about R1,700) from his own budget. Thus the support for Mr Kahovera, although provided under the name of the Fund, did not result in any drawdown of monies from the Fund.

During 2005 no award was made, due to complications with administration of the fund.

Research Funding Opportunities



GSZ Research and Development Fund

Hillary Gumbo

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 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. For further information, contact the Hon. Secretary, Kudzai Musiwa (kudzle@eng.sz.ac.zw).



SEG Timothy Nutt Memorial Fund

Brian Thomson

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, an 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, 2000, 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.

If you would like to apply for support, please contact either Brian Thomson (briant@ecoweb.co.zw).

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Annual General Meeting

Notice is hereby given that AGM of the Geological Society of Zimbabwe shall be held as follows:

Date: 3 March 2006

Time: 1700 hours

Venue: Senior Common Room, University of Zimbabwe

The charge for the dinner is Zim\$300,000.00 per person.

K. Musiwa
Hon. Secretary

AGENDA

1. Convening of the meeting
2. Minutes of the previous meeting
 - 2.1. Approval
 - 2.2. Matters arising not covered elsewhere in the agenda.
3. Chairman's statement
4. Treasurer's report
5. Announcement of next committee
6. "Geological wonders of China": presentation by Mr. N. Matura
7. AOB