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ISSUE
10
2019



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ABOUT PUBLICATION

Mining Zimbabwe premier source of Zimbabwe Mining News. Our core focus is the Zimbabwe Mining Industry, trends, new technologies being developed and used to improve this crucial sector, as well as new opportunities and investments arising from it. Mining Zimbabwe's sole purpose is growing and empowering the Mining Industry and highlighting all its challenges as well as putting forth expert solutions



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The 12 Billion roadmap is possible

EDITOR'S NOTE



Last month the President announced the Mining sector's USD 12 billion road map by 2023 which aims at making the sector earn USD 12 billion annually. At the moment the sector is failing to reach USD 4 billion. What is the possibility of Zimbabwe attaining the USD 12 billion road map and the humps along the way with possible solutions?

Gold has been important in Zimbabwe contributing significantly to the country's fiscus, Mining Zimbabwe looks at why the gold sector has been rising and falling rapidly in the past years and the possible solutions for the country to record a significant chunk of gold from gold producers.

The role of women in the mining sector cannot be undermined, the Zimbabwe mining sector has women who are doing the impossible turning tables and raising standards, mining Zimbabwe has featured a

list of women who are defining the odds in this male-dominated sector making their mark.

Small scale and artisanal miners are facing a mirage of challenges as they try to push the Mining industry to another level, this issue also features articles that focus on highlighting challenges faced by small scale miners.

Do enjoy the read, Mining Zimbabwe is encouraged when you write, call, contributing to the improvement of this your wonderful mining news provider.

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Blanket mine happy with USD ZESA payments



• *Electricity supply improves drastically for the Miner*

Caledonia Mining Corporation the owners of one of Zimbabwe's biggest gold producing mines, Blanket Mine has expressed their support on the move by the government to price electricity in foreign currency although pricing of goods and services in foreign currency are prohibited in Zimbabwe.

Rudairo Dickson Mapuranga

According to the gold miner, electricity supply at its mine in Gwanda has significantly improved due to the move by the government which allows mining firms to pay for power supply in foreign currency as a way to fund the electricity that is imported from South Africa and Mozambique.

"Caledonia Mining Corporation Plc ("Caledonia") announces that the electricity supply situation at the Blanket Mine ("Blanket") has improved substantially in late August and September thanks largely to a timely and coordinated response from the Chamber of Mines, the Ministry of Mines, the Ministry of Energy and Power Development and the Zimbabwean Energy Regulatory Authority ("ZERA") which introduced a new electricity pricing schedule for the mining industry to support the funding of imported electricity which is used exclusively to supply participating mining companies" the

miner said.

Through its report, Caledonia Mining corporation said that despite the electricity situation in the country being abnormal the prospects of the mine were not affected as electricity supply in the month of June and July favors the gold miner who continues to operate normally.



Caledonia CEO Mr Steve Curtis

"Caledonia does note recent media commentary regarding the electricity supply and pricing situation in Zimbabwe as a whole but notwithstanding this, Blanket continues to operate normally and electricity pricing in US dollar terms is stable and not affected by the increases recently announced"

"As previously disclosed, Blanket did experience electricity disruptions in July and

early August and relied heavily on its installed diesel generator back-up capacity." "Prior to this time, Blanket had installed a back-up generator capacity of approximately 12.5 megawatts (MW), sufficient to run the entire mine at full capacity but insufficient to sustain both the mine and the Central Shaft project. In response to the increased risk of electricity supply outages Blanket has purchased an additional 6 MW of diesel generator capacity."

"The additional generators are on site and are currently being installed and are expected to be operational in October after which Blanket's operations will be fully insulated from the risk of unstable electricity supply," the gold miner said.

Electricity is now priced in US Dollars at a cost which is slightly lower than the pricing structure prior to the recent monetary devaluation. The electricity supply authorities have also implemented an uninterrupted power supply agreement for the mining industry in an effort to support the sector and electricity supply has stabilised following these changes.



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Miners urged to embrace EPOs



Lindi Mpofu

It is extremely important for miners to understand what the Mines and Minerals act say on Exclusive Prospecting Orders (EPOs) for them to get clear clarity. In actuality miners are not supposed to be fighting against these EPOs but ensuring that the act is followed and adhered to by the Government and EPO holders, to protect their rights and ensure they gain from the presence of EPO's in their areas, Zimbabwe Miners Federation (ZMF) Vice President Lindi Mpofu has said.

Rudairo Dickson Mapuranga

Speaking at a Miners Meeting held in Norton last month, the ZMF Vice President said that miners are misdirecting their energy and fighting against the very thing that could uplift them and the nation. The act has many sections that protect the miner and safeguard their rights regarding mining claims under EPO's these rights if enforced coupled with "lose it or use it" which is under review by the Ministry will make way for a better mining sector and impact small scale operations positively.

Mpofu said that miners should embrace EPOs because it is a way for small-scale miners to gain information on the viability of their mining land and access to information on the geology of the explored mining concessions.

Lindi also said that at law EPO holders are

required to recede land back to the government along with the geological every year during the 3 year period granted to EPO Applicants. It must be understood that when an EPO Applicant is granted an EPO a three year duration period is given for exploration under which up to five minerals can be explored. The government expects that yearly portions of the EPO's will be receded to the government with the geological information for the areas explored. For example under the 65, 000 hectares given which is the maximum land area allowed to be allocated as per act, perhaps 20,000 hectares will be explored, note that not all the land will be suitable for large scale mining some areas will definitely be suitable for small-scale mining operations, armed with knowledge of the preferred areas to mine the EPO applicant will then recede the portion that will not be utilised by them back to government with the geological reports. Miners should be fighting to ensure that this land and information must be availed to small-scale miners through the geological survey offices within the respective province being explored.

"If granted access to these geological reports miners will run better operations as access to geological will ensure more targeted, efficient mining which will reduce the rampant land degradation, the reduced mining costs will enable miners to have excess capital to reinvest and grow their operations, access to geological will enable miners to attract investors and structure better joint venture partnerships, access to equipment loans, collateral becomes possible as miners can utilise their claim to negotiate better terms thus promoting financial sector inclusion. More indigenous miners can venture into mining as proper

information will be readily available to ensure return on investment."

"Above all this, our Nation benefits greatly as the government is better placed when signing trade deals with foreign investors as they can now avail geological reports showing resources available for exploitation. This will lead to overall better deal structures and revenue earned from our minerals. Under the current sanctions, it will also help to attract more genuine mining firms who will follow our country laws and

help uplift our surrounding mining communities. The uplifting of the local miners will also help to drastically impact and improve the surrounding areas through commerce and increased earnings which will also allow for community project support."

It is a way for small-scale miners to gain information on the viability of their mining land and access to information on the geology of the explored mining concessions.

"Section 86 deals with the issue of EPO's and I encourage Miners to familiarise themselves with the act" our literacy level allows for all miners within the sector to take time to familiarise themselves with the important acts that affect them as miners said Lindi.

Lindi Mpofu went on to say that miners should seek to understand their rights under EPOs, for example, miners can retain their mining concessions which are under EPOs as long as fees are paid up to date with the Ministry of Mines and Mining Development. In the event of any oversight, Miners should approach the Ministry or make use of their ZMF Provincial Chairpersons to get assistance as mistakes can occur, hopefully, these will be rectified faster with the arrival of the cadastre system.

The "Use it or lose it" policy will also help to free up land parcels that have been held for years without activity this in addition to

Miners urged to embrace EPOs

ensuring EPOs operate for the stipulated three-year duration and recede land as per the act, Zimbabwe should begin to see a vibrant organised sector. Miners will have access to areas to mine and more structure and order can be introduced through the formalisation of their activities.

Lindi also said that miners according to the EPO section of the act may approach EPO Applicants to request permission to mine in areas that the applicant is not interested in or not utilising. EPO Applicants are encouraged to dialogue with the local communities to promote good relations. EPO applicants were generally open to the idea of community members or associations requesting permission to mine on areas not being utilised, particularly since most areas are drought-stricken and communities have no other source of livelihood except mining.

"It is therefore imperative for Zimbabwe to carry out these explorations, however,

Miners can retain their mining concessions which are under EPOs as long as fees are paid up to date



Lindi with other Small-Scale Miners in Norton

miners should seek to understand their rights under the EPOs to promote better understanding and engagement," said Lindi

It is important to note that Exploration grants or assistance are normally extended to countries to assist with the quantification of minerals available in the ground. This enables countries to have knowledge of their resources and it assists when signing trade deals with other countries however under the current

circumstances Zimbabwe is not legible for this type of assistance due to a number of challenges sanctions being a major stumbling block, Zimbabwe is, therefore, relying on small and large companies who are willing to carry out exploration deals with Zimbabwe over specific parcels of land for specific minerals. The large areas are due to the use of satellites and helicopters as the process of exploration takes place.

How to get a gold buying permit in Zimbabwe



For a prospective gold buyers, the criteria below must be satisfied before issuance of such gold buying agency permit:

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 5. Current tax clearance certificate for companies.
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- a. Current licence for the custom milling plant and/or elution plant issued by the Ministry of Mines and Mining Development.
 - b. Current tax clearance certificate.

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Gold production at Blanket increases by 7 percent



Caledonia Mining Corporation has announced that gold production at its Matabeleland based Blanket mine has increased by more than 7 percent due to the new power supply measures introduced by the government for the mining sector.

Rudairo Mapuranga

The company through its third-quarter production report said it has produced 13 646 ounces of gold which is more than 7 percent up from the previous quarter where the gold miner produced only 12 712 ounces.

The gold miner also said that its production for the first 3 quarters of the year has declined by over 3 percent with the miner producing 38 306 ounces in 2019 as compared to the 39 559 ounces produced during the same period in 2018.

Caledonia Mining Corporation said that the firm was not giving up on its production target of 53 000 ounces in 2019 and remains on the pursuit of its 80 000 ounces by 2022.

"Approximately 13,646 ounces of gold were produced during the Quarter, 7.3% above the 12,712 ounces produced in the second quarter of 2019."

"Gold produced for the 9 months to September 30, 2019, was 38,306 ounces, approximately 3.2% below the 39,559 ounces produced in the corresponding period of 2018.

"Caledonia maintains its 2019 full-year production guidance of 50,000 to 53,000 ounces and remains on track with progress towards its target of 80,000 ounces by 2022" reads the company's report.

According to the company's Chief Executive Officer Steve Curtis, production in the third quarter was below the company's target due to unstable power supply during July and early August, however, the situation improved later during the quarter.

"Production in the third quarter of 2019 was slightly below our target but showed steady growth in production in the previous two quarters. Production in the quarter had a

difficult start due to significant interruptions in the supply of electricity in July and early August although the electricity situation improved substantially later in the quarter. Caledonia remains on track to achieve our guidance of 50,000 to 53,000 ounces for the full year" said Curtis.

"We are very pleased to have completed the shaft sinking phase of the central shaft project during the quarter, a significant milestone for our business. The shaft has now entered the equipping phase of the project which we expect to be completed in mid-2020. We look forward to commencing production from the central shaft during the second half of 2020 which is expected to deliver the Company's growth plan to achieve 75,000 ounces in 2021 and 80,000 ounces by 2022."

About Blanket Mine

Caledonia Mining is a profitable cash generative gold producer with a strong growth profile, Caledonia's primary asset is the Blanket Mine in Zimbabwe which produced 54,512 ounces of gold in 2018 at an All in Sustaining Cost of \$802/oz.

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Zimplats production increase by 10 percent

Zimbabwe's biggest platinum producer, Zimplats's mining production has improved by 10 percent in the quarter ended 30 September 2019 as compared to the same quarter in 2018, and 7 % higher as compared to the previous quarter that ended 30 June 2019 due to the developments underway at the company's Mupani mine.

Rudairo Dickson Mapuranga

According to the company's third-quarter report released on Thursday, mined tonnage from both minerals by the miner which are platinum, palladium, gold, rhodium, ruthenium, iridium, silver, nickel, copper and cobalt increased at the firm increased by 7 percent from the previous quarter and it was 10 percent higher than that which was recorded in the same quarter in 2018 owing to enhanced fleet production and additional tonnage from Mupani mine.

"Mined tonnage increased by 7% from the previous quarter and it was 10% higher than that reported in the quarter ended 30 September 2018. This was mainly due to improved fleet productivity and additional tonnage from Mupani Mine, which is still under development" the platinum miner said.

According to the Miner, tonnes milled increased by 9 percent from the previous quarter and 3 percent from the previous quarter benefiting from higher mill volumes.

"Tonnes milled increased by 9% from the previous quarter due to an increase in mill running time. Running time was impacted in the previous quarter by planned shutdowns for mill relines at both concentrators. 6E metal in matte production increased by 3% from the previous quarter benefiting from higher mill volumes said the platinum miner.

6E production in the previous quarter

included 3 036 ounces recovered from the furnace during the rebuild which commenced on 10 June 2019, its total production during the quarter was at 151 458 ounces, 3 percent increase from the previous quarter which totaled 147 136 and 2 percent increase as compared to the same quarter in 2018.

Platinum production in Ounces was at 70 000 ounces during the quarter improved by 3 percent from the previous quarter which produced 67 978 ounces and over 1 percent increase as compared to the same quarter in 2018 which produced 69 825 ounces. Palladium production during the quarter ended 30 September 2019 increased by 4 percent compared to the previous quarter producing 59 795 ounces and 57 258 ounces respectively, and an improvement of 5 percent as compared to the same quarter in 2018 producing 56 727 ounces during the quarter last year.

The Gold produced by the miner was at 8 582 ounces during the quarter, 1 percent increase from the previous quarter which produced 8 496 ounces. The gold production was a whole 10 percent increase from the comparable quarter ended 30 September 2018 at 7 797 ounces.

The platinum miner managed to decrease its Rhodium production by 6 percent to 5 580 ounces from 5 905 ounces the previous quarter and a whopping 10 percent decrease as compared to the same quarter of 2018 which produced 6 220.

The miner, however, managed to increase its Ruthenium production by 6 percent to 5 468 ounces from 5 143 ounces the previous quarter and a slight 2 percent increase in the comparable quarter of 2018 which produced 5 382 ounces.

Iridium production during the quarter was at

2 033 ounces from 2 356 ounces the previous quarter 14 percent decrease and an embarrassing decrease of 20 percent from the same quarter in 2018 which produced 2 549 ounces of iridium.

The production of Silver also decreased by 20 percent to 10 292 ounces during the quarter ended 30 September 2019 from 12 914 ounces the previous quarter and 15 percent decline compared to the same quarter last year which was at 12 112 ounces.

1 358 tonnes of Nickel were produced during the quarter, 3 percent increase from 1 319 tonnes in the previous quarter. The same quarter last year produced a total of 1 358 tonnes.

Copper production was a resounding 7 percent increase as compared to the quarter ended 30 September 2018 which produced a total 962 tonnes compared to 1 034 tonnes produced this quarter, a 3 percent increase from the previous quarter which produced 1 004 tonnes of copper.

The production of cobalt at the miner increased by 79 percent producing 43 tonnes of Cobalt during the period as compared to 24 tonnes of cobalt produced the previous quarter, cobalt production also has a resounding 95 percent increase as compared to the same quarter last year which produced a total of 22 tonnes cobalt.

Total operating cash costs increased by 15% from the previous quarter mainly due to the increase in mined and milled tonnage. This was further impacted by higher selling expenses due to the increase in concentrate exported during the period of the furnace rebuild. As a result, operating cash cost per platinum ounce increased by 2% from the previous quarter.

Eight things the government should focus on to get more gold



Gold delivery to the country's sole gold buyer and exporter, Fidelity Printer and Refinery has declined significantly as compared to the previous year due to various reasons. There is a big assumption that, although gold delivery to Fidelity has declined production has not declined but improved due to the coming of more investments and more players in the artisanal and small-scale mining sector.

Rudairo Dickson Mapuranga

According to the Chairman of the Institute of Mining Research at the University of Zimbabwe Lyman Mlambo, Fidelity can achieve more gold delivery through the following among other measures that he highlighted to Mining Zimbabwe.

(1) Offer a stable and good price.

To achieve that we need a gold price support scheme from we draw when prices are depressed and into which we add when the price is very good. This means Fidelity needs to build a reserve of Forex specifically for that purpose. This will curb side-marketing. In the long-term things will balance out as the price is generally fluctuating in the long-term.

(2) Increase forex retention

Fidelity needs to increase the forex retention component of the price from the current 55% to about 85 % because of equipment, spares and consumables are mainly imported. Despite miners advocating for higher forex retention last year from 75 % they were getting, the central bank through the Ministry of Finance reduced the forex retention to 55 percent.

(3) Timely payments

Fidelity must settle payments in good time so as not to disrupt operations. We have had cases where mines had to wait for several months to get paid, yet in the meantime they got imports to pay for. If Fidelity delays paying the RTGS component it will be insignificant value due to hyperinflation.

(4) Consistency in loans support

Fidelity must be consistent in its loan support, not to relax when it is getting loads of deliveries. This loan support should be well integrated into the ASM formalisation program so that eventually the ASM sector stands as a business entity, not livelihood or poverty-driven activity. Remember

formalisation has two main aspects to it: mechanisation and legality (registration) - with the latter providing avenues to deal with issues of compliance on the environment, child labor, social welfare, SHE standards, etc.

(5) Training ASM

Training in technical skills to improve mining methods and levels of gold recovery. There is an assumption that a lot of gold in Zimbabwe is going to waste due to poor mining methods by the small scale and artisanal mining sector, it is the due of the government to hold or support mining indabas that support miners to improve their mining methods and gold recovery processes.

(6) Work together with the Ministry of Mines and Mining Development to develop a database of deposits suitable for small-scale mining.

The ministry of mines has been called to work with small scale and artisanal miners through giving them documents that would identify them to suitable donors and loan providers.

(7) Mining Policy

Government to finalize the mining policy and the main Mines Act Bill which have provisions for recognition of SSM sector as well as those addressing the various issues in the sector.

(8) Simplify the fiscal regime

With regard to Fidelity, there is also the need to simplify the fiscal regime as a whole and to make it more competitive, for example by making royalty profit-based rather than gross revenue-based in which case we double tax profit when we exact corporate tax. But Fidelity has done well to make royalty deductible for income tax and also to index it to international prices.

Gold production, the rapid rise, and fall



The gold industry in the country has been in existence for over 1000 years with one of the powerful early societies, the Great Zimbabwe kingdom and the Mutapa kingdom believed to be gold funded economies. Since then the country has produced a significant amount of gold. Zimbabwe's production peaked last year when it produced 33,2 tonnes and in 1906 and 1999 at 30 tonnes and 27 tonnes respectively.

Rudairo Dickson Mapuranga

In Zimbabwe, all gold by law is sold to the country's sole gold buyer and exporter, Fidelity Printers and Refiners (FPR). Experts believe that gold produced in Zimbabwe is four times more than gold delivered to the country's sole gold buyer and exporter.

Despite the coming in of more small scale and artisanal miners on board and better mining technology introduced, the country has surpassed its record production of 30 tonnes per annum only once last year (2018) when a record delivery of 33,2 tonnes was recorded due to various reasons.

This year, the government has set a gold production target of 40 tonnes which has proven to be out of reach with the country's

sole gold buyer and exporter recording only 12 tonnes during the first half of the year. Production is expected to rise to 17 tonnes during the second quarter of the year, however, the record set last year will not be surpassed as expected by the government.

The government through its USD12 Billion road map has set a likely to be laughable target earnings of gold per annum of up to 4USD billion that is over 100 tonnes of gold per annum when the country since 1980 has failed to reach 40 tonnes in a single year.

Traditionally, the mining industry has been very important to the economy of Zimbabwe. The sector generates considerable employment, foreign currency earnings, infrastructure development and attracts significant foreign direct investment.

Can the mining sector achieve 100 tonnes of gold delivery to Fidelity?

According to Zimbabwe Miners Federation spokesperson, Dosman Mangisi the gold mining sector can deliver 100 tonnes of gold or more to the country's sole gold buyer and exporter if the government supports the sector.

"More gold is being produced in the gold mining industry, the sector has the potential to produce 50 to 100 tonnes of gold annually and if more resources are channeled, we are able to produce more in this country," said Mangisi.

However, according to Core Miners Association Founding Chairperson Canaan Joseph Saurombe, the 100 tonnes production figure being thrown around cannot be considered to be true, however, production according to him is very high and delivery to the country's sole gold buyer and exporter can only be achieved when the gold mining sector is formalised.

"Well, I don't know how that assumption was build up. But I do agree without a doubt that we are producing more than what is accounted for. The complexity begins on our definition of production, in this case, it focuses on formalised

production which is accounted for and adds up to the monthly/ annual gross" said Saurombe.

Saurombe also added saying that it should be the government's main priority to make sure that, small scale and artisanal miners are attracted to formalisation before the idea of formalisation is preached. The Core Miners Association chairperson said that the government needs to dovetail gold production and declaration through dialogue and creating relationships with the miners.

"We need to interlock the gold production and gold declaration to Fidelity; we have to create incentive policies for the formal sector. Besides preaching formalisation, one has to be attracted to formalise by just evaluating the pros of making that decision."

Experts believe that gold produced in Zimbabwe is four times more than gold delivered to the country's sole gold buyer and exporter.

Gold production, the rapid rise, and fall

"If it becomes more profitable and business-oriented for a miner to be formal and to work with fidelity being the sole buyer, then I'm sure we can revolutionise as intended."

"So, I think engagements between the miners and the government being the policymakers have to be ongoing. To make sure that the mining environment becomes very much favorable for business to those who are supporting production. I'm sure that how we will experience a boom in production" Saurombe said.

Why gold delivery was high 20 years ago with fewer miners in the industry?



Dosman Mangisi

The year 1999 is Zimbabwe's most successful gold production period before 2018, with the country getting over 27 tonnes from both large scale and small-scale gold producers.

According to Zimbabwe Miners Federation spokesperson Dosman Mangisi, production in 1999 was high because of the government despite the sector being under-exploited was very promotive to all the miners through different initiatives which encouraged miners to sell their gold directly to the government without being pushed.

The ZMF spokesperson also said that gold production was very high during the period because the control of gold was production was controlled directly by the Ministry of



Mines and the ministry of finance through the central bank could only care about receiving the gold from the miners.

"The policy was just simple government being so promotive through RBZ, miners were being resourced directly through their banks to buy gold and deposit to RBZ. It was right on the grassroots, it was direct interaction, there were not so many arms who deal in the regulation of gold" said Mangisi.

Mangisi also said that production in the 1990s was high because the small scale and artisanal miners were recognized by the government in 1991 through the amendment of the Mines and Minerals Act which allowed independent gold mining efforts by black workers.

2000-2005 gold production was fair

The year 2000 gold production declined only by 2 tonnes from the record set in 1999 and by 7 tonnes in 2001 setting production of 20 tonnes in 2001. Gold delivery during the period is believed to have been caused by different factors among them the grabbing of commercial farms by the government a move which made some small scale and artisanal miners move to farming from mining.

The period also was the genesis of the economic crisis which hit the country due to the economic sanctions which were imposed on the country by the European Union and the United States of America.

In 2002 gold delivery to FPR was 15,5 tonnes, the following year production was 18.78 percent decline with the country's sole gold buyer and exporter recording 12.5 tonnes. In 2004 production increased getting over 21.3 tonnes of gold an increase in production by over 69 percent. Delivery, however, declined in 2005 when the gold buyer recorded over 34 percent decrease in production, with only over 14 tonnes of gold delivered.

2006 -2013 an average of 9 tonnes per year

Although foreign currency retention was higher both from 2006-08 when gold buyers would receive 75 percent forex from all gold delivered to the central bank, and 100 percent foreign currency during the GNU era, gold production during the era was very low averaging only 9 tonnes per annum.

According to Mangisi, artisanal and small-scale mining was criminalised in 2006 as part of a government effort to ensure that all gold extracted in the country be sold to the government, but that policy only pushed illegally mined gold to the parallel market.

Why did the gold delivery increase between 2013-19?



From 2014 to 2018 gold deliveries to the country's sole gold buyer and exporter increased rapidly mainly due to the reason that small scale and artisanal miners who were banned were allowed to operate again, the period produced an average of 30 tonnes of gold delivery to Fidelity.

Gold production, the rapid rise, and fall

According to Mangisi, in 2014, the government began issuing artisanal mining permits, free of charge, to anyone interested in selling gold to the government-run Fidelity Printers and Refiners, the only legal gold buyer in Zimbabwe. In 2018, there was a massive public outreach through ZMF to encourage miners to sell their gold to Fidelity. During the period before 2018, there was no hustle getting a gold buying permit.

For the government to get more gold from small scale and artisanal miner it is of paramount importance for the government to reminisce this period and look forward to improving the period than disturbing it.

Why the target cannot be reached in 2019



Hon Polite Kambamura

The government through the Ministry of Mines and Mining Development has set a gold target of 40 tonnes which the deputy minister of Mines Hon Polite Kambamura has expressed pessimistic views that the target would not be reached.

Caledonia has reduced its yearly target from 56 000 ounces in 2019 to 50 000 ounces due to the electricity problems the country has been experiencing during the first half of the year. The unstable power supply is one of the reasons that makes it difficult for the sector to gain ground in 2019.

ZMF spokesperson Dosman Mangisi also said that the target cannot be achieved due to policy inconsistencies by the Ministry of

Finance. According to Mangisi, it is not the production that usually declines in the small scale gold mining sector but deliveries to central bank because of some of the policies introduced during the year affected the market greatly.

"It is deliveries that decline caused by economic policies that the country put, as long as our payment methods are very poor gold delivery is affected, the situation will then attract vultures in the country to buy gold at low prices," said Mangisi.

The ZMF spokesperson also said that mining disputes in the sector have caused a decline in production, the year 2019 recorded more mining disputes than the previous four years which led to the sector halting some operations that would have helped in the attainment of the gold target.

Late payments by Fidelity are also a cause of concern, this year one of Zimbabwe's biggest gold producer Metallon Corporation Limited placing its mines under care and maintenance citing late payments by the country's gold buyer. RioZim for almost 2 months during the year also suspended operations due to late payments.



FPR Headoffice

What should have been done?

For the sector to have achieved its 40 tonnes target, monetary policies would have been improved to favor business than indulgence government appetite.

Rising mining disputes would have been curbed and a lasting solution reached, the situation might be carried over to 2020 which might also affect production next year.

The government should liberalise gold buying, give free permits to all gold buyers in the country. As long as the miners who are the producers are still complaining about pricing, licensing, marketing and late payments, then gold Mining submissions to Fidelity may further decrease.

According to Core Miners Association chairperson, Canaan Joseph Saurombe, "Next year there is a need to work on the pricing of gold, I would personally suggest at least 80%US+, 20%-Rtgs, considering that government is also banking on the forex for the acquisition of other important commodities such as pharmaceutical stocks.

(2) FPR being the sole buyer has to be readily available to each and every miner. Most being breadwinners they need quick money and the advantage is being taken up by smugglers.

(3) Encouraging policies and/or incentives for miners who are declaring their yellow metal to FPR

(4) Direct support to miners; machinery, mining loans that can be effectively assessed

(5) **Need for accountability and clarity;** if a target is set, steps towards the mandate must be clear to quickly identify falls in trends to allow the authorities to deal with them whilst they are still short term and less complex."

USD12 billion road map achievable?



Last month the President of Zimbabwe Emmerson Dambudzo Mnangagwa unveiled the USD12 billion road map with aims at developing the mining sector in Zimbabwe to a USD12 billion industry by 2023. The mining sector is already Zimbabwe's biggest foreign currency earner. Experts and the government are of the view that the sector is the leading horse towards the revival of the economy.

Rudairo Dickson Mapuranga

The President's USD12 billion road-map has put a target of USD4 billion for gold producers which is a third of the target while platinum and diamonds will weigh in with US\$3 billion and US\$1 billion, respectively. Chrome, Nickel and Steel are expected to generate USD1 billion, coal and hydrocarbons are also expected to produce USD 1 billion. Lithium at the moment is expected to produce USD0.5 billion while other minerals are forecast to produce

USD1.5 billion up to USD 2 billion.

It is a well-known fact that Zimbabwe is hamstrung by a lack of mining exploration, moving to the USD12 billion industry by 2023 and of course becoming a middle-income earner by 2030, investing in mining exploration is the key. However, it is also a known fact that tapping of the known deposits in the country should be of primary concern.

Investment in mining prospects should be the country's number one concern towards improving the mining sector and the economy at large. Is it possible for the sector to earn 12 billion annually by 2023?

Is the USD12 billion target achievable?



With the copiousness mineral deposit, the country is sitting on both under exploitation and unexplored but known resources, the country has the potential to earn and turn the wheels of the economy and transform the country into an upper-middle-class earner not later than 2023. It is, therefore, Mining Zimbabwe's opinion that the country can reach the president's vision of the country becoming a middle-income earner by 2030 with the backup of the mining industry.

The miners' support

The Miners in Zimbabwe have thrown their weight behind the USD12 billion roadmap for the mining sector in the next three years optimistic that the target was achievable, however, miners are of the knowledge that certain initiatives, policies, and reforms need to be looked into for the sector to achieve the USD12 billion fate.

USD12 billion road map achievable?

USD 4 billion for gold, is it possible?

The mining sector last year earned US\$3,4 billion, driven by the high performance of the gold sector, which delivered a record 33,2 tones. Overall last year the sector failed to earn USD 4 billion how can the sector as a whole achieve that feat?

Experts are of the view that the majority of Zimbabwe's gold is being smuggled out of the country through different channels and the nation is losing millions due to rampant smuggling.

In order to achieve the USD 4 billion mark, there are various factors that need to be addressed by the government for the gold sector to achieve the target.

(a) Curb gold smuggling

There are various reasons which has led to gold smuggling from Zimbabwe among them, the 55/45 per cent retention, late payments from Fidelity and various Statutory Instrument (SI) implemented by the government.

In order for the sector to achieve the target, it is of paramount importance for the government to consider paying gold miners what they are demanding, pay the gold producers on time to limit alternative markets and remove the current SIs gazetted by the Minister of Finance Mthuli Ncube which banned the use of foreign currency in all local transactions and pricing of equipment in foreign currency.

(b) Invest in gold prospecting -

The government of Zimbabwe needs to revive the gold mining sector by investing in gold mining through Fidelity, supplying

miners with equipment, make public the gold development fund and issue miners with prospecting licenses on time in order for them to acquire loans. Geologists believe that there is a little activity happening along the Great Dyke for the country to reach full gold exploitation.

(c) Invest in Exploration

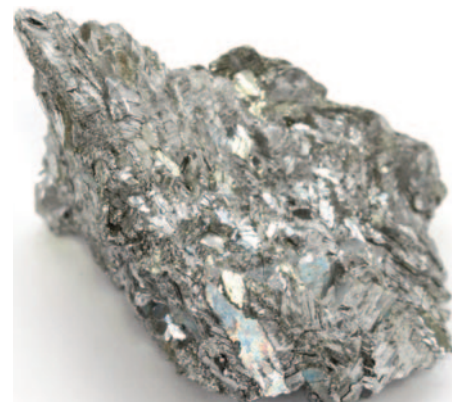


Production in Zimbabwe is limited by a lack of exploration. Identifying new mines in the mining sector is key, the government should, therefore, make it their duty to invest in exploration through granting as much EPOs as possible to various EPO holders.

USD 4 billion nearly not possible

Identifying a gold mine is a daunting task, it can take up to 10 years for geologists, chemists, and engineers to examine a potential site. And even then, the likelihood of a mine being developed into a production gold mine is less than 0.1 per cent. Only ten per cent of these sites contain enough gold to justify further development. But above ground, gold is everywhere. New deposits of gold are increasingly hard to come by and increasingly difficult to locate. So as gold Mining continues to slow and the cost associated with mining increase to meet the challenge of extraction, gold could become even more expensive.

Can the intended target for PGM be reached?



Zimbabwe hosts the second-largest platinum group metals (PGMs) resource in the world on the Great Dyke. An estimate of 2.8 billion tones PGM ore at 4g/t 4e is estimated to lounge on the Dyke. Grade and thickness of ore body persist over large areas.

It is indeed true that the sector can contribute up to USD 3 billion and push the economy of Zimbabwe to yester year's heights thereby helping the nation reach the USD 12 billion target however it could be difficult for the country to reach by 2023 without the necessary steps taken by the government.

It is, however, of no doubt that the PGM sector has all it takes to contribute even more than its projected target through the coming in of projects like Karo and other platinum mining firms.

The possibility of diamond contributing USD 1 billion Is it very high?

Zimbabwe in the Marange field has the largest diamond field in the world in terms of carats produced, estimated to have produced 16,9 million carats in 2013 that is about 13 per cent of the global rough diamond supply. However, diamond production at Marange is estimated at under USD 60 per carat while some diamond mines in the world produce rough diamonds valued at over USD 1000 per carat.

USD12 billion road map achievable?

Zimbabwe has other diamonds reserves in Masvingo, that is Chivi, Beitbridge, Mwenezi, and Mazvihwa in Zvishavane where the diamond miner RioZim's Murowa diamond is the miner. Murowa diamond at its Mazvihwa reserves has a record high of 740,244 carats in 2018.

The president of Zimbabwe and the Minister of Mines and Mining Development were optimistic that the diamond sector will have an immense contribution than before through the coming in of world's biggest miners in the diamond sector like Anjin, Alrosa, and Vast Resources.

It is, however, important to note that Zimbabwe is at loggerheads with the west, the selling of its diamonds is at risk with the US Customs and Border Protection alleging the use of forced labor in Zimbabwe's diamond mining sector. The sector could lose market if the government does not prove to the world that the allegations are malicious.

Is it not a big target for Chrome, Nickel and Steel to generate USD1 billion?



Zimbabwe has the second-largest high-grade chromium ores in the world after South Africa with reserves of approximately 10 billion tones. The country has more untapped than tapped Nickel deposits with only Trojan mine in Bindura only mining the mineral at a very low scale.

Only steel production can reach the target in this category if plans are in place to revive the sector. However, as of now it could be just wishful thinking with no plans in place. The government also needs to address issues of predatory chrome pricing in order for miners to invest in the sector.

Half a billion for lithium?



Zimbabwe has one of the world's biggest hard rock lithium. The Arcadia lithium project located near Harare, Zimbabwe, is considered to be one of the world's biggest hard rock lithium resources.

Prospect Resources fully owns the lithium project, which is estimated to produce an average of 75,000 tones per annum (TPA) of spodumene and 155,000tpa of petalite concentrates during its 20-year mine life. In 2010, lithium was added to the United States governments' list of critical minerals – minerals that are important to the country's manufacturing and defence industries, highlighting its growing importance in the global economy.

Through the Arcadia Lithium project alone, the sector can generate more than half a billion per annum, however, the project could start kick to its full potential slightly after 2023 which means that the government's target may fall by the wayside.

USD 1, 5 billion from other minerals?

The country has one of the world's highest

mineral deposits with records showing that the country has got almost all the minerals found on earth. There are various projects underway from oil and gas to gemstones. According to one miner, the gemstone sector only has the ability to earn USD 2 billion annually if the government through Minerals Marketing Corporation of Zimbabwe (MMCZ) focuses on promoting the sector to attract buyers and value addition.

Overall conclusion, can the sector earn USD 12 billion per annum by 2023?

Mining Zimbabwe believes that it is possible for the sector to earn more than USD 12 billion per annum, however, certain points need to be addressed before the government starts on preaching about the USD 12 billion mining sector.

The government of Zimbabwe needs to take on the following 10 priorities which will get the mining sector moving towards the USD 12 billion industry.



(i) End corruption- although not much recorded corruption in the sector is too prevalent and the cancer of corruption needs to be dealt with once and for all.

(ii) Institutionalise the rule of law to end statutory risk- there should be no changes to rules and regulations without wide stakeholder consultations and advance notice.

USD12 billion road map achievable?



(iii) Stable economic environment-

A stable economy where property rights are respected and policy is consistent will help stabilize the mining sector, thereby leading to the growth of the sector through attracting the right investment.

(iv) Currency must be free-floating and tradable

A floating exchange rate is a regime where the currency price of a nation is set by the forex market based on supply and demand relative to other currencies. This is in contrast to a fixed exchange rate, in which the government entirely or predominantly determines the rate.

(v) Economic growth-

Capital Flows Foreign capital tends to flow into countries that have strong governments, dynamic economies, and stable currencies, therefore, Zimbabwe needs to have a relatively stable currency to Attract investment capital from foreign investors.

(vi) Absolute minimal restrictions on lines of communication, especially the internet

The government of Zimbabwe reportedly lost millions of dollars through delayed Revenue inflows due to the slow processing of imports and exports after switching off the internet services countrywide early this year.

(vii) Improve geoscientific knowledge by revamping and recapitalising the Geological Survey Dept.

(viii) Partially privatise ZMDC

ZMDC is reportedly dead broke which led to speculations that they cannot afford to explore their numerous claims. Many assertions are constantly being thrown around which are of the view that ZMDC is sitting on dead assets and the government has no money to give so as to carry out high-risk exploration. Therefore, this has led experts into believing that, ZMDC must be listed on the stock exchange to raise money and obviously the government gets diluted to less than the controlling shareholder.

(ix) Promote exploration seriously with good tax breaks for companies who put high-risk exploration \$ into the ground.

(x) Digitalise mining rights, title registration, and all payments

Amidst reports of corruption, money laundering, externalization and other unscrupulous behaviors by mining personnel, all transactions which are mining-related in Zimbabwe if done digitally this will avoid corruption and Improve transparency. The government of Zimbabwe, therefore, needs to prioritise on these 10 points in order for the sector to achieve the 12 billion dollar status without which it will be just another project that will never yield results like the other targets previously set by the government.

(xi) Improve electricity supply



Current erratic power supply is one of the major reasons why we have depreciated gold submissions to Fidelity. With gruelling power cuts the country is facing this is set to be a major obstacle to the 12billion road map. The government needs to make power a major priority else the 12billion dollar roadmap is nothing but a pipe dream.





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Challenges facing artisanal and small scale miners in the Zimbabwean mining industry



INTRODUCTION

The artisanal and small scale mining (ASM) sector and in particular the gold sector, has in recent times been very topical in Zimbabwe due to the important role it is playing in the national economy, through employment creation and the generation of much needed foreign currency. So it is no wonder that Mining Zimbabwe is interested in finding out the problems facing this sector, with a bid to help the sector find ways to mitigate these challenges and enable the sector to grow even more.

Differentiation between artisanal and small scale miners in the Zimbabwean context.

While artisanal and small scale miners are generally lumped together into the asm sector, it is important to note that there really is an important albeit fine distinction between these two and while the problems they face may be similar in nature, their needs and what motivates them is arguably different as will be shown later in the article. It is therefore important to differentiate between those who constitute an artisanal miner and those who fall into the category

of 'small scale miner'. There may be 'universal' or international definitions which one can get from Aunty Gugu (Google) or other internet search engines, but I would like to add that I am particularly concerned about how these are viewed or treated in the Zimbabwean context. I am therefore proffering my own interpretation as follows:

An artisanal miner is one who carries out mining activities in a rudimentary and usually non-formalised fashion while relying primarily on basic hand tools like a pick and shovel whereas a small-scale miner is one who is working in a formalised fashion and has mining title to the resource that he or she exploits. In most cases, therefore, an artisanal miner is operating at a subsistence level of survival while the small-scale miner is an aspiring or actual business person, having invested capital to acquire mining title in the form of claim certificates and other relevant licenses.

Challenges and problems facing artisanal miners and suggested solutions to those problems.

- Absence of an enabling legal framework to accommodate artisanal miners within the

national economy.

The prevailing mining, environmental management and gold trade legal framework criminalises or outlaws the activities of artisanal gold miners, even though attempts have been made by the authorities to 'turn a blind eye' to the activities of artisanal miners after having realised belatedly that a significant portion of the country's gold production is coming from this sector. Several initiatives and attempts have been made to encourage growth of this sector, like the "ask no questions policy" by Fidelity Printers (the legal sole buyer of gold in Zimbabwe) for any artisanal miner who manages to get to their buying sites before getting arrested along the way, but these have been piece-meal and until a comprehensive enabling legal framework encompassing rights to mining, environmental issues and the free possession of gold is in place, success in harnessing this sector will effectively remain elusive. This is the root cause of the "black market" scourge that the country faces and hopefully the long awaited proposed and amended Mining Bill and other legislation will address this.

Historical bias against and negative perceptions of artisanal mining activities.



As pointed out above, current legislation in place criminalises or outlaws the activities of this sector, which has led to a negative perception of artisanal mining in the national psyche. This has resulted in participants being called the derogatory name of '(ama)korokoza'.

Challenges facing artisanal and small scale miners in the Zimbabwean mining industry

At one time there was even a popular and long-running series airing on national TV of the same name. This is unfortunate because the result has been that unsavory characters and even criminals have been drawn to this sector due to desperation. With their propensity for violence and criminal activities which regularly make the news and headlines, they thus over-shadow the multitudes of honest and hard-working brave young men and women who actually drive production in this sector. Artisanal gold mining is sheer hard work, literally back-breaking and yet hundreds of thousands of people depend on it for daily survival. The sector should, therefore, be applauded and encouraged to grow by government and yet at the moment, it is the preserve of foreign-funded non-governmental organisations (NGO's) whose unclear agendas may even be at variance with national interests. It is therefore quite pleasing that while in the past the term 'korokoza' may have evoked feelings of revulsion and rejection tinged with some fear due to a lack of understanding of what artisanal mining (kukorokoza) entails, these days due to efforts of industry stalwarts like Mr Wellington Takavarasha and others who more than 6 years ago founded the Zimbabwe Artisanal and Small Scale Mining Council (ZASMC), that is no longer the case. The nation now has a new-found respect for the so-called 'korokozas' who have proven to be economic freedom fighters in their own special way as they truly embody the Zimbabwean spirit of tenacity and struggling to succeed against all odds, however daunting they might be.

Lack of mining title and hence lack of security of tenure.

Because of the absence of an enabling legal

framework for artisanal mining to take place, it is very difficult for artisanal miners to obtain mining title to the ground they would want to work on, hence they would not have the security of tenure. Consequently, their operations are characterized by "smash and grab" tactics where the attitude is grabbing whatever gold you can wherever you can and damn the consequences because for them it is a question of survival and in those jungles and pits, it is only the fittest who will survive. So it is a vicious cycle where land and mine invasions are a daily occurrence and the authorities do not seem to have a clue as to how to break this cycle. In my view, away needs to be found of linking artisanal miners with mining title holders so that they provide labor for shallow ground mining in a win-win arrangement. One such proposal was put forward by the author in the "Command Mining" framework, where artisanal miners would provide labor for small scale miners in a sustainable partnership. However, this program is still to see the light of the day and artisanal and small scale miners await for this program to commence.

• Lack of capital to acquire tools and equipment, working capital, etc.



Artisanal miners invariably lack the capital to capacitate their operations, hence the scale remains at subsistence level unless some well-meaning donor comes along to make donations of equipment. In many in-

stances, some entrepreneur would approach groups of artisanal miners in lucrative locations and offer sponsorship in the form of compressors, pumps, consumables, etc., in return for a high proportion of their production and usually the terms are exploitative if not usurious, due to the high financial risks involved in artisanal mining. Again raising any form of capital from outside sources is a challenge for groups of artisanal mine workers because of the informal nature of the activity.

Lack of cost-effective milling and gold recovery facilities



Artisanal mining primarily targets the recovery of 'free gold' in nugget form and the general illegality surrounding the activity demands that participants recover the gold as quickly as possible in the cheapest manner possible. They thus resort to inefficient panning in rivers with the added use of cheap but hazardous mercury or being exposed to predatory custom millers who retain the bulk of the gold in the sands remaining from the ores the miner would have generated. Fortunately for the artisanal miner, affordable milling equipment has made its appearance in the form of highly portable hammer mills which can be operated at the mining site, thus avoiding ore haulage costs to exploitative custom milling centres, while retaining a rich sands dump which can be sold for substantive amounts to custom leechers (pun intended).

Challenges facing artisanal and small scale miners in the Zimbabwean mining industry

This has presented the government and relevant authorities an opportunity to craft regulations and an operational framework that licenses these devices under appropriate conditions, thus yielding revenue to local authorities and enabling communities to benefit from appropriate technology, unlike a situation where some vested interests are lobbying for the banning of hammer mills. If bicycles, motorcycles, motor vehicles and even dogs can be licensed, then why not gold hammer mills which can create employment for our fitters and technicians nationwide since their increased use will lead to a higher demand that can support a local manufacturing and maintenance industry. This is certainly food for thought for the authority who should take heed that if they cannot control a phenomenon, they should not ban it but rather license it so that it can be properly regulated for everyone's benefit.

Lack of knowledge to carry out sustainable environmentally friendly and safe working practices



Because of the lack of an enabling legislative and regulating framework, there are no wide-spread national structures to provide any form of training in artisanal mining, unlike what obtains in agriculture. Lack of requisite knowledge results in artisanal miners suffering exposure to unhealthy working conditions and health hazards (mine dust leading to silicosis and mercury that to harm the nervous system

and give heightened risk of birth defects (Minamata experience), etc. As such unscrupulous elements can get away with exploiting the vulnerable artisanal miners.

• Lack of 'safety net' or capacity to save for a rainy day or life after retirement.



Invariably due to the subsistence nature of artisanal mining, a large proportion of the participants will not be in a position to make any meaningful savings. It should be noted however that a good number of artisanal miners are also farmers who resort to artisanal mining during the dry season. So while the vast majority of these miners are not able to make significant savings in the conventional sense, most do use their earnings from mining to augment their farming activities through buying farm inputs and even livestock which then serve as a cushion at the point of retirement.

Challenges and problems facing small scale miners and suggested solutions to those problems.

• An archaic a restrictive legal mining framework

The current Mines and Minerals Act does provide a legal framework upon which any Zimbabwean wishing to participate in the industry can do so, though it is a colonial construct that was primarily designed to accommodate and serve the interests of the well-resourced mining operations within the

Rhodesian-era economy to the exclusion of indigenous players in the mining sector. This is the genesis of the criminalisation of artisanal miners which was dealt with in the previous section, even though the bulk of the large scale gold mines were established at sites where indigenous artisanal miners had been operating sustainably for hundreds of years before the advent of the white man in Zimbabwe. The law that was then put in place was inordinately tight with regulations and requirements governing the acquisition of mining titles that were very difficult, if not impossible for most Africans to achieve. Mining then became the preserve of white-owned corporations who became the primary gold producers for instance. This has been the case until recent times after the successful land reform program which then availed and opened up large swathes of mineral-rich land to new owners. Therefore being law-abiding citizens that Zimbabweans generally are, those with the means to acquire mining title under the prevailing act have gone ahead and done so, thus entering the category of "small-scale miners" according to my classification at the very beginning of the article. Having done so, they still have to meet the stringent requirements and regulations under this act that govern for instance the appointment of a mine manager, high fee structures to maintain mining title, the handling of explosives which require expensive and over-designed magazines and over-strict environmental requirements before one can carry out on-site milling operations which are essential to achieve economic viability.

For the government to effectively support this growing class of small and medium enterprise entrepreneurs, all these obstacles to their growth need to be reviewed through

Challenges facing artisanal and small scale miners in the Zimbabwean mining industry

consultations with the small scale miners' representatives. Fortunately a body exists in the form of the Zimbabwe Miners Federation (ZMF), which has lately taken that role seriously and is starting to make an impact in its lobbying efforts as seen by the recent relaxation of Environmental Impact Assessment requirements before a small mining project can commence and the initiative and attempt to ensure miners get essential fuel through some ring-fencing arrangements. However more still needs to be done, especially as regards the mining regulations themselves which are still too stringent for most small scale miners. To put this into its proper perspective, imagine every farmer who has a tractor and other farm equipment and uses dangerous pesticides being required to formally appoint a mine manager for their farm and to have an elaborately designed safe or strong room where they keep the pesticides and which must be registered with the Ministry of Agriculture for an exorbitant fee. And that farmer also has to pay another exorbitant fee to acquire the license to buy those chemicals! That's the extent of control and hurdles that lie in the path of the hapless small scale miner who wants to remain legal.

Lack of capital to acquire tools and equipment for mining and milling and processing, working capital, etc.

Just like in the case of artisanal miners who also lack adequate capital to capacitate their operations, that small scale miner faces even more challenges in this regard because when done properly, mining should be a business that needs adequate investment to fully develop. Besides, mining projects by their very nature are capital intensive and have long gestation periods of years, rather than seasons as in farming.

Therefore one needs deep pockets or a source of cheap finance to sustain a successful small scale mining project and in most cases small scale miners are found wanting, leading to the collapse of their ventures.

Lack of knowledge or skills to carry out sustainable environmentally friendly and safe working practices.

We met this challenge before with artisanal miners, but in this case, a small-scale miner is expected to know better due to their generally higher educational level and economic status. Most gold miners are driven by passion (gold fever) and also due to financial and time constraints, those who should acquire the necessary knowledge do not bother to take time to understand the technical skills required to run a successful mining enterprise, which then leads to premature failure of those enterprises. This includes lack of knowledge and limited capacity for beneficiation or value-addition to mined products, with examples in chrome, base minerals, precious and semi-precious stones, and even gold and it also extends to lack of business management knowledge which is essential for cost-effective operations, e.g. proper record keeping, financial management, and man-management.

In conclusion, therefore, it must be highlighted that the challenges cited above and the proffered solutions are by no means exhaustive nor deeply entrenched as they constantly change while the industry and the economic situation in the country evolves. For instance not so long ago small scale gold miners were literally screaming hoarse that the pricing regime adopted by Fidelity of giving them a portion in forex and another portion deposited into their

accounts at the prevailing inter-market bank rate was robbing them of value, but now that the bank rate between the Zimbabwean dollar and the US dollar is so close to the parallel market rate, the howls of protest have suddenly gone quiet because pricing is now no longer an issue and gold miners are making a bee-line to Fidelity Printers to deposit their gold. That is why I have not even bothered to talk about pricing as a challenge because it is highly dependent on the economic situation prevailing at the time. In any case, gold miners always have a ready market waiting to buy their bullion at competitive prices pegged to the international prices, the so-called "black market". The situation is different though for other sectors like base minerals and semi-precious stones where artisanal and small scale miners are also present in significant numbers, but that could be a subject for another day and the writer is not qualified in any way to comment about those sectors. However, it is hoped that the article will generate debate and encourage the authorities and the miners themselves to re-look at their challenges and find innovative ways to overcome them. The ASM sector is surely poised for spectacular growth should government treat the artisanal and small scale mining sector in the same manner that it previously did with the small and medium enterprises (SME) sub-sector in the industrial and commercial sector, i.e. giving it a ministry of its own separate from the mainstream ministry of mines or at the very least, hiving it off from the ministry of mines and subsuming it into the small and medium enterprise ministry whose sole reason for existence is to nurture and grow small and medium scale enterprises. Just a thought!

Written by Eng Chris Murove who writes in his own capacity

Women making things happen in the Zimbabwe Mining Industry

Orthodox thinkers consider the mining sector to be a very dangerous industry which is not fit for women. However, according to a certain African proverb, if you educate a man you educate an individual but if you educate a woman, you educate the nation.

Rudairo Dickson Mapuranga

The mushrooming of women in the mining sector has led experts to come up with the conclusion that the mining sector in Zimbabwe will be the economic reviver partly due to women's enthusiasm and hard work towards achieving a certain objective.

Women have taken an active role when it comes to mining matters and the day to day business of the sector. The mining sector which is considered by experts to be the economic resuscitator in Zimbabwe has created women who are powerful in shaping the sector for the benefit of Zimbabwe's economy.

Women have taken the leading role in companies and organisations that were male-dominated and they are proving to be equally gifted as men and sometimes excel. Below is a list of women who are taking an active impressive role in the mining sector.



Dr Mercy Manyuchi

Dr Musaida Mercy Manyuchi who is a director in the Ministry of Mines and Mining Development is a Doctor of Technology in Chemical Engineering and she is currently researching options for using charcoal material as a sustainable power source in African communities.

She is the Director for Research, Value Addition, and Beneficiation in the Ministry of Mines and Mining Development. Manyuchi is also a board member for the Minerals Marketing Corporation of Zimbabwe. Manyuchi, a Ph.D. holder from the Cape Peninsula University of Technology in South Africa studies sustainability focusing on the water-energy-food nexus. She also has been instrumental in bringing a Nigerian Businessman named Benedict Peters into Zimbabwe.



Ella Muchemwa

A non-executive director in one of the only four-diamond mining firms in Zimbabwe, Zimbabwe Consolidated Diamond Company (ZCDC).

Muchemwa has over 16 years of experience in diamond exploration, feasibility studies through diamond operations. Mrs. Muchemwa is a qualified geologist with over 30 years of experience in the mining industry in Zimbabwe, Namibia and South Africa and she is currently a consultant with Mrell Consultancy.

She has spent over fifteen years with RioZim and Murowa Diamonds, covering diamond exploration, feasibility studies through mining operations and was part of the leadership team involved in establishing Murowa, from a green field. She also represented Zimbabwe at World Diamond Council as a member of the Kimberley Process Certification Review team to the Democratic Republic of Congo (DRC) in 2009.

She was the acting Managing Director for Murowa Diamonds Private Limited for nine months (2016) and a Mining Services Manager at Richards Bay Minerals in South Africa. She is the first woman to be elected Chairman of the Geological Society of Zimbabwe in 2001 and the first to be elected into the Chamber of Mines Presidium as the 2nd Vice President in 2010. Mrs. Muchemwa, holds a BSc General degree in Geology and Botany and a Special Honours degree in Geology, both from the University of Zimbabwe.

Women making things happen in the Zimbabwe Mining Industry



Elizabeth Nerwande

"She is serving as the President of the Chamber of Mines of Zimbabwe." She is a non-executive director of Zimbabwe Consolidated Diamond Company (ZCDC)

Mrs. Nerwande-Chibanda is currently the Head of Corporate Affairs for Mimosa Mining Company. Mrs. Nerwande-Chibanda was the Executive Director of Consumer Council of Zimbabwe (CCZ) from 1999-2003, CEO for Zimtrade from 2004-2006 and Commissioner General for an Expo in Aichi Japan. Mrs. Nerwande-Chibanda holds a Diploma in Social Work (1991) and an Honours degree in Industrial Psychology.

Jacqueline Munyonga

Jacqueline is the Director of Legal Services in the Ministry of Mines and Mining Development. She also holds a Bachelor of Laws Honors degree from the University of Zimbabwe. She is a registered Legal Practitioner, Conveyancer and Notary Public. She recently submitted her dissertation for LLM in Commercial Law with UNISA. Jacqueline Munyonga has a glowing experience in civil and criminal litigation, dispute resolution, contract negotiation and corporate governance.

At the Ministry of Mines and Mining Development, she collaborated with the legal counsel from local and international entities on matters cutting across various aspects of the law. She is the chief negotiator of the Ministry on mining contracts and agreements, gives legal advice to the Minister and his deputy, the Permanent Secretary and the whole ministry at large and works closely with the Attorney General's Office. She has extensive experience in several due diligence exercises, acquisitions, and strategic investments. Jacqueline has been instrumental in the successful negotiation of multi-billion contracts with big international investors and she has been essential in the creation and protection of value addition in the mining sector, also being the legal focal person for the Ministry in Kimberly Process Certification Scheme. She also participates in anti-money laundering initiatives spearheaded by the government.



Otilia E Furusa

"Otilia Furusa is the current Minerals Marketing Corporation of Zimbabwe (MMCZ) metals marketing manager. Otilia Furusa joined the Minerals Marketing Corporation of Zimbabwe (MMCZ) on 1 March 1985 as a Sales Executive III in the Metals Division. In December 1995, Otilia was appointed as a Management Trainee under the Steel and Granite Division and later became the Acting Divisional Manager.

She rose through the ranks and was promoted to Deputy Divisional Manager Metals in 2000. From 2003 to 2007, she was further promoted to become Marketing Executive-Metals Division. Mrs. Furusa was appointed the Deputy General Manager of Shanghai Jinchuan Zimbabwe Mineral Co. Ltd (SJZMC) which was a Joint Venture Company between Jinchuan Group Ltd of China and Minerals Marketing Corporation of Zimbabwe in July 2007. SJZMC was created to trade in minerals with Zimbabwe and the SADC region, facilitating mineral processing and value addition and related technology transfer between Zimbabwe and the Far East as well as enhancing Asian- Pacific international trading. Upon closure of the company in 2010, she returned to Zimbabwe and assumed her Marketing Executive duties. Mrs. Furusa acted as the Deputy General Manager (Marketing) responsible for two divisions i.e. Metals and Non-Metals for four and a half years and acted as the General Manager in the absence of the General Manager.



Henrietta Rushwaya - "THE IRON LADY OF ZIMBABWE MINING"

A woman we love to call the "Iron Woman of Zimbabwe Mining" Henrietta Rushwaya is the current Zimbabwe Miners Federation President (ZMF). ZMF is a small scale and artisanal miners body that is subscribed to the Ministry of Mines and Mining Development with a membership of over 35 000.

Since her ascension to the presidential position at ZMF, Rushwaya has turned the small scale mining sector in Zimbabwe into a formidable force. Since she has been at the helm of the Federation, Zimbabwe has seen the rise of younger people in Small-scale mining something she is rarely credited for. The rise of Rushwaya at ZMF has seen the ASM sector accounting for the largest chunk of the country's gold deliveries to Fidelity Printers and Refineries after overtaking their counterparts in the primary production sector which is dominated by Conglomerates.

Amidst the fuel crisis the country is experiencing, Rushwaya's executive entered into a mutual relationship with Glow Petroleum where miners under ZMF are unlimitedly supplied with fuel by Glow petroleum at a very reasonable amount. Her executive also entered into a mutual relationship with Zimbabwe's sole gold buyer and exporter in an attempt to reduce gold leakages in Zimbabwe and improve dialogue between ASM and the sole buyer.



Lindi Mpofu

Lindi is considered by many to be the face of the women in the mining sector.

She is currently Zimbabwe Miners Federation vice president. She is also a shareholder in a Chrome Mining Venture, Alaska Mining located in Guruve and she is a director at the mine which produces 4000tonne per month. Lindi is also the 2nd National Chrome Representative, member of the MMCZ Chrome Consultative Group, Ex Vice-Chair of Guruve Mining Association Board of Executive, a shareholder in Uhuru Mining with South African partners and an Agent for Xander Resources South Africa. She has been vocal towards the "ill-treatment" that small scale chrome miners have been receiving from the government and MMCZ. Lindi was also influential in facilitating the marriage between Zimbabwe Miners Federation and Fidelity Printers and Refineries which saw the two begin to work together to reduce gold leakages and promote fair gold pricing in Zimbabwe. Lindi this year was featured in a Germany based EineWELT Magazine for her work in the Zim Mining Industry.



Barbra Mutambanengwe

Born in Zimunya south of Mutare city under Manicaland province in 1959, Barbara Mutambanengwe is the founder and managing director of Kenako Diamond Processing, a firm which deals with rough diamond cleaning. Industry.

Barbra who is a holder of a diploma in secretarial studies from Harare Polytechnic with no mining-related course from the school of mines or another university has defined the odds by becoming the first woman who ventured into the Diamond Mining Processing. It took Barbra almost over two years for her to get a licence in diamond processes for her to set up a diamond deep boiling facilities in Msasa, Harare. Barbra owns one of the biggest diamond cleaning plant in Zimbabwe which has the capacity to clean over 1.2 million carats per month, she has cleaned diamond for various diamond firms including Zimbabwe Consolidated Diamond Company (ZCDC). The objective of cleaning diamonds is to remove coating so that buyers can see clearly the colour, clarity and then make the correct value of the diamonds. Diamond processing and mining have been aligned to be a man's job despite those odds Ms. Mutambanengwe engaged herself into diamond processing.

Coloured gemstones and Zimbabwe's economic recovery: A potential.



In January 2018, the PR Newswire online, London, published that the gemstone market is approximately 23 billion US dollars and that the popularity in non-diamond gemstones had soared to a 100% increase in prices within the decade.

In the economic downturn that the country has been experiencing, it would be unwise to ignore the economic potential of the colored gemstone industry to the GDP, taking into account that we have vast known deposits under the stewardship of citizen miners or ASMs.

To appreciate the potential impact of colored gemstones on the economy, one needs to comprehend the mine to market value chain:

1. Gemstone exploration and mining

- Is truthfully a risky business for investors, but on economic scales, this motivates businesses in mine equipment supply, mining explosives and other relevant supply needs for any mine. This means business for any local supplier. Moreover, investment may be sought from the local banks and

micro finances and that adds on to the business of this economy.

Gemstone sorting and grading

- Stage is wholly concerned about the skill of consistent grading of parcels to the appetite of the different targeted markets.

Gemstone sales

- Major activities are gem auctions and fairs. Directly, there is the propagation of economic gain in the Tourism industry and in the businesses of Branding and advertising. The marking of the country as a gemstone hub commands an inflow of migration and business to Hotels, entertainers and the tourism industry. Furthermore, the businesses concerned with advertising and promotion of these activities will be at their hype.

Cutting and Polishing

- The stage is wholly concerned about the skill of cutting rough stones into polished and jewellery-worthy pieces.

Jewellery manufacturing

- The stage is wholly concerned about the

skill of designing, moulding and setting a jewellery piece.

Jewellery retailing

- Is the sale of the final product and also has a bearing on the Tourism industry.

- The whole chain offers employment from village levels to urban societies. There is also an appreciation of value as the chain ascends. At any stage preceding the sorting and grading, there is potential for the product to be exported, thereby partaking in the share of the USD23Billion market. If the gemstone industry is formalised, the country will enjoy tax returns, mining royalties, and community development. The gemstone industry can ensure a basic standard of living at homestead level for the citizen miner.

• Verdict

- Are being readily picked by citizen miners in small deposits. However, with proper geological surveys and mining, the production can be expanded to develop consistent supply for the market. The citizen miner usually lacks financing and proper tenure hence the small gemstone produce is highly smuggled at unfair returns to the miner and at a blatant loss to the taxman. There is a hand-to-mouth dependence for the miner and the communities' living standards are never raised. Indirect industries such as tourism, advertising, banking, and downstream beneficiation are denied active participation. If the situation continues as is; these non-renewable mineral resources will be fleeced from the country and other economies will continue to benefit from the ignorance we assume concerning the economic impacts of the gemstone business.

Minerals and Location found in Zimbabwe

Agate	Nyamandhlovu, Chikomba, Lupane
Aluminum	Mutare, Nyanga, Mwenezi
Amazonite	Nyamandhlovu, Rushinga
Amethyst	Nyamandhlovu, Hurungwe, Hwange, Makonde, Lupan
Antimony	Kwekwe, Bubi, Mberengwa, Kadoma, Shurugwi
Arsenic	Bubi, Shurugwi, Mutare, Gwanda
Asbestos	Masvingo, Gwanda, Matobo, Mberengwa, Insiza, Makonde, Umzingwane
Aventurine	Masvingo, Beitbridge
Barites	Kwekwe, Mwenezi
Beryl	Hurungwe, Kariba, Goromonzi, Harare, Mudzi, Rushinga, Mutoko, Bindura, Marondera, Gutu, Buhera, Bikita, Chegutu, Hwange, Mberengwa, Gweru
Bismuth	Gwanda, Insiza, Goromonzi, Hwange
Cesium	Mudzi, Bikita, Goromonzi
Calcite	Hwange, Bindura, Chiredzi, Mwenezi
Chromium	Mberengwa, Guruve, Makonde, Gweru, Kwekwe, Shurugwi, Chegutu, Kadoma, Gwanda, Insiza, Masvingo, Chirumanzu
Citrine	Marondera, Harare, Goromonzi
Clay	Harare, Bulawayo, Gwanda, Gweru
Coal	Gokwe, Chiredzi, Beitbridge, Mwenezi, Hwange, Lupane, Binga, Kariba, Hurungwe, Bikita
Cobalt	Kwekwe, Insiza, Shamva, Bubi, Bindura
Copper	Makonde, Kadoma, Mutare, Chirumanzu, Chegutu, Kwekwe, Shurugwi, Beitbridge, Gokwe, Bindura, Chipinge, Bikita, Insiza, Makonde, Harare, Bulawayo, Shamva, Chiredzi, Nkayi, Mudzi, Chegutu, Bindura, Kwekwe, Hurungwe, Bubi, Makonde, Bikita, Gwanda, Masvingo.
Cordierite	Hurungwe, Beitbridge, Chimanimani, Rushinga, Makuti
Corundum	Beitbridge, Chiredzi, Shurugwi, Marondera, Mberengwa, Mazowe, Rushinga, Insiza, Goromonzi, Wedza, Makoni
Diamond	Gweru, Bubi, Beitbridge, Binga, Mwenezi, Mutare, Chivi
Diatomite	Hurungwe
Dolomite	Mutare, Beitbridge, Makonde, Mudzi, Masvingo, Rushinga.
Emerald	Gutu, Masvingo, Insiza, Mberengwa, Hurungwe.
Feldspar	Harare, Bikita, Umzingwane, Goromonzi
Fireclay	Hwange, Chiredzi, Kwekwe, Lupane, Nkayi, Kadoma, Kwekwe
Flint clay	Mwenezi, Beitbridge
Fluorite	Hwange, Guruve, Binga
Garnet	Beitbridge, Hurungwe, Mudzi, Guruve, Rushinga, Marondera
Graphite	Hwange, Hurungwe, Kariba, Makonde
Gypsum	Beitbridge
Gold	Every district in Zimbabwe
Iron	Kwekwe, Mberengwa, Harare, Kwekwe, Buhera, Gweru, Charter, Chiredzi, Masvingo, Mazowe, Kadoma.

Minerals and Location found in Zimbabwe

Jade	Masvingo
Kaolin	Kwekwe, Mutare, Bubi, Hwange, Kadoma, Mazowe, Harare, Umzingwane, Nkayi, Chegutu
Kainite	Hurungwe, Nyanga, Mudzi, Rushinga
Lead	Mberengwa, Kwekwe, Gokwe, Mutare, Wedza, Hwange
Limestone	Mberengwa, Gwanda, Bindura, Shamva, Mazowe, Kadoma, Umzingwane, Gweru, Chegutu, Chimanimani, Mudzi, Harare, Hurungwe
Lithium	Goromonzi, Mudzi, Buhera, Bikita, Chegutu, Hwange, Harare, Insiza, Rushinga, Mutoko, Mutare, Hwange
Magnetite	Gwanda, Nyanga, Kadoma, Mwenezi, Insiza, Buhera, Mberengwa, Beitbridge, Gweru
Manganese	Kwekwe, Gweru, Makonde, Mberengwa
Mercury	Bubi, Kadoma
Mica	Hurungwe, Rushinga, Kariba, Hwange
Molybdenum	Kwekwe, Insiza, Shurugwi, Makonde, Chipinge, Gweru, Mutare
Mtorolite	Guruve, Mutare
Nickel	Bubi, Makonde, Kwekwe, Insiza, Guruve, Shamva, Shurugwi, Matobo, Chegutu, Bindura, Gweru.
Ochre	Gweru, Kwekwe
Palladium	Kwekwe, Makonde, Shurugwi, Chegutu
Phosphate	Buhera
Platinum	Kwekwe, Makonde, Shurugwi, Chegutu, Centenary
Pyrite	Shurugwi, Gwanda, Mazowe, Kadoma, Bulilimangwe, Shamva, Hwange.
Salt	Mwenezi
Sapphire	Mudzi
Selenium	Makonde
Silica	Gweru, Kwekwe, Makonde, Chegutu, Gokwe, Harare, Goromonzi
Sillimanite	Hurungwe
Silver	Makoni, Makonde, Kwekwe
Talc	Bubi, Guruve, Insiza, Nyanga, Mutare, Mt Darwin, Mberengwa, Goromonzi, Mutoko, Wedza, Kwekwe, Makoni
Tantalum	Hurungwe, Guruve, Kariba, Mudzi, Mutoko, Shamva, Bindura, Harare, Goromonzi, Murehwa, Mt Darwin, Rushinga, Mazowe, Marondera, Gutu, Masvingo, Buhera, Bikita, Mutare, Hwange, Chivhu, Mberengwa, Chimanimani, Makoni, Insiza
Tin	Hurungwe, Mudzi, Shamva, Bindura, Goromonzi, Harare, Rushinga, Mt Darwin, Nyanga, Gutu, Bikita, Hwange, Masvingo, Mutare
Topaz	Hurungwe, Gweru, Mutare
Tungsten	Hurungwe, Kariba, Shamva, Mazowe, Rushinga, Bindura, Guruve, Mt Darwin, Harare, Mudzi, Goromonzi, Bulawayo, Insiza, Matobo, Gwanda, Umzingwane, Bubi, Buhera, Mberengwa, Kadoma, Bikita, Shurugwi, Mutare, Chipinge, Chegutu, Kwekwe, Chiredzi, Wedza, Gweru, Hwange, Masvingo, Makoni
Vanadium	Mt Darwin, Guruve, Bulawayo
Vermiculite	Buhera, Mudzi
Zinc	Kwekwe, Gokwe, Nyanga



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- Soda Ash Dense
- Mill Balls
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