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The Voice of Mineral Sector in Malawi

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Malawi to enact new mining law this year

Minerals sector welcomes new minister

By Marcel Chimwala

overnment says it has planned to have the new Mines and Minerals Act in place before the end of the year to replace the 1981 Mines and Minerals Act, which is said to be outdated.

New Minister of Natural Resources, Energy and Mining, Honourable Bright Msaka SC, said at a consultative workshop on the Draft Mines and Minerals Bill held at Capital Hotel in Lilongwe that enactment of the new laws is now long overdue.

"My Ministry is presenting you an opportunity to provide your final comments on the Draft Bill. After this, and taking into account your collective views, the Bill will be presented to Cabinet and eventually to the National Assembly," said Honourable Msaka in his speech to launch the workshop which attracted a cross section of stakeholders in Malawi's minerals sector.

Meanwhile, congratulations have poured in from a number of minerals sector players to Honourable Msaka upon his appointment as Minister of Natural Resources, Energy and Mining.

Stakeholders that have congratulated the Minister include the Principal Secretaries, Commissioner for Mines, Directors and the members of staff of the Ministry of Natural Resources, Energy and Mining, RAKGAS, Hamra Oil Holdings, Pacific Oil Limited, Cement Products, Crown Minerals/Tengani Titanium Minerals, Shayona Cement Corporation, Intra Energy/Malcoal Mining, Mota-Engil, Mchenga Coal Mines, Optichem (2000) Limited and Standard Bank.

(See our exclusive article covering the consultative workshop on Malawi's Draft Mines and Minerals Bill on Page 10 and 11)



Hon. Msaka: Enactment of new law long overdue

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congratulate Honourable Bright Msaka SC on his appointment as Minister of Natural Resources, Energy and Mining.

Govt. to recruit Registrar of Mineral Tenements



Mr. Chilumanga making his presentation

By Marcel Chimwala

he Malawi Government will recruit the Registrar of Mineral Tenements who will be responsible for maintaining a chronological record of all applications received for mineral tenements.

This is contained in the Mines and Minerals Bill, which is expected to be tabled in Parliament this year.

Acting Director for Department of Mines, Mr. Peter Chilumanga, explained in his presentation at a consultative workshop on the Mines and Minerals Bill in Lilongwe that with the new law in place, the Department will migrate from using manual to cadastre system of keeping records.

"The Registrar of Mineral Tenements will receive applications for the grant, transfer, extension, modification or consolidation of mineral tenements or application for expansion or surrender of mineral tenement areas," said Chilumanga, reading an extract of the Bill.

According to the Bill, the functions of the Registrar of Mineral Tenements will include to coordinate mineral tenement application processing, receive applications and coordinate the processing of applications for export permits and Reserved Minerals Licences.

The Registrar will also maintain the register as required by the Act and receive and maintain mineral tenement related

records, reports and submissions.

Chilumanga told the participants at the workshop that the Registrar will accept payment of fees and annual ground rent required by the Act and establish and maintain a database which shall be accessible by the public.

The Registrar will report to the Commissioner for Mines and Minerals.

Other than the existing Mines and Minerals Act of 1981 which seemingly gave more powers to the Minister, the Bill seems to give more powers to the Mineral Resource Committee in the administration of the mineral licensing regime.

The Mineral Resources Committee shall consist of the Principal Secretaries (PSs) or representatives of PSs for Ministries responsible for mining, economic planning and development, local government, environmental affairs and lands.

The Committee will also have slots for Director for Mines and Geological Surveys.

"The Minister may not grant an exploration licence, retention licence, medium-scale mining licence or large scale mining licence unless the Mineral Resource Committee has approved the respective application, and any grant of a licence that contravenes this subsection is null and void," states the proposed piece of legislation.

It further says that "where the Mineral Resources Committee approves an application for an exploration licence, retention licence, medium scale mining licence or large scale mining licence, the Minister, without delay, shall without exception grant such licence to the applicant."

"Where the Mineral Resources Committee determines that a mineral tenement tendering process should be applied to any Geological Survey Reserve Area, the Minister, without delay, shall initiate and carry-through the tendering process for such area."

The Bill has also some aspects that promote community engagement by mining companies, corporate social responsibility, and local participation in mining ventures.

It also recognizes artisanal and small scale miners and women miners as important participants in the development of the minerals sector.



PS Mr. Ben Botolo (2nd from right) and some of the delegates at the workshop



The Principal Secretaries,
Commissioner for Mines,
Directors and Members of Staff
in the Ministry of Natural
Resources, Energy and Mining



congratulate

Honourable Bright Msaka SC

on his appointment.









on his appointment as Minister of Natural Resources, Energy and Mining.

EDITORIAL

Congrats Hon. Msaka, word of thanks to Hon. Muluzi



BY MARCEL CHIMWALA, PUBLISHING EDITOR

The month under review saw some changes at Capital Hill whereby Ministers and Principal Secretaries were shifted to positions which His Excellency the State President Professor Arthur Peter Mutharika felt they will fit the most.

The Ministry of Natural Resources, Energy and Mining was not spared in the changes. It received former Secretary to the President and Cabinet Honourable Bright Msaka SC as the new Minister replacing Honourable Austin Atupele Muluzi who was moved to the Ministry of Home Affairs and Internal Security.

Mining Review joins the whole mining fraternity in congratulating Honourable Msaka on his appointment and also extends best wishes to Honourable Muluzi as he takes over the reigns at Home Affairs.

We feel it is an opportunity for Honourable Muluzi who is familiar with security issues that may affect investment in the minerals sector to head the Ministry of Home Affairs.

We, therefore, expect that the youthful charismatic minister who mesmerized us with his moving and inspiring speeches when he was at the Ministry of Natural Resources, Energy and Mining will hardly forget the minerals sector as he serves the country in his new role. Best Wishes Honourable Muluzi!

For Honourable Msaka, this edition of *Mining Review* which is the biggest ever as it is filled with messages congratulating you upon being bequeathed with the new robes is a clear testimony of a grand welcome in the minerals sector.

The sector is hoping to benefit from your rich experience as a career civil servant which saw you rising to the top position of Chief Secretary to the President and Cabinet.

Your professional knowledge and understanding of the laws is another plus which we feel is vital as the Ministry is in the course of reviewing archaic pieces of legislation including the 1981 Mines and Minerals Act and we assume Professor Mutharika based on such merits to shuffle you to the Ministry. Congratulations Honourable Msaka!

Great Spirit! Dear stakeholders!

Mining Review would like to thank various stakeholders who have sponsored this special edition that welcomes the ushering of Honourable Msaka to his new position. Special mention should go to the Principal Secretaries, Commissioner for Mines and the whole Ministry of Natural Resources, Energy and Mining, our major sponsor RAKGAS, Mota-Engil, Hamra Oil, Cement Products Limited, Shayona Cement Corporation, Intra Energy/Malcoal Mining, Tengani Titanium Minerals/Crown Minerals, Pacific Oil Limited, Optichem (2000) Limited, Mchenga Coal Mines and Standard Bank, which is the leading bank in financing the minerals sector. We thank you for showing the great spirit of togetherness you, Dear stakeholders!

EYE ON MALAWI'S Extractive Industries Transparency Initiative With Rachel Etter

Examining Malawi's journey towards EITI compliance



he Government of Malawi intends to submit its application to join the Extractive Industries Transparency Initiative (EITI) this June. The new Minister of Natural Resources, Energy and Mining, Hon. Bright Msaka SC, confirmed, once again, Malawi's intentions to join the EITI. This step is being taken in order to promote greater accountability in the sector and fact-based dialogue on how Malawi can best use resources and revenue. Msaka made these remarks during the consultation workshop on the draft Mines and Minerals Bill in mid-April. Msaka also noted that transparency for the disclosure of necessary information for the EITI, such as data on company payments to government, is provided for in the draft Bill.

On 30 and 31 March, after the April edition of the Mining Review went to press, the multi-stakeholder group that has been charged with the implementation of the EITI in Malawi, met to draft the work plan for the EITI process. This is one of the required documents for Malawi to sign up to the EITI and be awarded EITI candidacy status.

The three constituency groups in the multi-stakeholder group – government, industry and civil society – along with Lutz Neumann, a consultant hired by GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit), met in Salima to discuss the terms of reference for the grouping and the work plan. The Ministry of Finance, Economic Planning and Development's Revenue Policy Division is currently operating as the EITI National Secretariat so was also present at the meeting along with GIZ representatives from the programme Strengthening Public Financial and Economic Management. The chair of the meeting, the Chief Economist from the Revenue Policy Division, George Harawa, explained that "This is a very, very important meeting as part of the multi-stakeholder group's work as we move the EITI process forward".

The multi-stakeholder group deliberated the goals for the EITI in Malawi. At its heart, the EITI promotes transparency and disclosure of company payments to government and government receipts of these payments in order to foster greater public debate on the use of natural resource wealth. The multi-stakeholder group hopes that the EITI in Malawi will also strengthen partnerships and trust between government, companies and the public to attract quality investments that can be used to increase the revenue base and socio-economic benefits from the extractive industries.

Present at the meeting were multi-stakeholder group representatives from the Ministry of Finance, Economic Planning and Development, the Ministry of Natural Resources, Energy and Mining, the Reserve Bank of Malawi, the National Audit Office, Globe Metals & Mining, Mkango Resources, Paladin, ActionAid Malawi, the Catholic Commission for Justice and Peace, Citizens for Justice, and the Foundation for Community Support Services. Only Bwanje Cement sent their apologies.



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SPEECH BY THE MINISTER OF NATURAL RESOURCES, SC. AT THE OPENING CEREMONY OF THE NATIONAL MINERALS BILL HELD AT SUNBIRD CAPITAL HOTEL,



t gives me great pleasure to warmly welcome you all to what I consider to be a crucially important National Consultative Workshop, on a long overdue draft Mines and Minerals Law.

Distinguished ladies and Gentlemen, we are here today in order for my Ministry to present the draft Mines and Minerals Bill and give you, distinguished and eminent participants, an opportunity to provide your final comments on the Draft Bill. After this, and taking into account your collective views, the bill will be presented to Cabinet and eventually to the National Assembly.

Distinguished Guests, Ladies and Gentlemen, the current Government, under the sterling leadership of Professor Arthur Peter Mutharika has singled out mining as one of the key transformative sectors for the upliftment of our economy.

There is no doubt in the opinion of Government that mining still remains one of the key priority sectors that can significantly contribute to socio- economic development of the country. This is also envisioned in the current Malawi Growth and Development Strategy.

However, in order for the mining industry and our mineral resources to make the expected contribution to the country's economic growth, there is need for concerted, consistent and steadfast effort towards promotion of sustainable mining. This, in the main, will be possible only if we develop a sound and comprehensive mining legislation, which takes into account

prevailing international best practices, attract investment and enables Malawians to derive optimum benefits from mining.

Accordingly, we need a piece of legislation that is comprehensive, that meets international standards, that clarifies the rules of engagement, that reduces speculation, that evens the playing field, that makes mining profitable, that is beneficial to Malawi, that attracts investment, that protects the environment, that eliminates corruption, that reduces disputes, and that minimises litigation.

Further, I envisage a modern Mines and Minerals Bill to be one that adequately addresses corporate social responsibility, has in place a system for determining fair prices, enforces transparent and accountable decision making, encourages local equity participation, recognises the value of minerals exhibitions, protects investors from being hounded out of their investments, and does not ignore the role of women and the youth.

Distinguished delegates, this workshop will be considered a success, and our nation will be better served, if the outcome of this gathering will be a draft Mines and Minerals bill that addresses and allows all those expectations to happily co-exist, without one undermining the other.

Distinguished Guests, Ladies and Gentlemen, you will recall that from 16th to 17th July 2014, most of you gathered at Bingu International Conference Centre where a broad spectrum of stakeholders participated in a National Consultative Symposium during which my Ministry sought views on the current mining legislation.

Today, you are gathered once again to present the reviewed draft mining legislation and to seek your final comments into the Draft Mines and Minerals Bill before it is submitted to Parliament for enactment.

Just to highlight a few salient progressive features, of the draft Bill:

- Proposes the creation of a Mineral Resources Committee that will ensure transparent and efficient issuance and administration of mineral tenements;
- promotes local community engagement between the licence holder and the communities in the vicinity to the tenement;
- proposes the possibility of Government participating in some mining projects;
- shifts the collection of mineral royalty from my Ministry to Malawi Revenue Authority;
- provides for exploration companies to apply for a retention licence when some economic and technical factors do not permit the development of a mine where exploration has been done.

The draft Mines and Minerals Bill is also aligned to the African Mining Vision and the Malawi Growth Development Strategy.

Distinguished Guests, Ladies and Gentlemen, my Ministry attaches great importance to consultations and collaboration with all stakeholders. Your wisdom, experience and input towards the formulation of this Bill is therefore of utmost importance. Your input, wisdom and experience, will continue to be relevant in the implementation of the law once passed by parliament.



The Management and Staff of Crown Minerals/Tengani Titanium Minerals





congratulate Honourable Bright Msaka SC on his appointment as Minister of Natural Resources, Energy and Mining.



At Maravi, we understand that companies involved in the mining and extractive industry are often faced with a wide range of challenges and risks. These can range from managing local stakeholders, keeping staff safe while operating in remote and arduous areas and securing assets and equipment vital to production operations. Our understanding of the extractive industry makes Maravi the ideal partner to mitigate against the numerous security challenges posed as part of these types of projects.

Who we are

Maravi is a Malawi-based, ethically-aware security risk management company, focussing on East and Southern Africa. Maravi was born out of the need for high-quality, cost-effective and responsible security risk management services in the region.

Services

Maravi offers a range of services to help protect the staff, assets and operations of companies engaged in the oil and gas, mining and other extractive industry sectors against the different types of risk to which they are exposed. Some of those services include:

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- o Pre-market entry and path-finding services
- o Threat and risk assessments
- o Security reviews of operations and facilities
- o Compilation and updating of security specific documentation
- o Security incident investigations
- o Brand and reputational protection
- o Background and due diligence checks

Security services

- o Protective services/security coordination
- o Airport meet and greet
- o Discreet escort
- o Remote security management
- o Event security planning and management
- o Organisational security health check

Training (including bespoke courses)

- o Security awareness training
- o Training for specific security duties
- o Crisis management training
- o Training for staff for specific emergency situations

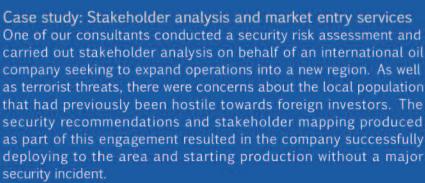
Analysis

- o Stakeholder analysis by in-country consultants
- o Pre-deployment country threat briefings
- o Analytical training for managers/heads of security
- o Regular security reporting



Extractive Industry Services

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Case study: Development of oil and gas security management system

To better coordinate its security, our personnel helped develop a security risk management system for an international oil company operating a concession block within the region. The final procedural and physical framework complied fully with the requirements of ISO 28000 (international standard for security management systems specification) as well as national and international standards. The system that was developed has now been used as a benchmark for other companies.

Case study: Security risk assessments and design services to a national mining company

Our staff have worked with a national mining company to provide a range of security services. These have included multiple security risk assessments on different phosphate and precious metal mines, as well as security design services. The task required liaison with multiple stakeholders, including the highest levels of the government and managing a project design team split between Africa, the Middle East, Europe and Asia.





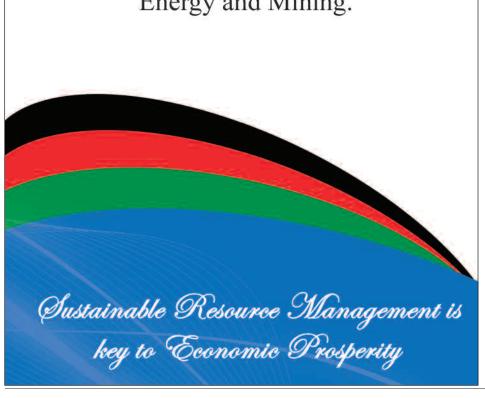
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Honourable Bright Msaka SC
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NEWS & ANALYSIS May 2015

Malawi conducts sc

cross section of Malawians of different walks of life had an opportunity to scrutinize the New Mines and Minerals Bill and inject their input into the all important document at a national consultative workshop that was held in Lilongwe from April 14 to 15 with funding from the World Bank and European Union courtesy of the Mining Governance and Growth Support Project.

The workshop was officially opened by the Minister of Natural Resources, Energy and Mining, Honourable Bright Msaka who stressed that the aim of the Malawi Government is to come up with a law that will promote sustainable mining in Malawi.

Msaka said: "There is no doubt in the opinion of Government that mining still remains one of the key priority sectors that can significantly contribute to socioeconomic development of the country.

This is also envisioned in the current Malawi Growth and Development Strategy."

"However, in order for the mining industry and our mineral resources to make the expected contribution to the country's economic growth, there is need for concerted, consistent and steadfast effort towards promotion of sustainable mining. This, in the main, will be possible only if we develop a sound and comprehensive mining legislation, which takes into account prevailing international best practices, attract investment and enables Malawians to derive optimum benefits from mining."

The Minister also said he envisages a modern Mines and Minerals Bill to be one that adequately addresses corporate

social responsibility, has in place a system for determining fair practices, enforces transparent and accountable decision making, encourages local participation, equity recognises the value of exhibitions, minerals protects investors from being hounded out of their investments, and does not ignore the role of women and the youth.

Members of private mining companies who gave their views on the bill agreed with Msaka



Mr. Hastings Chipongwe of MGGSP

Group photograph of stakeholders who pa



Some of the government officials at the workshop



Representative of Banks: Mutisunge Banda of Standard Bank (L) and Sitabene Majamanda of FDH Bank (R)



Chief Kyungu flanked by other traditional leaders including Inkosi ya Makosi Mbelwa V and Inkosi Mabulabo

that besides addressing several other pertinent issues, the new law should protect investors from being hounded out of their investments.

"I support the Minister's statement on protection of local investors because in the case of Malcoal, we are encountering problems to compete with cheap coal imported from neighbouring countries which is flooding the Malawi market. We recommend that the new law has provisions that will guide the government to intervene in such situations and put in place measures to halt these coal imports so that we can survive on the market," commented Eugene Khoriyo, Country Director for Malcoal Mining.

He explained that the coal subsector is one of the major employers in the mining sector which makes it imperative for the government to protect it to ensure its survival.

Cement producing companies also shared the same feelings with Shayona Cement and Cement Products Limited complaining of cheap imports invading the cement market.

"In our case, we are preparing for an expansion project that will involve installation of a clinker plant, which is a huge investment. We urge government to incorporate clauses in the law that will ensure survival of such investments by controlling cheap cement imports for the sake of our survival and that of our employees," said Cement Products Limited

Chairman Aslam Gaffar in an interview after the workshop.

Chiefs also had their say on the bill with Paramount Chief Kyungu stressing that the government should include measures to ensure that mining companies fulfill the corporate social responsibility pledges they make to the communities when launching projects.

"We have to ensure that corporate social responsibility must be real. Companies should not run away from it," said Kyungu.

The Paramount Chief also urged the government to incorporate measures that will allow communities have shares in the mining ventures taking place in their areas in order to ensure that the communities directly benefit from the projects.

rutiny on mines bill



rticipated at the consultative workshop

district commissioners. religious leaders, members of parliament and civil society groups. Mr. Khoriyo of Malcoal Mining



President of Women in Mining Mrs. Emma Adam was also present

Hon. Msaka captured with corporate sector representatives, Mr. Grain Malunga of Chamber of Mines and Mr. Jitendra Patel of Shayona Cement

The bill has to ensure that Malawians are the real owners of the resource and that should not only be lip service. It should also not give ground for corruption to any government official," said Executive Director for Institute for Policy Interaction, Rafik Hajat.

Representatives of financial institutions also aired out their expectations at the event. They pointed out that provision for huge investments in corporate social responsibility projects as proposed by some delegates will make it difficult for mining companies to acquire project financing from banks.

"Financial institutions will always finance projects that are viable and forcing companies to make massive investments



working on prospects and we want this bill to attract investors to exploit these prospects for the benefit of the country," he said.

At the workshop, officials from the Ministry made presentations on what is contained in the bill and welcomed comments from members of the audience which, among others, included traditional leaders,

Mr. John Nkhoma, a mining sector consultant making his contribution at the workshop

The gathering was a follow up to the National Consultative Symposium on the bill that was held at Bingu International Conference Centre from July 16 to 17, 2014.

As opposed to the Mines and Minerals Act of 1981, which vests resource ownership on the President on behalf of the people of Malawi, the proposed law says the resources of Malawi are directly owned by the State.

The seriousness of the delegates, their active participation and the richness of the contributions certainly showed that the decision by the Malawi Government to review the old mining laws and the contribution by the financiers World Bank and European Union are of great significance.

The point was backed by District Commissioner for Blantyre, Mr. Charles Kalemba ,who proposed that people whose land have been taken away for mining purposes must be allowed to use their land as a token to acquire shares in the proj-

On their part, civil society representatives proposed that the bill, which has clauses to allow government hold up to 10% free equity in large scale mining ventures, should also make it mandatory for mining companies to give some shares

In addition, they proposed that the government sets up a company to invest in joint venture arrangements with foreign mining investors.

Congratulations.



Mr. Bright Msaka SC

The board members, management and staff of Standard Bank congratulate the **Hon. Bright Msaka SC.** on his appointment as Minister of Natural Resources, Energy & Mining.





The Chairman, Board of Directors, Management and Staff of



on his appointment as Minister of Natural Resources, Energy and Mining.



The Board Members, Managing Director, Management and Staff of



Shayona Cement Corporation

on his appointment as Minister of Natural Resources, Energy and Mining.

MINING REVIEW May 2015 MINISTERIAL STATEMENT

ENERGY AND MINING HONOURABLE BRIGHT MSAKA CONSULTATIVE WORKSHOP ON DRAFT MINES AND LILONGWE, MALAWI ON 14TH - 15TH APRIL, 2015



Part of the stakeholder audience that participated in the consultative workshop listening to the minister's speech

Allow me to commend all stakeholders for the constructive comments that the Ministry has been receiving throughout the review process and for honouring our invitation to this final consultative workshop. It is our hope and expectation that you will have fruitful deliberations and make value-adding final comments to this important legal instrument. I wish, therefore, to encourage you to vigorously continue scrutinising the draft bill and pointing out the remaining gaps, inconsistencies and discrepancies in the draft bill. Your diligence, objectivity and patriotism will be most demanded in this process in order for our nation to address challenges identified in this industry.

May I also take this opportunity to inform this workshop that the Ministry is taking bold steps to build capacity, including capacity in research, under the Mining Governance and Growth Support Programme. In this regard, we are collaborating with the University of Malawi (Chancellor College and the Polytechnic) to train geologists and mining engineers, among others. We are also working in partnership with the Malawi University of Science and Technology (MUST) in the training of mineral processing engineers and metallurgists.

We will continue with capacity building programmes at both undergraduate and postgraduate levels to strengthen the human resource capacity in order to meaningfully and efficiently manage sustainable development of the mineral sector.

The issues of transparency and accountability in the administration *I thank you for your kind attention.*

of mineral rights and utilization of royalties and fees for the mineral sector are very important. This is why the Government is firmly committed to the EITI process. The Government is currently taking all necessary steps to sign for membership to the EITI by June this year.

I wish to extend Government's sincere gratitude to the World Bank, European Union, JICA, the French Government, ADB, UNDP, FDH Bank, Ned Bank, among other cooperating partners, for their steadfast support towards the development of the mineral sector in Malawi. This is a nascent sector, whose challenges are enormous. We will therefore continue to count on your support to realize the full potential of this very promising sector.

In the same vein, I wish to acknowledge in a special way, the effort that the Task Force team, with technical guidance from the Consultant, Professor James Otto, has put into coming up with the draft Mines and Minerals Bill that is before you today.

Finally, I would like to sincerely thank you all for coming to participate in this important National Consultative Workshop on the Draft Mines and Minerals bill. I wish your meeting unlimited success.

With these remarks, I declare the Consultative Workshop officially

16 ANALYSIS May 2015



TECHNICAL FILE

by Grain Wyson Phillip Malunga FIMMM Mining and Environmental Management Expert

ECONOMIC POTENTIAL OF PEGMATITES IN MALAWI

Malawi is underlain by basement metamorphic rocks intruded mainly by basic, granitic and syenitic rocks and overlain by sedimentary rocks. Most of these pegmatites are granitic with abundant quartz,

So far, valuable minerals such as beryl, tourmaline, zircon and garnets have been observed. There exist potential for discovery of other rare and industrial minerals.

INTRODUCTION

Pegmatites are course grained granitic rocks that occur as dykes and form narrow ridges or small hills. Most pegmatites contain abundant quartz, feldspar and mica. It is important to note that there exist other pegmatites derived from plutonic rocks such as gabbro and syenite. They contain important accessory minerals in form of gemstones or rare minerals.

These accessory and valuable minerals include beryl, tourmaline, spodumene, garnet and topaz. Industrial minerals from these rocks include quartz and mica while rare minerals that can also be formed in them include columbite and tantalite.

This paper tries to inform prospectors that they will Figure 1: Kacheure pegmatite displaying quartz definitely encounter these minerals and tries to describe their physical and chemical characteristics.



plus feldspar, mica and quartz plus feldspar zoning

PEGMATITIC MINERALS

GEMSTONES

Gemstones found in Malawi pegmatite include: amazonite, apatite, beryl(aquamarine, chrysoberyl, emerald) garnet, kunzite, lepidolite, spodumene, topaz, tourmaline, zircon and many others. Large crystals of excellent quality material are often found inpegmatite.

Gemmstones obtain their colour from their own makeup (idiochromatic) or from trace elements (impurities) such as chromium, lithium, copper, iron, manganese and vanadium giving them an allochromatic characteristic. Natural dispersion of light (pseudochromatic) through surface reflection can also give colour to gemstones.

Examples of allochromatic characteristics or colour by impurities is given below;

- 1. Beryllium (Be): Emerald (blue-green)
- 2. Chromium (Cr): Emerald, Tourmaline (green)
- 3. Copper (Cu): Malachite (green)
- 4. Iron (Fe): Aquamarine, Tourmaline (green); Chrysoberyl, Citrine, (green-yellow-brown)
- 5. Lithium (Li): Tourmaline (green, pink)
- 6. Manganese (Mn): Tourmaline (pink), Morganite
- 7. Titanium (Ti): Sapphire (blue)
- 8. Vanadium (V): Emerald, (green-red), Tourmaline (green)

Amazonite

Amazonite is an easily fracturing green feldspar that can be cut and polished to be used as gemstone. Its colour is believed to be coming from lead and water.

This mineral is common at Kabumba in Mzimba and Usisya in Nkhata Bay hosted by granitic rocks.





Figure 2: Amazonite specimens (Source: www.gemstone-dictionary.com)

Apatite

Figure 3: Example of pegmatite apatite (www.geologycafe.com)

Apatite is a calcium phosphate rock containing fluorine, chlorine and vanadium among other elements that substitute for calcium. Its colour varies from green to blue and can be mistaken for aquamarine and tourmaline. The immediate differentiation is that it is softer.

Gem apatite has been mined in Nsanje around Tengani and Lulwe mission.

Beryl is a rare mineral that is rich in beryllium and occurs in veins and cavities associated with hydrothermal activity within pegmatites. These minerals are in veins that penetrate quartz rocks in the order of mica, feldspar and beryl in quartz.

Beryl which is non gem quality is a source of beryllium and is sold as "trash". The gem quality has usually uniform colour, is transparent and with less or no cracks for easy cutting and polishing.





Figure 4: Beryl crystals from Kacheure mine in Mzimba

This mineral occurs in eight colours with different following names: emerald (green), aquamarine (greenish blue to blue), morganite (pink to orange), red beryl (red), heliodor (yellow to greenish yellow), maxixe (deep blue), goshenite (colourless), and green beryl (light green). The common gemstone from this mineral is aquamarine whose colour ranges from blue to milky blue.

Garnet is found in pegmatites as an accessory mineral. The common garnet in Malawi pegmatite is red garnet called almandine and orange garnet called spessartine. While the author was undertaking limestone exploration on Malowa hill (Golomoti) in 1996, he found green garnet in a pegmatite on eastern summit.



Quartz is a hard, durable and common mineral that forms a massive principle component of a pegmatite. Gem varieties include amethyst, smoky quartz and rose quartz. These are grouped as semi-precious stones

> Amethyst forms through radiation from surrounding rocks activating colour centres around iron impurities.

> Smoky quartz derives its colour through natural radiation emitted from the s urrounding rock. This radiation activates colour centers around aluminum impurities within the crystalline quartz. These gems can be processed and used in rings, cufflinks, pendants, necklaces, earrings, and brooches for people who like the yellowish brown to brown color.

> The color of rose quartz is attributed to microscopic inclusions of a pink variety of the mineral dumortierite. Rose quartz is usually cut into cabochons and

Figure 5: A typical crystal Amethyst is common in Mzimba and Chitipa. of smoky quartz Smoky quartz is collected from pegmatite cavities on



Mulanje mountain, Zomba mountain and Nyika plateau where they are sold as mineral specimens. Rose quartz occurs as pockets within massive white quartz in Mzimba

Figure 6: Rose quartz from Kacheure mine in Mzimba



TOURMALINE

Tourmaline is a multi-coloured gem falling within semi-precious stones. It is crystalline boron silicate mineral compounded with elements such as aluminium, iron, magnesium, sodium, lithium, or potassium.

Figure 7: The multi-coloured nature of tourmaline

RARE MINERALS

Pegmatite hosts many rare minerals. In Malawi a few minerals have been observed so far. These contain beryllium, columbium, niobium, tantalum and titanium, tungsten and many other elements. In most cases these have included columbo-tantalite, pyrochlore, beryl, rutile and ilmenite. If the mine contains nice crystals, the minerals are often more valuable as mineral specimens and faceted or tumbled. Good sources of these minerals are Mzimba, Senzani, Neno, Thambani and Tengani areas.

INDUSTRIAL MINERALS

Pegmatite can be a source of industrial minerals such as;

- 1. Sheets of mica as initially explored in Mzimba pegmatites,
- 2. Feldspar for use in glass and ceramic use for example in the Linthipe and Kirk Range area
- 3. Quartz for use in glass making, abrasive and foundry sand

CONCLUSION

Malawi is country that requires a serious business minded leadership if we are to unveil earth's treasure. A systematic mineral exploration program is required grouped according to geological prospectivity as well as taking into account the financial and human resource allocation. Pegmatites prospecting and support to small scale miners will bring order and sustainable mining that will generate mineral wealth and sustainable environmental management and poverty alleviation.

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on his appointment as Minister of Natural Resources, Energy and Mining.





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The Directors, Management and Staff of



congratulate Honourable Bright Msaka SC on his appointment as Minister of Natural Resources, Energy and Mining.

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No to secret mining deals

Government committed to EITI process

By Chiku Jere

he Malawi Government has expressed its commitment to apply for the candidature of the Extractive Industries Transparency Initiative (EITI) by June this year.

Minister of Natural Resources, Energy and Mining, Honourable Bright Msaka SC, said when he presided over the opening ceremony of the National Consultative Workshop on the Draft Mines and Minerals Bill that the development is of utmost importance to ensure transparency and accountability in the administration of mineral rights and utilization of royalties and fees for the mineral sector.

"Government is aware that issues of transparency and accountability in the administration of mineral rights and utilization of royalties and fees for the mineral sector are very important, that is why it is firmly committed to the EITI process," said Msaka in his maiden address to stakeholders in the mining sector who gathered at the opening ceremony for the workshop.

The Minister said Government has already started taking all necessary steps to sign for membership to the EITI following President Arthur Peter Mutharika's declaration in his State of the Nation Address last year.

Adherence to EITI guidelines will see detailed disclosure of tax payments, licences, contracts and production data, foster debate around the management of Malawi's resources and ultimately ensure natural resources benefit all citizens.

According to information gathered from EITI International Secretariat website, www.eiti.org., EITI sets global standards for the governance of a country's oil, gas and mineral resources, which are supposed to be implemented by governments, in collaboration with companies and civil society.

By signing to EITI, the country signals commitment to the transparent and accountable management of its natural resources, which, in the process, enhances citizens' trust on government.

Through implementation of EITI, citizens benefit from receiving reliable information about their country's natural resources, and the process helps to improve government systems as adherence to transparency and accountability is promoted.

Adherence to EITI Standard involves seven requirements that a country needs to fulfil and these



Professor Mutharika made the declaration

include effective oversight by the multi-stakeholder group, timely publication of EITI reports, which include contextual information about the extractive industries; also a full government disclosure of extractive industry revenues, and disclosure of all material payments to government by oil, gas and mining companies.

A country pledging to adhere to the standards remains a "candidate" for two and a half years from the date of admission and the renewal of the candidature would depend on an independent evaluation on whether the country is deemed to have met and complied with the EITI requirements.

During the event, Hon Msaka also took time to commend all stakeholders for the constructive comments that the Ministry has been receiving throughout the review process of the Mines and Minerals Bill.

He also encouraged the participants to vigorously continue scrutinising the Draft Bill and pointing out the remaining gaps, inconsistencies and discrepancies, in order to come up with a final and sound legal instrument that would fairly regulate the mineral sector for the mutual benefit of all players.

"Your diligence, objectivity and patriotism will be most demanded in this process in order for our nation to address challenges identified in this industry," Msaka said.

The Minister also informed the gathering that his Ministry is taking bold steps to wholesomely build capacity in the mineral sector, including in research, under the Mining Governance and Growth Support Programme



Professor Otto: New law to promote transparency (MGGSP).

He said in collaboration with the University of Malawi's Chancellor College and the Polytechnic as well as Malawi University of Science and Technology (MUST), Government intends to train more geologists, mining engineers, mineral processing engineers as well as metallurgists.

"We will continue with capacity building programmes at both undergraduate and postgraduate levels to strengthen the human resource capacity so that we meaningfully and efficiently manage sustainable development of the mineral sector," asserted Msaka.

Mining Law Consultant, James Otto, said at the workshop the proposed mining law will do away with concerns of secret mining deals raised by civil society

Some of the salient progressive features of the Draft Bill include; the proposal for the creation of a Mineral Resources Committee that will ensure transparent and efficient issuance and administration of mineral tenements, likewise the promotion of local community engagement between the licence holder and the communities in the vicinity to the tenement.

The draft bill also shifts the collection of mineral royalties from the Ministry to Malawi Revenue Authority (MRA) as well as provides for exploration companies to apply for a Retention Licence when some economic and technical factors do not permit the development of a mine where exploration has been done.

