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CONTENT

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COVER: MACHINERY EXCHANGE

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We are earthmoving equipment specialists that specialise in equipment sales, equipment rental, spare parts, filtration and power generation.

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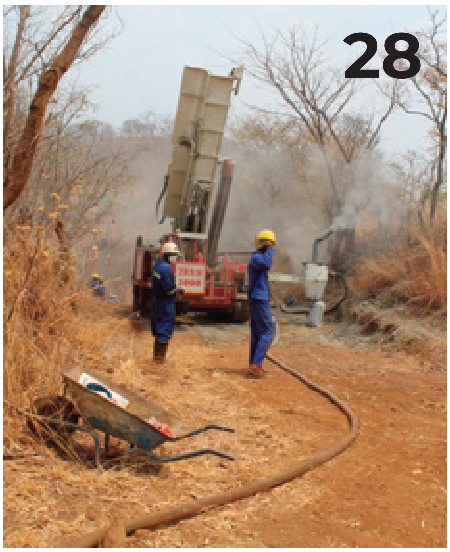
SAFETY AND SECURITY

Prospect Resources

LARGE SCALE MINES

SAFETY AND SECURITY



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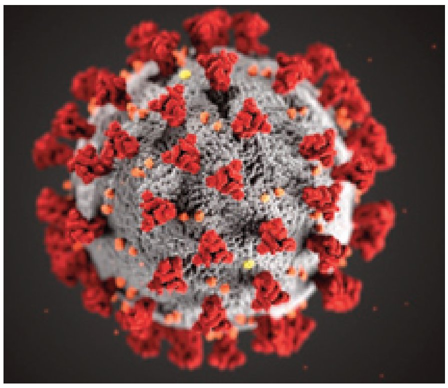

SMALL-SCALE MINING

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WRITERS/ JOURNALISTS

Rudairo Mapuranga - rudairomap@gmail.com

Shantel Chisango
shanteltynechisango@gmail.com

Precious Chikuruwo
preciouschikuruwo18@gmail.com

CONTRIBUTORS

Sharon Tsuro
Keith Sungiso

SALES & ADVERTISING

Kelvin Sungiso
kelvin@miningzimbabwe.com
Cell/Whatsapp 0775523000

PUBLISHER
Timelison Media (Zimbabwe)

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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Capacitate Mines Ministry for a smooth flowing Mining Industry

As Mining Zimbabwe we believe the biggest challenge currently in the mining industry is the incapacitation of the Mines and Mining Development Ministry.

It is disheartening to note that despite the ministry being the driver of the country's economy it is so poorly funded to the extent of lacking basic necessities like bond paper. Mashwest's Mines and Mining Development Ministry provincial office currently only has two vehicles that should service an area of over 57,441 km².

> **"With over 4000 pending site visits it will take the two vehicles over five years to process 4000 applications in Mashwest."**

With over 4000 pending site visits it will take the two vehicles over five years to process the 4000 applications for mining titles.

This clear incapacitation is creating a chain of events which range from slow processing of applications, poor monitoring of mining activities, illegal mining, disputes among others.

Getting certification to conduct mining business is just taking too long not only for locals with United Kingdom Headquartered-Vast Resources being a typical example of a foreign based company which has been waiting for eons but as usual responsible authorities have chosen to remain mum on the whole issue.

Despite challenges being faced in the mining sector Zimbabwe remains an excellent mining investment destination which has over 63 minerals including Minerals of the future which are Lithium, Cobalt, Nickel, Manganese, Copper, Rare-earth metals amoung others.

It is in the country's best interest to push for value addition on minerals like lithium which in turn will create thousands of local jobs and earn the country the much needed foreign currency and help attain the Presidents vision towards an upper-middle income economy by 2030.

As mining Zimbabwe it is our duty to highlight challenges in the Zimbabwe mining industry and putting forth expert solutions. We would like to take this opportunity to thank our advertisers who have kept us publishing since 2016. Thank you for your faith and support and we hope to have your continued support for many years to come.

We would also want to thank our followers as we recorded significant growth this year with LinkedIn leading the pack with an impressive niche audience that surpass top global mining publications.

We wish you all a Happy safe festive season and always stay updated with Zimbabwe mining affairs by visiting our website www.miningzimbabwe.com. Enjoy the read!!

Three key pillars to Mining Safety in Zimbabwe

EcoSure

Mining in Zimbabwe has proven to be one of the most important economic drivers with a contribution of +5% to the country's GDP and providing about 4.5% of employment to the country's population.

According to TradeZimbabwe, 60% of Zimbabwe's land surface is made up of ancient rocks that host a rich variety of mineral resources, meaning that there is still a lot of mining that is yet to be done and key to this mix is safety as it threatens the future of mining in the country which has a bearing on the economy.

It is known that key fundamentals in mine safety is to eliminate all health and safety risks, however, stories on mine disasters, collapses and men being trapped in the mines continue to be reported almost every other month. These worrisome disasters raise a lot of questions on the preparedness of most employers to practice safe and sustainable mining to mitigate these unfortunate incidents.

We will discuss three key issues around mining safety that any mining employer should have in place and how these have a bearing on workers' satisfaction, safety, and productivity. The 3 issues are an Emergency Rescue Plan, Health Insurance, and Life insurance.

Emergency Rescue Plan

Any employee would be happy to work when they know that their employer cares enough and has an emergency rescue plan in place in the event of a limb threatening medical emergency. Imagine having one of your employees succumbing to a snake bite, fall of ground or even being in the way of an explosion. All these are unforeseen accidents that are prone to happen and if you do not have a plan in place, this may result in loss of life and rendering your mine unsafe – a bad reputation and brand damaging remark for any astute Mining business operator.

Whereas if you have a plan in place, say for instance with one of the industry leaders, the EcoSure Rescue Services Plan – MARS Ambulance, which has a base in every mining town and is able to set up one in your operating area. This means that for both small and big accidents you are covered because you have a team waiting to attend to all your employees just as the accident happens. This way you can preserve the lives of your employees and improve productivity as you show your sincerity in ensuring their wellbeing is taken care of.

Health Insurance

The next thing an employee wants to know is what happens if I am admitted into hospital from that snake bite, explosion, or ground fall? Yes things are tough and people risk because the need to survive is greater than the desire for an unfortunate reality but truth is, they would be more productive and willing to invest more if they knew you had an answer to the question above.

Most companies often cut off a percentage of salaries once an employee is no-longer productive, in some instances, the employee has no befitting medical aid to settle their bills or income to feed their family while they are in hospital, hence the need for health insurance. For such instances, I would also recommend that as an employer you consider taking the EcoSure Hospital Cashback Plan, a service that gives your employee a daily allowance for each day they spend in hospital from the fourth day of hospitalisation. This money can be used by the employee to complement their income while they are in hospital so that the family has some money to live on since their breadwinner would be unwell.

Life Insurance

Lastly, the employee also wants to know your plan as an employer in case they pick a permanent injury or die while at the mine due to that snake bite, ground fall, explosion, or any other accident that may happen while at the mine.

Most mine workers have families they look after, whose livelihood would be immensely affected if their loved one picked a permanent disability or died while at work. For this, I recommend that any employer should pick the EcoSure Personal Accident Plan which gives the employee's family up to USD10,000.00 in the event that they pass on or become permanently disabled from any mining related accident.

With such financial support, the family has a starting point, and this makes you as the employer come across as a very supportive and caring business that looks after its employees quite well.

Parting Shot

In a nutshell, employee productivity and satisfaction are largely hinged on your empathetic commitment to establishing a clear Safety Plan to support your employees. You can take the above plans and customise them for your employees from the Econet Life Group Life Assurance plan. The plans cover everyone from the CEO to the artisan who travels down the dark cave looking for the precious minerals; we all need these at some point in our unpredictable lives.

You can contact the Econet Life Team on 0774222261 and 0774222748 to understand more about these safety plans. Employee safety is key and has a huge bearing on our industry and economic performance, and hence should be prioritised.

On a point of order Mr Speaker Sir! Mines Portfolio Committee's year-end report

The Portfolio Committee on Mines and Mining Development's year was short in terms of operations due to COVID19. It was end-loaded with less having been done at the year's onset but in the last quarter. 2020 began with a number of agenda items on our work plan, having started the year after paying visits to a select of Platinum Group of Metals mining houses as part of the Committee's familiarization visits exercise. One of the major targets the Committee had and still has, is the finalisation of the Mines and Minerals Amendment Bill.

On that note, we had a cat and mouse race with the Ministry of Mines and the Legislative Drafters in the Attorney General's Office. We had anticipated ending the year with the All-Stakeholders Consultation Workshop that was supposed to be held from 9th – 13th December 2020. It is our consolation that we have arrived at this stage and also my pleasure that the Bill among other associated proposed laws are already provided for in the 2021 budget. A lot of work has already been done around the Bill. There are many new emerging issues due to the dynamic nature of the mining sector so the delay has been a blessing. The Committee however is still deciding on where to place some of the emerging issues in the ongoing legislative reform agenda cognisant not to waste any more time.

In addition, we have started the Gold Inquiry that encompasses an investigation into poor deliveries and accusations of corruption leading to mining title conflicts in the sector. This was in response to the high incidences of violence which was threatening national security as well as production levels of gold in the country. People were now afraid of conducting their

their operations while at the same time, unnecessary and avoidable conflicts are still rife. The impact on livelihoods, national image, ethnic and regional relations and the desire to attract more investment in the sector ushered in us the idea to conduct the inquiry which is still ongoing.

Around the gold sector, the Committee also conducted an inquiry into the farmer-miner dispute together with the Portfolio Committee on Agriculture. That was specifically a case study and we had a practical feel of what is actually taking place in around that matter in Zimbabwe. The issue is around livelihoods sustainability and it was established in the visited areas, that the people are mostly relatives and lacked communication hence the conflicts. Both sides were cooperative but there was water pollution as a result of mining work, which was negatively affecting downstream market gardening.

Again, during the year-end, the Committee conducted an inquiry into the mining accidents currently being rampantly experienced in both small and medium-scale as well as in formal and informal mines. Nevertheless, there is an approved outreach programme for conducting another inquiry on past and present environmental degradation due to mining throughout the country. The two programmes work hand in glove because usually, the persons currently at risk of mining accidents are also the same people who are less responsible when it comes to environmental management, without fully exonerating some large-scale mines.

The Committee has a number of reports that have to be presented in the National Assembly for adoption and these have been delayed by the COVID19 pandemic. More-so, the Committee has been involved in various platforms for advocacy, public engagement, empathetic reasons, solidarity, listening and learning. In this regard, we want to appreciate the support received from the Civil Society Organisations, internal and external development partners, our main stakeholder the Ministry of Mines and Mining Development and the media, among others.

Through our friend the Zimbabwe Environmental Laws Association, many platforms for engagement including with the communities in mining areas were created and facilitated. The Committee has received tremendous support from many other organisations working in the sector in various ways, and we cannot specifically mention their names due to space limitations, but only to say we are thankful. These engagements allowed the Committee and Parliament in its broader sense, to receive criticism necessary for its improvement and, bridged the gap between Parliament and the citizens it exists to serve.

The Committee was capacitated on a number of issues including debt reduction, contract scrutiny, environmental issues, illicit financial flows, and sustainable development among others. In ending, next year is expected to be a busier year since we have already adapted to conducting our duty within the COVID19 risk context. The Mines and Minerals Amendment Bill is at the core of the 2021 agenda of the Committee. Last year (2019) the Committee mainly focused on familiarising with the sector and capacitation of the Ministry of Mines. This year (2020), we have been tackling the challenges in the sector to ensure productivity. That is the main agenda going forward to the 2023 mining vision and ours is the target we do not expect to miss since that is one of the pillars for the attainment of Vision 2030. Our Committee remains open for engagement. May I wish you Zero Harm, Merry Christmas, and a Happy 2021.

onlyitalian 10 2010-2020 office furniture

Only Italian is celebrating its 10th anniversary this year with an exciting new range of office furniture that's right up to date with international trends in workplace design.

Mirella Bescotti is the founder and managing director of Only Italian, which was started 10 years ago in a small flat in Avondale. The company was so successful that they soon moved to their current premises in Williams Way in Msasa which is still their head office and warehouse. Two years ago, Mirella opened the new showroom in the Celestial Office Park in Borrowdale, just opposite Celebration Centre, where you can see their new range beautifully displayed.

Only Italian sources most of its range directly from Italy, although they also work with local manufacturers for specific customer's needs. Their main suppliers in Italy are the leading brands LineKit, IVM and SCAB Design - all renowned for top quality furniture in the latest styles that are on trend with modern international office design. Their ranges include shared workstations, individual desks and chairs, executive desks, boardroom and meeting room tables, storage solutions, reception desks and furniture for waiting areas. In addition, they have now introduced COVID screens for the workplace to keep workers feeling safe and healthy – there are both clip on screens and movable self-standing screens in clear Perspex.
Apart from supplying furniture, Only Italian also offers a design service so they can visit your office (or work from plans) to give you advice about what furniture would work best – and look good - in your space. Their delivery and installation services are first class, and all their products are fully backed up so in case of any problem, which rarely happens, items can be repaired or replaced.

A few of their major corporate clients include Old Mutual, CABS, Stanbic, CBZ, Steward Bank, NMB Bank, Smart Building Solutions, Machinery Exchange, Cimas, Econet, Doves, Puma, Lafarge, Bitumen World.

To find out more: Visit their showroom at Block C, Celestial Office Park, Borrowdale. Check out their website: www.onlyitalian.co.zw or their Facebook page: Only Italian Office Furniture Call: 0778 408665 or 0242 886 254

Invent Insurance Agents call for collaboration between Insurance players and mining business

Insurance is not always something people can think about when the mining business is mentioned. It is common knowledge however that the mining business is a risky business and risky business is the reason insurance companies are in business. As such, there is a great need for the collaboration of the two industries, with the view of protecting the growth of the mining industry.

A market intelligence report by Willis Towers Watson in 2020 shows that insurance companies paid about a US 1.3 billion in claims in 2019 from global mining losses caused by several factors including machinery breakdown, fire and explosion, natural catastrophes, derailments, and strikes & riots. To some, claims payments of US1.3 billion might seem like a lot but one has to wonder how much more losses did mining companies experience which was uninsured. It is not clear how much in insurance claims payments Zimbabwean miners have received, but we have realized a fair share of accidents in the mining industry of late.

Just like with any other business, insurance is key in protecting the financial security of the mining business and it can also be used as a growth agent.

Zimbabwe's mining landscape has a mixture of larger mining companies, small scale miners, and illegal miners. Larger mining companies have shown a great understanding of the need for comprehensive risk management, which includes the need for insurance. It is however the smaller mining companies that are not taking full advantage of insurance solutions available to them. This could be because the local insurance industry has not done much in terms of product development concerning the setup of the mining sector in Zimbabwe.

The need to turn the mineral wealth of Zimbabwe to profitable enterprises has been a major thinking point for policymakers in the nation. One way of achieving this is developing the potential production of the small-scale mining sector, which in itself is turning risk into a path of growth. The stepping up of insurance players to design and deliver solutions that manage risk and optimize benefits for the small-scale miners will take Zimbabwe's mining sector on a growth trajectory. However, insurance companies in Zimbabwe have had a limited appetite to insure small scale mining risks.

It is the duty mainly of insurance agents and brokers to step up in designing industry-specific policies and guarantees that optimize operating risk and expand the power to obtain capital, which will strengthen the small-scale miners' business. This on its own is not possible unless the insurance players take time to study the mining sector with the view of having a deep technical understanding of the sector. Keeping up with the pace of changes in the mining sector will have to be one of the key attributes of the insurance players who seek to take the lead in this. Mining sites by their nature operate like moving construction sites as such there are always problems in defining property such as underground works and roadways and things such as the unpredictability of rock material behaviour never make it easy for insurance players.

The nature of the unpredictability of most of the risks in mining is a good reason for insurance product developers to support miners, particularly the small-scale miners. This can be done through conducting risk assessments with specialist mining engineers, where major risk exposures and their potential damage will be identified, and major recommendations done which will make the risk attractive to insurers and reinsurers. It will always be a good thing to structure insurance policies according to the mining clients' needs and therefore one size fit all policies will not be ideal, but rather bespoke solutions. There is, therefore, a need for mining associations and mining companies to have close collaboration, open communication which will lead to sustainable partnerships that will not only benefit the mining entities but the Zimbabwean economy. Invent Insurance is beginning an exploration into the mining industry which will cause a drive for well-balanced risk transfer mechanisms to the insurance carriers.

Invent Insurance can be contacted at info@invent.co.zw or +263 732441441

Prospect records tangible progress in Arcadia Lithium project

Prospect Resources Limited has accredited the positive results in its financial year to the emphasis on the Arcadia project and a proactive approach to capital management putting Prospect in a good position.

Commenting on the success of Arcadia Project, Prospect Resources Managing Director Sam Hosack a third generation Zimbabwean, said the 2020 financial year has been productive with regards to the Arcadia Lithium Project.

“The 2020 financial year has been a year of tangible progress for Prospect Resources due to focusing on the Arcadia project and a pragmatic approach to capital management, placing Prospect in a strong position,” Sam Hosack said.

He further added that his team managed to highlight the Arcadia Project's economic potential by completing tests that enhanced the recovery of petalite while reducing the technical risk.

“Our team have delivered a Definitive Feasibility Study showcasing the strong economic potential of the Arcadia Project, completed test work that materially improved petalite recovery whilst also mitigating technical risk,” he said.

Supporting the United Kingdom vision 2030 of a ban on all fossil fuel cars, Mr Hosack opined that this will be a great time for Prospect Resources to become the Lithium biggest producer.

“With global consensus to expect growth in demand for lithium in a few years, this reinforces our plan to commence near term production of high purity petalite and spodumene, to take advantage of this rising market.

Prospect Resources

“We have set ourselves clear targets in 2021, focused on the rapid development of Arcadia to take full advantage of the lithium market resurgence. With a high-quality asset, producing low-cost high margin products with offtake partners secured and a committed management team, we have the formula for success and we look forward to delivering on these targets as we transition through funding and into production,” he added.

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Caledonia completes equipping phase of its central shaft

Caledonia Mining Corporation Plc is pleased to announce that the phase of fully equipping the Central Shaft from its base to the surface collar is now complete and it is on track to be commissioned in the first quarter of 2021. This has been completed considerably below budget and within a time frame to underpin the Company's expectation of delivering production of 80,000 ounces of gold in 2022.

Key features of the Central Shaft project since the start on 3 August 2015 include:

·Safety: 1,850 fatality free shifts with only two lost time injuries (LTI); 920 shifts since last LTI;

· Extended scope: the scope of the Central Shaft project was extended from an initial target depth of 1,089 meters to a final depth of 1,204 meters;

· Project is self-funded and is owner-built by Blanket crews with supervision from Sinking Engineering Mining Construction;

· During shaft sinking, more than 1,800 metres of infrastructure development was completed including mid-shaft loading;

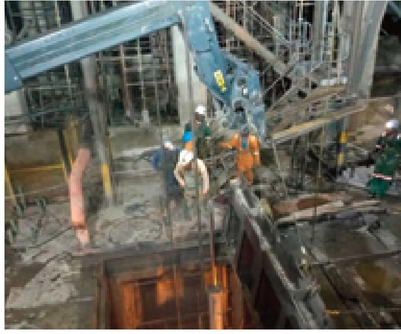
· Capital cost to date is approximately $60 million, compared to initial sinking contractor quotes received of about $100 million;

· Increased mine-life: the shaft has extended Blanket's life of mine to the current time horizon of 2034;

· Increased production: the Central Shaft is expected to increase production by around 45 per cent from approximately 55,000 ounces of gold in 2019 to the target rate of 80,000 ounces from 2022;

· Reduced costs: economies of scale and operational efficiencies arising from the Central Shaft are expected to reduce the all-in sustaining cost per ounce of gold from $855[1] in 2019 to between $700 and $800 per ounce;

· Increased exploration: the Central Shaft will provide access for



· Increased exploration: the Central Shaft will provide access for further deep-level exploration which, if successful, may extend Blanket mine life beyond 2034;

· The erecting and fixing of the headgear is due to be completed by the end of 2020 and commissioning is on track for first quarter 2021.

Commenting on news of the completion, Steve Curtis, Chief Executive Officer, said

"The completion of the equipping phase is a huge milestone for the Company, and no-one should underestimate this achievement. The last five years have been a tremendous team effort and we commend our employees for their hard work and their commitment to safety. Shaft sinking is widely regarded as one of the most dangerous activities in mining and I am proud to report that over more than five years the crew achieved 1,850 fatality free shifts to date with only two LTI and achieving more than one million LTI free man hours worked since the last LTI.

"We've invested approximately $60 million in this project since we first announced it in 2015 and it has been owner-built and fully funded through internal cash flow and has been completed at a cost that is well below initial quotes received.

"Central Shaft is one of the largest gold mining investment projects in Zimbabwe and will be transformational to our business: our target production is set to increase by 45 per cent to 80,000 ounces by 2022 while our long-term all-in sustaining costs are expected to drop to $700-$800 per ounce. Central Shaft will also position us to step-up our deep level exploration which, if successful may extend Blanket's life of mine, which is currently to 2034.

"Over the last five years we have built a solid foundation for the Company, we have a healthy balance sheet, a strong gold price and a highly cash generative asset with free cash flow expected to increase significantly with the rise in production. This is a very exciting time for Caledonia, and I would like to take this opportunity to recognise Dana Roets (Chief Operating Officer), Caxton Mangezi (Blanket Mine General Manager), Wimpy Nel (Design Engineer), Carel Greeff (Projects Manager), the late Rodney Voight (Civils Design Engineer), the entire team at Blanket, our technical team in Johannesburg especially Deon Niemand and the contractors for their outstanding performance as we take the business into its next chapter."

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The Mincon MP40MQ is a next generation DTH hammer in the Mincon range of 4” hammers.

With the world of drilling demanding higher production rates, lower overall cost per meter and greater efficiency Mincon stepped up to the challenge with the MP40MQ

The target is to achieve higher penetration rate and longer internal component life, raising production and lowering cost per meter, this will be achieved by excellent design and manufacture of Mincon tools along with expert advice and guidance and a continued improvement program.

The following three case studies prove this Hammer truly is the “The Driller’s Choice Worldwide”

Dubai (on going trial)

August 2020 Mincon deployed the MP40MQ after the Driller was experiencing high cost per meter and low production from their current supplier.

Current supplier
DR43 Epiroc D55 an average penetration rate of 0.79 meters per minute was recorded.
Feed: 75 Bar
Rotation: 55 Bar
Air Pressure: 24 Bar

Mincon MP40MQ
DR47 Epiroc D50 an average penetration rate of 0.95 meters per minute was recorded.
Feed: 85 Bar
Rotation: 35 Bar
Air Pressure: 22 Bar

This is an increase of 20% penetration rate, the MP40MQ was then put on DR43 the air pressure increased to 30 Bar and an average penetration rate of 1.1 meters per min was achieved, giving an increase of 40%.

Customer also reported changing failed major internal parts 3-4 times in the hammers life of 20,000 metres, the MP40MQ Internals are currently at over 5,000 meters and still going strong.

Senegal - Pre-splitting holes – 20 m @12 degrees January 2020

Mincon deployed the MP40MQ after experiencing broken pistons and broken strike face on bits. Not only has this problem now been total eradicated but penetration rate has improved from 16 meters per hour to 18 meters per hour that is an increase in penetration of over 12%.

Customer was extremely impressed with results and now the MP40MQ is the only 4” hammer they purchase.

- Parameters:

Pen rate	Feed	Rotation	Air Pressure
18 m/h	51 bar	30 bar	26 bar

UK (ongoing trial)

July 2020 Mincon deployed the MP40MQ as an alternative to the 4HRTD. We compared both hammers side by side on 2 Epiroc D55's The rock here is a medium to hard granite that is extremely abrasive, the drilling is very challenging with up to 7 meters of broken rock at the start of the hole and a high ingress of water.

This type of drilling can be very punishing on the rock tools causing a high amount of back hammering/free hammering whilst try to get through the broken ground, normally resulting in shanked bits and broken pistons.

When using the MP40MQ for over 20,000 meters we have not experienced any breaking of internal components.

As can be seen in the table opposite the MP40MQ has achieved 12% increase in penetration rate 11.5% decrease in litres of fuel per hour 8% decrease in engine load This is one of the MP40MQ pistons used in the UK trial at 10,304 meters, when compared to a new piston there has been zero OD wear and very minimal impact damage to the strike face.

This is the reason the hammer is still performing and consuming same amount of air as when new.

Hammer	Avg Pen rate	Fuel l/hr	Engine load %	Air pressure
4HRTD	0.85 mts/pm	80.3	96	26 Bar
MP40MQ	0.95 mts/pm	71	88	30 Bar

Conclusion

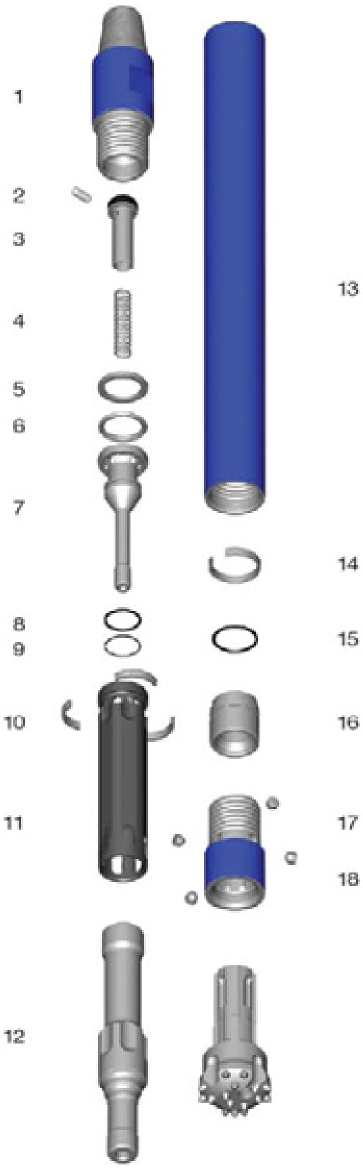
The MP40MQ has proved to be a high preforming hammer in some very demanding drilling conditions.

- **Consistent high penetration rate**
- **Reliable and robust internal components**
- **Lower air consumption**
- **Lower fuel usage**
- **Lower engine load**

It is important to note as this is a high performing hammer, drill parameters will need to be adjusted to suit increased penetration rate also ample amounts of high quality hammer is to be used, on all of the case studies feed pressure was increase by 10-20 Bar

Future

Mincon is currently running extensive trials on coated chucks as part of our continuous improvement program this is with a scope to improve overall hammer life by up to 40% in abrasive conditions. Combined with high performance of the MP40MQ it will be "The Drillers Choice Worldwide"



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6x4 Tipper Truck

- Driving Type: 6x4 / 3 Axles
- Horse Power: 336HP / 371HP
- Transmission: HW19710, 10F & 2R
- Bucket Size: 16CBM / 18CBM / 20CBM

8x4 Tipper Truck

- Driving Type: 8x4 / 4 Axles
- Horse Power: 371HP / 420HP
- Transmission: HW19710, 10F & 2R
- Bucket Size: 25CBM / 28CBM / 32CBM

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GREAT DYKE INVESTMENTS (GDI), THE BEST UPCOMING MINE OF 2020

Zimbabwe through the President HE Emmerson Dambudzo Mnangagwa's Open for Business Mantra has attracted significantly attracted new mining projects from PGM, lithium, diamond, oil, and gas to mention a few, Great Dyke Investment's (GDI) Darwendale platinum project's performances in 2020 were significant.

Rudairo Dickson Mapuranga

GDI is expected to become Zimbabwe's next giant platinum mine, the project has been ahead of the schedule. The mine is expected to increase the country's exports of Platinum Group of Metals in 2020.

> ***The platinum project is expected to become Zimbabwe's biggest Platinum producer. When complete the project is expected to produce 860,000 ounces of platinum group metals and gold a year.***

The project has already spent US$100 MILLION to date including exploration costs. Reports have it that a significant amount of investment will now be needed if Great Dyke Investment, owned by Russia's Vi Holding and Zimbabwean investors is to complete the $2 billion project.

The platinum project is expected to become Zimbabwe's biggest Platinum producer. When complete the project is expected to produce 860,000 ounces of platinum group metals and gold a year.

This means that the project will join South African companies Impala Platinum Holdings Ltd and Anglo-American Platinum Corp in producing the precious metal in the country.

The company is considering providing decent accommodation to police officers in Norton under a programme to construct 1 000 houses for its employees.

This year, the mine handed over of blankets, kitchen utensils and various foodstuffs to nine families at Norton Police Station that lost property in a fire.

The project has been hailed by Zimbabweans across the political divide to with Norton Legislature Hon Temba Mliswa welcoming the company's Corporate Social Responsibility in his constituency.

The project is expected to complete its 2nd box-cut in 2021 as well as to start construction of the concentrator, construction of the Tailings Storage Facility, construction of bulk surface infrastructure that includes power lines, water lines, road networks, and buildings and continuing with declining mining and development in both portals

Great Dyke Investment is expected to become a big player in assisting the mining sector to achieve the President's vision for the industry achieving a US$12 BILLION earner by 2023 with contributions reaching 270000 of 4E Ounces production.

G and T Scales the market leader in weighing Industry

G and T Scales Services has taken a market leadership position in the weighing industry having taken baby strides since it's inception in 2004.

Today, G and T Scales boasts of an international status with branches in Botswana, South Africa and Zimbabwe. Currently a project is going on in Mozambique as the branch looks forward to it's launch in 2021. The market leader has rooted itself in weighing equipment ranging from the smallest pocket scale to weighbridges. The scale division has given birth to the stationery division which has become a major brand on its own. Both divisions gave birth to the 'newly born child' Migo, a logistics department. The logistics department is currently plying Zimbabwe, Mozambique and South Africa routes.

G and T Scales looks forward to walking this journey with the current esteemed clients and those who are joining on board along the way. We wish you a merry Christmas and a prosperous new year!!

The future of coal in Zimbabwe

With the world increasingly changing laws to move towards clean energy, the use of coal energy remains a bigger threat to the world's climate but remains a necessary evil as world energy consumption grows rapidly.

Rudairo Dickson Mapuranga

The United Kingdom government recently announced that it will ban the use of coal for domestic use by February 2023 in bid to tackle air pollution and encourage the use of cleaner fuel in the country. This affects the use of coal even for industrial use as some NGOs has advocated for the complete ban of coal.

As of 2010, coal accounted for 43% of global greenhouse gas emissions from fuel combustion. Simply put, to solve the climate crisis we must stop burning coal. Zimbabwe which has one of the world's largest untapped coal reserves is highly reliant on coal and stands to lose billions of dollars if the government joins the rest of the world in banning coal for electricity generation.

However, according to experts in the energy industry, energy consumption will increase by almost 60 per cent by 2040 and coal will still be the major source of power generation globally.

The International Energy Agency has predicted that by 2050, the volume of international coal trade will increase by 1.5 times compared to the current level.

Zimbabwe seems to have shelved coal as one of the major foreign currency earners as evidenced by the President's vision for Zimbabwe's mining sector becoming a US$12 BILLION industry by 2023 in which coal was not recognized to the contribution of the sum.

The continued use of coal for electricity generation is an indication that the mineral can fetch billions of dollars through energy production and exports.

Coal can therefore undisputedly contribute to the President's vision of the country becoming an upper-middle-income earner by 2030.

Coal has proved that even though governments and pressure groups are pushing for its ban, there has not been a cheaper alternative to coal, for example, the United Arab Emirates is set to become the first Arab Gulf country to generate electricity from coal. Experts have predicted that other countries might follow suit advantaging countries like Zimbabwe to become suppliers of the energy manufacturing mineral.

However, it must not be forgotten that coal is typically the dirtiest fuel for power generation, countries in Europe and the middle east have abandoned plans for coal power, for example, Oman launched a tender for a coal project at Duqm in 2018, but it was later shelved.

CAN RAW LITHIUM survive the test of time, beware Zimbabwe!

Its quite clear that Lithium has attracted world recognition as a significant mineral playing a substantial role in electric cars and other clean tech gadgets. However, Europe which the world has been eyeing as the consumer of raw lithium is changing goalposts by promoting recycling of vital elements such as lithium.

Rudairo Dickson Mapuranga

The European Union has been tipped by the European Raw Materials Alliance (ERMA), a partnership of over 300 companies, business associations and governments, to break Europe's dependence on imports from China and other resource-rich countries.

The EU reportedly imports around 98 per cent of rare earth from China. Turkey supplies 98 per cent of its borate, while Chile meets 78 per cent of Europe's lithium needs. South Africa provides 71% of its platinum and Brazil supplies 85 per cent of the old continent's niobium, a crucial part of steel alloys used in jet engines, girders, and oil pipelines.

Zimbabwe is the world's fifth-largest producer of lithium, albeit with only a single producing mine and could soon regret to have invested in the sector because the popularity of lithium in clean energy and tech gadgets could soon be wiped out.

However, political analysts have interpreted ERMA's move has a way of trying to dismantle China from controlling the whole world market through identifying African countries like Zimbabwe that can be able to supply lithium and raw earth minerals to the rest of the world.

Zimbabwe has the potential to supply over 20 per cent of the world's lithium appetite potential able to supply over half of Europe's demand for the next 30 years.

Renowned research groups have predicted that the European Union will need about 60 times more lithium than it is currently consuming and 15 times more cobalt for electric vehicles (EV) batteries and energy storage by 2050. It is estimated that the demand for rare earth minerals used in high tech devices and military applications will increase 10-fold in Europe over the same period.

Bikita Mine Fleet

Bikita Mine

The European Union will not be able to ditch out lithium and raw earth imports due to the world's adoption towards clean energy and the fact that recycling of elements could be deemed a danger to the climate.

Bikita Minerals is the only active lithium mine in Zimbabwe with several other lithium projects at various stages of development, establishing its position among the major producers in the world.

Lithium was classified by the government as strategic in helping the country achieve US$12 BILLION mark by 2023 with the mineral fetching half a billion.

The country also boasts of MIRRORPLEX (Pvt) Limited's lithium project in Shamva which is postured to become Zimbabwe's biggest hard rock lithium resources has the potential to grow into a world-class lithium mine with Results from 240 Rock Chip samples taken from the exposed Bonnyvale pegmatite body at the Shamva Lithium Project provides high-grade lithium assay results up to 3.13% Li2O and surface sampling at the Loch Ness prospect has revealed two more pegmatites containing high Li2O grades up to 4.82% Li2O.

Prospect resources diamond drilling in progress

Other lithium projects are Arcadia by Prospect Resources, Zulu and Kamativi projects which would cement the country's position on the world lithium market.

Zimbabwe should now focus on value addition through reopening closed factories thus becoming one of the largest suppliers of lithium batteries and clean energy.

Zimbabwe Mining in 2020

The year 2020 was a difficult year for both large producers and small scale miners due to falling commodity prices as well as the impact of the COVID-19 pandemic which ravaged the entire globe.

Mostly affected in terms of both output and price compressions were base minerals such as chrome ore and ferrochrome, according to Finance minister Mthuli Ncube.

As a result, the sector ameliorated contraction to -4.7% in 2020.

This article seeks to discuss the bad and the good experienced by the mining sector during the course of this year.

THE BAD

Failure to pay gold producers timeously

Fidelity Printers and Refiners (FPR) underpays and sometimes pays late for gold. The body pays producers partially in forex and partially in amounts of Zimbabwe dollars determined by the official exchange rate.

Delays in payment for gold deliveries is one of the major contributory factors to the smuggling of Zimbabwe's yellow metal to countries such as the United Arab Emirates and neighbouring South Africa.

Payment delays saw one of the biggest mines, RioZim shutting down its operations citing "insignificant" part payment of its gold deliveries to (FPR).

FPR has attributed the delays to settle payments for gold deliveries to the shortage of foreign currency following the outbreak of the Covid-19 pandemic, which has seen restrictions on international flights that transport the hard currency into the country.

For the industry to grow, FPR needs to reduce the turnaround time for payment of gold delivered by both large and small-scale producers. Currently, the turnaround time for payment is not sustainable. It forces producers to sell their gold in the black market.

Subdued capacity utilisation

RESERVE BANK OF ZIMBABWE

Total capacity utilization in the mining industry remained subdued at around 61% owing to challenges in raising capital and investment, according to the Chamber of Mines. The main hindrance to capital flowing into the sector is a negative perception about the country and the political risk factor.

In addition, the Reserve Bank of Zimbabwe (RBZ) has faced obstacles in paying gold producers timeously, thus gravely affecting working capital for the miners.

Mine fatalities

Year-in, year-out, lives are lost in Zimbabwe's mining sector, with corruption and inadequate monitoring of mining activities by the government cited as major causes.

The year 2020 was no exception.

On November 10, 2020, six miners got trapped underground at Patridge Mine in Esigodini and even today, their bodies have not been retrieved as the government has abandoned rescue efforts, saying the mission is too risky.

Again, rescuers are still trying to reach out to least 40 miners in Bindura who are trapped underground after a shaft collapsed. Other accidents which happened this year include five artisanal miners who got trapped underground at Task Mine in Chegutu as well as two miners who died after a shaft collapsed at the Globe and Phoenix Mine in Kwekwe District, 200 km southwest of the capital Harare.

In May this year, another worker at Vumbachikwe Mine died after he allegedly fell during a blasting exercise when he was alone underground.

To end these disasters, mining activities across the country should be monitored. There should be training of people who can lead and monitor operations, especially on areas of drilling and blasting.

Corruption

Corruption continues to rear its ugly head in Zimbabwe's mining sector. This year, a local publication unearthed serious corruption cases involving officials in the Ministry of Mines and Mining Development who are allegedly causing man-made disputes in mining towns occurring around the country due to deliberate double allocation of registration certificates.

An investigation carried by the online publication shows that Provincial Mining Directors (PMDs), though armed with full knowledge on the ownership of mine claims in the country, deliberately re-allocate mine claim certificates to their loyal syndicates who either give them cash upfront or a percentage of the loot.

The publication also reported that small scale miners in Midlands Province were accusing the Midlands PMD Nelson Munyanduri and the national office of operating a well-orchestrated conspiracy of deceit, fraud, misrepresentations, chicanery and double-dealing after he double allocated a mining certificate on disputed land.

Mineral leakages

Gold leakages remain on the increase in the country and require tightening of surveillance and penalties for illegal externalisation and other dealings, according to Finance minister Mthuli Ncube in his 2021 national budget.

Ncube said the Gold Mobilisation and Surveillance Committee, as well as the Minerals and Border Control Unit, will be strengthened and capacitated to be able to execute their mandate," he said, without giving figures.

According to government estimates, the country is losing about US$100 million monthly through smuggling.

Policy inconsistencies

CHAMBER OF MINES
of Zimbabwe

Chamber of Mines survey findings shows that mining executives are worried about policy inconsistencies which characterized the operating environment for 2020 to persist in 2021, impacting negatively on business planning. They cited misalignment in foreign exchange and fiscal framework, liquidation of unutilised Nostro balances, and multiple taxes to weigh down mining operations in 2021.

THE GOOD

$1 billion credit facility

On May 1, 2020, President Emmerson Mnangagwa announced an $18 billion economic stimulus package to scale up production in all sectors affected by the COVID-19 pandemic.

Out of the $18 billion, a total of $1 billion was meant to support a credit facility to incentivise investment in large scale and small scale mining and speed up implementation of a computerised cadastre system.

Though the intention to incentivise investment in large scale and small scale mining was good, the reports that a number of small scale miners failed to access the facility due to red tape among other challenges, are very unfortunate.

Mineral exports up

In his budget, Ncube revealed that in terms of export earnings, mineral exports were around US$2.4 billion for the period January to September 2020, compared to US$2.1 billion recorded over the same period last year.

Keeping mines operational during the lockdown

Ncube said due to the nature of mining operations, most mining houses did not completely shut down during the lockdown period like other sectors. However, small scale miners operations were disrupted as the police kept on harassing them, demanding exemption letters.

2021 OUTLOOK

In 2021, the government expects the mining industry to rebound by 11% driven by planned expansion programmes aimed at increasing production by miners as we move towards the attainment of the US$12 billion industry. This, it said, will be achieved through increased exploration, expansion of existing mining projects, resuscitation of closed mines, the opening of new mines and mineral beneficiation and value addition.

Further, expected improvement in the availability of power supply and foreign currency is expected to propel production and capacity utilisation from the current 61% to about 80% in 2021.

According to the Chamber of Mines latest survey report, about 90% of mines are planning to ramp up production in 2021 while 10% expect to remain the same. Of the respondents that are expecting to increase production, approximately 40% are expecting to ramp up production by more than 30%. About 10% expect to increase output by between 10% and 30%.

Mining executives are expecting an improvement in the global commodity market in 2021, with 90% of respondents indicating that they are optimistic of a favourable commodity market in 2021 on the back of anticipated improvement in the covid-19 situation. About 10% are skeptical about market conditions in 2021 and expect the covid-19 situation and depressed demand specifically for base metals to persist in 2021.

Moving with the US$12 Billion target

Late last year, the President of Zimbabwe Emmerson Dambudzo Mnangagwa unveiled the US$12 billion road map with aims to developing the mining sector in Zimbabwe to a US$12 billion industry by 2023, however, mining performance in 2020 has left a lot to be desired when it comes to the attainment of the vision.

By Dickson Rudairo Mapuranga

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.

The President's US$12 billion roadmaps, has put a target of US$4 billion for gold producers while platinum and diamonds will weigh in US$3 billion and US$1 billion, respectively. Chrome, Nickel, and Steel are expected to generate US$1 billion, coal and hydrocarbons are also expected to produce US$ 1 billion. Lithium at the moment is expected to produce US$0.5 billion while other minerals are forecast to produce US$1.5.

For the government to achieve the President's vision of turning the mining industry to fetch US$12 billion annually by 2023, exploration and reopening of closed mines should be at the epicentre of increasing the country's mineral production.

However, very little has been done in 2020 in making sure that old mines are functional, at the same time the government has not been transparent on exploration investments happening in the country.

The Minister of Finance and economic development Prof Mthuli Ncube last year allocated $293.2 towards exploration to promote the Mining sector, however, many geologists in the country mocked the minister for investing very little in exploration. Zimbabwe, therefore, remains hamstrung by lack of exploration.

However, announcing the 2021 National budget the Finance Minister allocated US$1,4 BILLION to the mining sector with much of it expected to be channelled towards mineral exploration.

Gold performance in 2020

Fidelity Printers and Refiners (FPR) the country's sole gold buyer and exporter had projected gold output to reach 35 tonnes this year owing to increase in fuel allocation to miners, however, by the end of

Moving with the us$12 billion target

With two months to year-end, FPR now expects deliveries to reach 18 tonnes, the lowest national output since 2015. Last year, miners delivered 27.6 tonnes, reflecting a 35 per cent decline.

The country's bullion export receipts also retreated 23 per cent to US$697 million in the first 10 months of this year from US$906.7 million earned during the same period last year.

Gold performance in 2020 should be a wake-up call to the President towards the attainment of the US$4 BILLION gold industry by 2023, according to the statistics this year, it will be very difficult for the sector to realize a billion-dollars.

For the gold sector to achieve the US$4 billion mark, the government would need to address various factors affecting gold production and deliveries to the country's sole gold buyer and exporter.

What needs to be done?

(a) Curb Gold smuggling

International Crisis Group (ICG) reportedly indicated that Zimbabwe is losing $1.5 billion of gold through smuggling, Home Affairs Minister Kazembe Kazembe had earlier said that the country was losing US$100 MILLION worth of gold every month due to smuggling.

The country's centralized gold buying scheme which underpays producers is largely to blame because it encourages smuggling and erodes industrial mining profits. Payments to small-scale and artisanal miners at time take days to weeks pushing them to look for more lucrative markets.

The government, therefore, needs to employ measures that discourage smuggling of gold in order for the sector to realize the President's target.

(b) Invest in gold mining

The reopening of viable closed mining assets, ramping up of production in all existing mines, opening new mines as well as value addition and beneficiation is essential for the sector to achieve the US$12 BILLION mark.

The government through the open for business mantra is pushing for the mining industry to attract investors both local and foreign promoting the President's vision for Zimbabwe becoming an upper-middle-income earner by 2030.

(c) Invest in exploration

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 many EPOs as possible to various Exploration companies. However, those have to be closely monitored to avoid closing down of areas like what has happened in Matebeleland with the land just lying idle

Reports have it that the government has granted EPOs Nicodemously with no activities showing that indeed the country is being explored.

d) Capacitate Mines and Mining Development Ministry

State of Maps the last time Mining Zimbabwe visited Chinhoyi

FORMALISATION. is arguably the hottest topic of 2020. Majority of small- scale miners in Zimbabwe are unregistered and those who have taken steps to register have not been issued with Mining Titles mainly due to incapacitation on the part of Ministry of Mines and Mining Development.

Chinhoyi Mines provincial Office which is mandated to service Mashonaland West (an area of 57,441 km²) has two only vehicles and over 4000 pending applications. Without any vehicular break-down or shortage of fuel the two vehicles, the province will need about 6 years to process 4000 applications The same provincial office has one cartographer who is said to be using his personal laptop. The maps in use at the office are inscribed **RHODESIA** 40 years after the fall of the oppressive state. Until such a time the ministry is fully capacitated lamenting about smuggling when majority of miners are unregistered is mere twaddle.

PGM performance in 2020

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

Platinum performance in 2020 was encouraging with the country's largest platinum producer, Zimplats recording 81 percent profits during the final year 2020.

Despite the threatening of the Covid-19 pandemic to many businesses in the world, The Platinum mines operations were not affected by the pandemic as all the mines and the processing plants continued operating throughout the year with no confirmed cases within the workforce except for a few who tested positive at Unki Mine in Shurugwi.

Unki Mines a subsidiary of the Anglo-American Platinum which is Zimbabwe's second-largest PGM producer increased production by 14 per cent in the quarter ended 30 September 2020 compared to the comparable quarter in 2019.

The increase in PGM production could be further be advantaged by the new operations in Great Dyke Investments' Darwendale mine which is expected to become Zimbabwe's leading Platinum Producer by 2023.

However, data released by ZimStats in August show that platinum was urged by diamonds in export sales with diamond ranking US$71 MILLION during the first 8 months of the year while platinum realizing US$66 MILLION excluding other PGM during the same period.

Diamond performances in 2020

Due to the effects of the pandemic, diamonds sale worldwide declined rapidly. Zimbabwe exported diamonds worth $71 million between January and August this year. Diamonds only edged platinum, which earned Zimbabwe $66 million during the same period. This is despite the fact that the diamond mining companies such as the Zimbabwe Consolidated Diamond Company (ZCDC) and Anjin continued operating during the lockdown. However, due to continuous production, Zimbabwe most likely had a surplus stock of rough diamonds without an obvious market to sale to.

Due to the decline in the diamond marketing world due to the pandemic, Minister of Finance and Economic Development Prof Mthuli Ncube announced that the government was going to promote value addition and beneficiation of diamonds through local diamond polishers and jewellers. As the demand and price for diamonds on the international market have slowed down due to coronavirus pandemic, the solution to a global reduction in prices lies within the country's policies. All along, Zimbabwe's policies have been outward-looking, but the pandemic impels the country to craft policies that focus on the internal value addition of diamonds.

The diamond sector performance can further improve to reach the US$1 BILLION target by 2023 through producing 10 million carats a year, however, its performance this year leaves a lot to be desired.

The Minerals and Marketing Corporation of Zimbabwe (MMCZ) managing director Tongai Muzenda said then that they were expecting to rake in up to $100 million from the sale of the diamond stockpile.

Zimbabwe produced 2.1 million carats last year valued at $141.1 million or $67.09 per carat, according to data released by the Kimberley Process earlier this year.

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, the 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.

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.

Chrome, Nickel, and Steel performance in 2020

Nickel mattes and Chrome performed significantly by August 2020 raking US$605 MILLION and US$88 MILLION respectively.

Zimbabwe has the second-largest high-grade chromium ores in the world after South Africa with reserves of approximately 10 billion tonnes. The country has more untapped than tapped Nickel deposits.

Steel production can reach the target in this category if plans are in place to revive the sector.

The government also need to address issues of predatory chrome pricing to generate more interest and also for miners to invest in the sector.

Lithium performance in 2020

Zimbabwe is the world's fifth-largest producer of lithium, albeit, with only a single producing mine, the country has the potential to produce 20 per cent of the world's total lithium.

The environment in Zimbabwe is not appropriate for lithium projects development, due to poor governance Zimbabwe is in an economic crisis.

On paper, Zimbabwe has the potential to earn over a billion in lithium sales especially when the world is putting a focus on clean energy especially in vehicles.

The government has projected lithium to earn US$0.5 BILLION by 2023.

Other minerals performance

The government is expecting minerals other than the above mentioned to earn US$1.5 in export sales by 2023.

The coloured gemstone industry in Zimbabwe has been tipped to earn over a billion in export sales but very little has been done to make sure that the potential of the industry to economic revival has been recognised. The performance of the sector in 2020 has somehow been disappointing with MMCZ which is responsible for the marketing of the stones not ready to ensure that a vigorous marketing strategy has been met.

Zimbabwe has one of the largest copper and cobalt reserves in the world and experts believe that Zimbabwe can earn as much as Zambia through its minerals, however, no efforts are done to attract investments in the sector. Copper and Cobalt can be of significance in achieving the US$12 BILLION target.

What is needed to achieve the US$12 BILLION mark?

Mining Zimbabwe still recommends the government of Zimbabwe to adopt the following 10 points to make sure that the mining sector moves towards the US$12 billion industry by 2023.

(i) End corruption- although not muchly recorded corruption in the sector is too prevalent and the cancer of corruption needs to be dealt with once and for all. To end corruption, the government will be to create and adopt a digital cadastral system which increases transparency.

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

(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 by 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) Formalise DONT Criminalise - Mines ministry is currently incapacited to handle mining title applications which are in-turn pilling up and are reportedly over 17 000 countrywide. Government should employ more staff and invest in more vehicles to process applications. Unregistered miners are the major source of gold leakages registering them will without a doubt improve gold submissions.

(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 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 the government gets diluted to less than the controlling shareholder.

(ix) Promote exploration seriously with good tax breaks for companies who put a 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 behaviour by mining personnel, all transactions which are mining-related in Zimbabwe need to be done digitally to avoid corruption and Improve transparency.

The government of therefore need to prioritize these 10 points 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.

Zimbabwe the best alternative rare earth global supplier

Zimbabwe could become an alternative rare earth element's biggest global supplier as the US-China trade war intensifies, Mining Zimbabwe can report.

Rudairo Dickson Mapuranga

Zimbabwe sits on bountiful and lucrative deposits of rare earth minerals, reports have in that Zimbabwe's deposits could be second after China although exploration activities on these minerals are still to be concluded, rare earth are now widely used in automobiles, electronic equipment and other fields.

Early this year, China Central Television's military channel reportedly said that the US was planning to use law from the 1950s to 'militarise' rare earth production in the US in an effort to frustrate Chinese monopoly on the supply of these minerals globally.

The US President Donald Trump reportedly signed an executive order declaring a 'state of emergency' and authorising the use of the National Defense Production Law to accelerate the development of mineral resources. This law was used earlier this year to speed up the production of medical supplies to manage the coronavirus epidemic.

Rare earth minerals are important in military technology, reports have it that, to manufacture an F-35 Fighter jet it takes about 417 kilograms of rare earth and 4 tonnes of rare earth minerals to manufacture a Virginia-class nuclear submarine.

It has been reported that 80 percent of the US rare earth mineral products are imported from China, the US although it produces its own rare earth minerals in California, it has been reported that they are shipped to China for processing.

Rare earth elements used in batteries and electronic devices are some of 35 minerals that the US government considers vital to the economy and national security. Of the 35 key minerals, 14 are not produced in the United States due to the war between the US and China, Zimbabwe might become an alternative in the supply of the other 14 elements.

The position for Zimbabwe in becoming an alternative rare earth global exporter has been further cemented when China early this month implemented its Export Control Law on which is likely going to have a major impact on the rare earth sector.

The law stipulates that the state will implement export control on dual-use items such as military products, nuclear, and other goods, technologies, services, rare earth and other items related to national security and interests, and fulfilling international obligations such as non-proliferation.

The Export Control Law means China now has a mechanism to further reduce rare earth exports, according to Netease news.

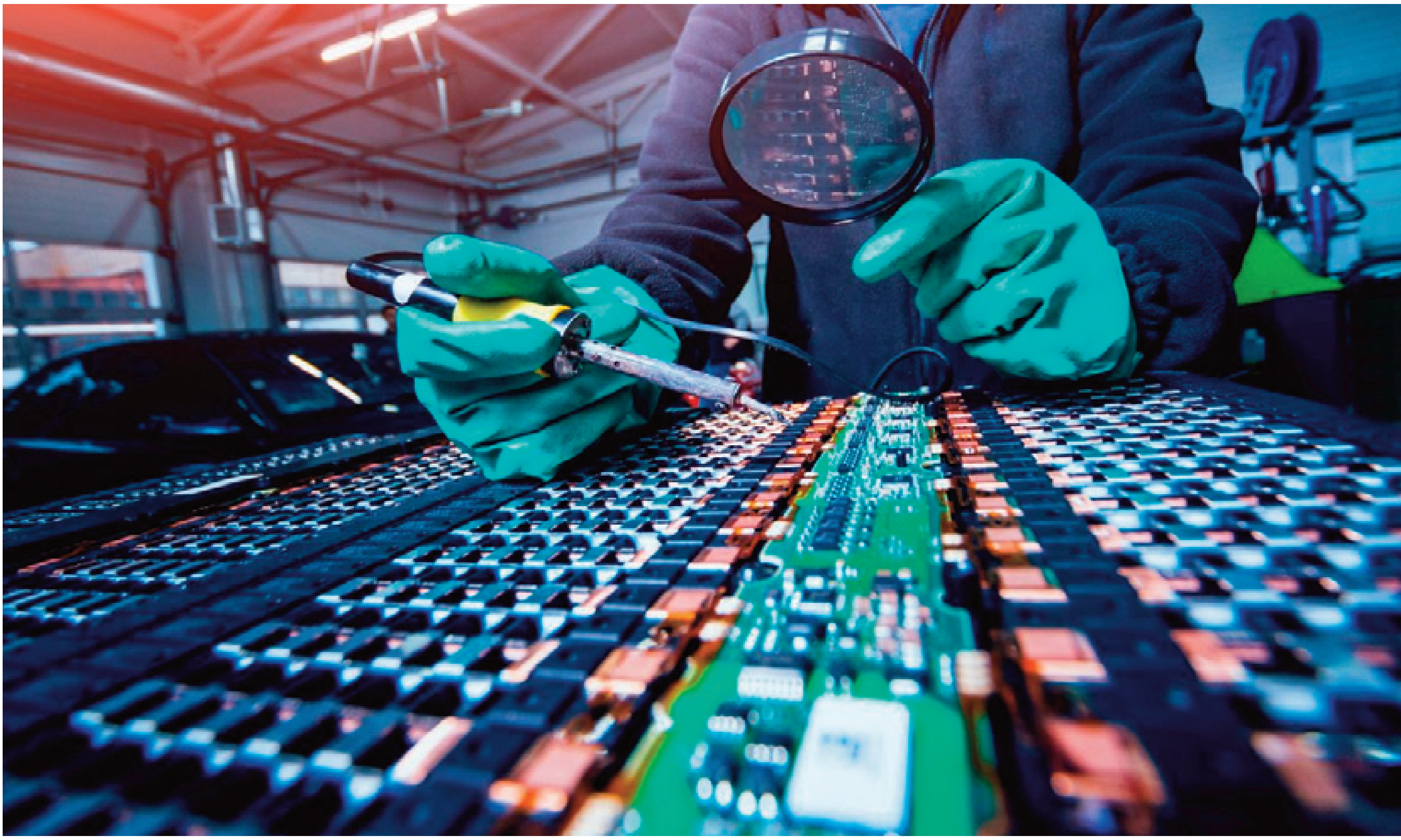
If China decides to reduce exports of rare earth minerals as a well to wage their war with the US, Zimbabwe which speculatively has the second largest rare earth deposits in the world will benefit from the development.

Currently the country according to President Emmerson Dambudzo Mnangagwa lacks the know how and resources of extracting these minerals, however, with the world rushing towards Electric Vehicles and strengthening militaries, the country will definitely attract foreign investment in mining and processing these minerals.

Premier African Minerals, which is listed on the Alternative Investment Market of the London Stock Exchange is reportedly prospecting for rare-earth elements in Matabeleland North, near the Zambian border.

The 17 rare-earth elements are cerium (Ce), dysprosium (Dy), erbium (Er), europium (Eu), gadolinium (Gd), holmium (Ho), lanthanum (La), lutetium (Lu), neodymium (Nd), praseodymium (Pr), promethium (Pm), samarium (Sm), scandium (Sc), terbium (Tb), thulium (Tm), ytterbium (Yb), and yttrium (Y).

World's first all-electric open-pit mine



Set to become the world's first all-electric open-pit mine, Nouveau Monde Graphite is advancing its procurement process for its fleet and charging infrastructure through an international call for pre-qualification.

Following work by its International Task Force Committee, Nouveau Monde has explored technologies, best practices and operational parameters to bring its vision to life in a cost-effective and technologically advanced way. Discussions with manufacturers have already identified existing machinery in development or that is already available, notably for the ancillary fleet where purchasing agreements are being finalized.

Through the call for pre-qualification, manufacturers are invited to submit detailed proposals and performance specs for their production equipment solutions. Whether powered by lithium-ion batteries, plug-in systems or hydrogen fuel cells, Nouveau Monde is seeking the best zero emission equipment for heavy-duty operations and harsh conditions associated with open-pit mining. The submission period is open from November 30, 2020, to January 30, 2021.

"Going all-electric is technically achievable, economically sound and environmentally responsible," noted Eric Desaulniers, President and CEO of Nouveau Monde Graphite. "We are thrilled to be driving innovation and progress in our sector and hope to see our peers embark in this effort to minimize the footprint of the mining industry. Our initial market screening has already shown attractive technologies and ingenious mindset from OEMs that will enable us to achieve our carbon-neutrality promise to our community, shareholders and customers."

The most advanced graphite project in North America, Nouveau Monde is targeting the launch of its commercial operations in 2023, with an allocated transition period to fully electrify its fleet by 2028. The company's demonstration plant already in production offers an ideal site to test equipment in real conditions, optimize design and advance technology.

The construction of a dedicated power line to supply the mining site with electricity will provide a reliable, affordable and clean supply of hydroelectricity to support Nouveau Monde's energy-intensive operations.

Seven safety tips to reduce Mining Accidents

Working in mining is risky business. Wankie coal mine disaster took place on 6 June 1972 when a series of underground explosions occurred at the Wankie No.2 colliery in Wankie (now known as Hwange) claiming 426 lives, It remains the deadliest mine accident to date in the country's history. This year mining related accidents have claimed over 50 lives mainly in the artisanal small-scale mining industry and nothing is yet to happen to try to enforce safety rules.

If you're considering a career in mining, or you are a miner it is crucial that you take the following safety measures to keep your time in the mines as trouble-free as possible.

1. Don't Ignore the Danger

The first step toward keeping yourself safe is to be cognizant of the fact that working in mining is hazardous. Accept that the mining industry is inherently filled with danger and stay alert every moment on the job. Watch out for your colleagues as well and never let your guard down. Accidents with major impact can occur in a moment of carelessness.

2. Dangerous Tasks Require Planning and Communication

When planning tasks, don't think only of completing them as efficiently as possible. Allocate extra time and money for safety requirements. Never compromise the safety of your employees when trying to meet deadlines or to boost the quality of work. All risks should be assessed, including the possibility of accidents. Try to eliminate risks as much as possible. Where a risk still exists, provide your team with clear instructions and educate them on how to mitigate it. If necessary, deal with the danger should it arise.

3. Get Professional Training

All team members should undergo regular safety training. This should not just apply to new team members. Even long-standing employees should be made to attend refresher courses. Safety training sessions that contain theory and practical components can be very helpful. Workers who take on strenuous roles may be sent for health and fitness checks to determine whether they are able to take on the physical demands of their work.

4. Always Wear Safety Equipment

There is a litany of safety equipment that mining workers use for their protection, from helmets to safety glasses and gloves. It is essential that all workers wear the necessary safety equipment at all times. There have been countless stories of workers being saved by helmets, for example.

5. Supervise Your Team

All team members should follow safety instructions with no exceptions. A supervisor must also be diligent about following up and enforcing the rules. Never allow more people to enter a site than are allowed. Supervisors also need to know the whereabouts of all team members throughout each shift. Likewise, all workers should be kept informed about what their fellow team members are doing throughout the day. Never allow any team members to breach the safety rules without a warning or, in the case of repeated disobedience, appropriate consequences.

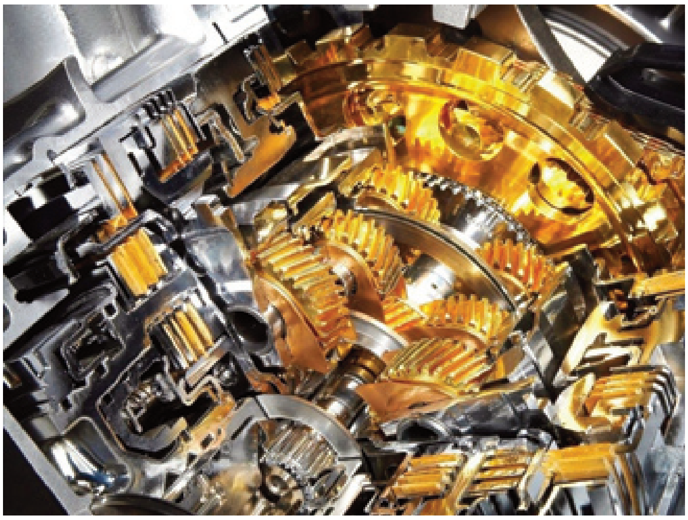
6. Document Your Safety Procedures

When accidents happen, all team members should know exactly what to do. Safety procedures must be clearly defined. When documenting the safety procedures, describe the various incidents that might occur, what needs to be done and whom to contact. Safety procedures should be displayed prominently in locations that can be easily accessed by team members.

7. Follow the Latest Safety Standards

Ensure all safety equipment is serviced regularly and satisfies all the latest safety standards. Never try to save on safety equipment. If an item no longer complies with the current safety standards, replace it, even if this means increasing expenses or delaying a project. Never allow staff to use outdated safety equipment, even for a short period of time. The number of safety-related incidents in the mining industry is high. Unfortunately, some of the tragedies that have occurred could have been prevented. Don't repeat the mistakes that have been made by others. While the risks can never be eliminated completely, following the above tips can help significantly

Don't trust your eyes when it comes to hydraulic oil cleanliness



Used oil analysis is a vital part of a hydraulic oil maintenance process. With it, operators can monitor and optimize the life of a hydraulic system. This data gives them a heads up as to what may be affecting the performance of the fluid or the system.

Used oil analysis involves taking a representative sample of the fluid, sending it to a qualified used oil analysis laboratory and then interpreting and acting upon the results.

Incorporated into a proactive maintenance program this process can give users the ability to evaluate trends over time and know when a system may be failing. It also provides a basis for better informed maintenance decisions and recognizing problems before they become too expensive or serious to repair.

Used oil analysis should complement other recommended maintenance processes, such as monitoring oil consumption. Always follow your equipment manufacturer's specified service interval for oil analysis sampling or sample at regular intervals.

What to look for

Many users believe if an oil looks clean then it is. But the human eye can only detect particulates about 40 microns or greater, and tolerances in critical parts of the hydraulic system such as pumps or valves – can be as low as 0.5 to 5 microns.

The ISO 4406 particle count standard used in oil analysis can help determine the true cleanliness of the oil.

Used oil analysis also measures viscosity, which is the fluid's thickness or resistance to flow The lab will use a simple viscosity test (ASTM D445) to measure any changes in viscosity.

Another test the Fourier Transform Infrared Spectroscopy (FTIR) – identifies multiple degradation processes and chemical changes such as acid number (AN) and oxidation. FTIR compares the spectrum of used oil with that of the new fluid. The difference between the used and new fluid spectrums indicate what form of degradation is ongoing and to what degree it has occurred.

Oxidation, for example. is a form of degradation that occurs when the fluid is exposed to high temperatures and air (oxygen), a typical problem in hydraulic systems. Oxidation can be assessed through FTIR and via the AN test.

For large and high precision hydraulic systems with servo-valves, additional oxidation testing can be performed such as Rotating Pressure Vessel Oxidation Test (RPVOT). Catalysts such as copper (and other wear metals) or water are known to accelerate oxidation.

Oxidation can cause the oil to darken and increase in viscosity. Additionally, as the degradation takes its toll it can cause formation of sludge, varnish and deposits that settle, as well as the formation of acids.

Higher fluid temperatures dramatically increase the rate of oxidation; the life of the oil is shortened at a quicker rate for every 18-degree Fahrenheit increase.

Using the data

Receiving the used oil analysis data is only the first step. If it's going to make a difference in how you manage your fleet, you need to quickly review and act on it.

Digital diagnostic tools and asset management reporting such as Petro-Canada Lubricants' LUBE 360 Oil Diagnostics can support efficient and effective data analysis.

Such tools can allow you to view your test results from mobile devices, giving your fleet management team 24/7 access. Easy-to-use dashboard graphs help to prioritize critical results and detect abnormalities. This will help your team proactively track where maintenance is needed and predict where it will be needed.

Author: Neil Buchanan, senior technical services advisor, Petro-Canada Lubricants, a HollyFrontier business.

Cat hydraulic mining shovel bucket with replaceable basket cuts rebuild time, optimizes capacity

Caterpillar now offers a two-piece bucket for Cat hydraulic mining shovels. The design reduces downtime by limiting refurbishment to the area of the bucket subjected to most of the wear—the basket.

The replaceable basket enables faster, easier and safer rebuilds compared to traditional buckets. In addition, the basket design can evolve with mine site conditions to further reduce downtime and optimize capacity over the life of the bucket.

The durable upper structure of a bucket will host several baskets during its service life, thus the need for optimizing basket replacement. Also, the two-piece bucket is lighter than conventional buckets, yet it features high wear resistance.

The basket is a single piece of structural steel with no liner or wear plates, and the floor and sideplate thickness are optimized for bucket size and anticipated wear rate. The basket is retrofittable onto legacy buckets used in compatible digging conditions.

The two-piece bucket enhances both safety and serviceability. Replacing just the basket requires less gouging, welding, and grinding than buckets protected with wear plates. The single-piece basket design also reduces potential hazards caused by stored energy.

Epiroc and Orica unveil prototype of world's first semi-automated explosives delivery system

Customers in the underground mining industry can look forward to safer, efficient and more productive development blasting as early as the end of 2021, as Orica and Epiroc commence commissioning on Avatel, a prototype of the world's first semi-automated explosives delivery system

Avatel will deliver a completely new way of approaching development blasting operations by eliminating charge crew exposure at the face. The solution provides safe access for an operator in cab to execute the development cycle while reducing the reliance on costly, time-consuming and at-times ineffective controls put in place to manage the risks to personnel working in one of the highest risk areas of an underground mine.

Built on the foundation of Epiroc's Boomer M2 carrier and integrated with Orica's latest explosives technology, Avatel is a twin boom, semi-autonomous and fully mechanized development charging solution that allows a single operator to complete the entire charging cycle from the safety of Epiroc's enclosed ROPS and FOPS certified cabin.

Sandvik and Exyn join to explore autonomous mining capabilities

Sandvik Mining and Rock Technology is set to explore autonomous mining capabilities through a partnership with Exyn Technologies Inc. Customers will benefit from the unique combination of Sandvik's digital mining solutions and Exyn's knowledge of autonomous aerial robot systems.

"We are committed to empowering a transformation to autonomy in underground mining," says Patrick Murphy, President of Rock Drills & Technologies, Sandvik Mining and Rock Technology. "This partnership will open up unique benefits, build on our industry leading automation offering and drive faster decision-making in mining processes to seize new opportunities for improving production performance."

Through this partnership, the companies will work together to provide efficient solutions for mapping and visioning underground mines, which will make a substantial difference when it comes to mine locations that are hazardous, hard to reach or conventionally time-consuming to survey and inspect. Sandvik's OptiMine, combined with data collected by Exyn's aerial robots, creates progressive visualization and information of the mine's actual environment to increase overall transparency of the mining process. The future collaboration between Sandvik and Exyn will entail research on how to apply and generate 3D views and perceptions of underground spaces autonomously.

"We are excited about this new partnership with Sandvik as they are recognized as an innovator in the industry and have revolutionized underground mining," says Nader Elm, CEO and Co-Founder of Exyn Technologies. "For the first time, customers will be able to map the entirety of their underground operations, even in dangerous GPS denied environments, while making mining safer and improving productivity. Through this partnership, we hope to empower efficient decision-making for customers and drive towards the vision of fully autonomous mining operations."

Heavy equipment Tire Maintenance: A little time can produce big savings

Unless you do the math, you may not realize that after labor and fuel, tires are your third-highest operating cost on a wheeled piece of heavy equipment. So starting a simple maintenance and management program could save you substantial amounts of money.

Creating a tire maintenance and management program may seem like an administrative burden for a small company with a limited fleet, but even a little effort can yield big savings. "If you are not able to look at your tires daily and manage them in that manner, you need to move into a tire maintenance and management program," says Johni Francis, global OTR product manager for Titan International.

There is a perception that tire maintenance and management programs are more suited to the big fleets than small contractors, but Chris Rhoades, manager of engineering and training for BKT tires, turns that myth on its head. "For the small operator a $6,000 tire is really important," he says. "It's just as important to the small contractor as it is the big companies, if not more so. They have to move a lot of material to make up that loss."

The benefits of a tire maintenance management program can be gleaned whenever a fleet has two or more pieces of equipment that use the same size and type of tires, says Tom Clauer, senior manager of commercial and OTR product planning at Yokohama Tire. Managing your tires can be as simple as setting up a rotation schedule or retreading cycle, or it can be more in-depth by using data-intensive, cloud-based analysis programs, he says.

Basically there are three steps to a successful tire maintenance management program: track your tires, seek expert advice from your tire vendors and coach your operators.

Tracking tyres

This can be as simple as calculating your tires' cost per hour by checking the hour meter on the machine each time you install new tires and each time you replace them. Record the results on an Excel chart or spreadsheet and use that to determine what brands or types of tires give you the most bang for your buck, which environments are the easiest or harshest on your tires, and which operators are careful with the machine and which ones are cowboys.

Aside from running cost-per-hour calculations, other data points can be collected to get a better handle on your tire costs. One of these is failure analysis, says Francis. Failure analysis is simply recording the cause of a tire being pulled from service.
If your tires experience a lot of cuts and chipping, you may want to examine how clean your loading and dump sites are. Spillage and loose rocks are hard on tires.

If you find a lot of heat-related failures, you may need to look into the design of your haul roads. Are they too steep, are the curves too sharp, or are your trucks overloaded for the road design? Bigger outfits will carefully engineer their haul roads, but at a minimum, you can ask your tire servicing dealer for an analysis or recommendation.

Working with your servicing dealer

Few contractors are tire experts, so in most cases, you should seek the knowledge and expertise of your tire servicing dealer.
"All servicing dealers have tire tracking tools, but a lot of contractors may not be asking for this service," says Rhoades. "If you're not, ask the dealer. Tell him you want tire tracking as part of the deal."
"Any time the end user wants to reach out and have a sales rep or a field technician come out, if they need that kind of support or have questions, that's a part of what we do daily," says Francis. "It's a constant communication. That channel has to be open."

Smaller fleets with fewer tires may not get as many site visits as the big fleets, but they should expect the same professionalism from their supplying dealer. Off-road tires are a major investment and should be respected with a high level of dealer involvement, regardless of fleet size, says Clauer.

Getting a tire vendor to do your tire monitoring is as simple as asking. Most have software tracking programs that do everything except change the tires and input the data. "Most customers don't want to get into the tire management process," says Rhoades. And since the dealers will usually be the ones to change the tires, it makes sense for them to input the data. "They typically do the input and provide reports as a value-added service," he says.

Coaching operators: things to avoid

Rough operators hack the life of your tires. Intoxicated with the power of a big diesel machine, they may not realize they're abusing one of its most important components. "The number-one thing is to give the operator ownership, so they treat the equipment like it's their own," Francis says. "Once you ingrain that into the culture, things will change."

Operators should avoid exceeding the limits of their equipment, including the tires, says Clauer. Knowing the haul restrictions – weight capacity, length of haul and haul speed – are vital to maintaining the tires' integrity, he says. They should also be coached on the long list of tire-damaging behaviors, including running over debris, static steering and counter-rotation (on skid steers), that accelerate wear and damage.

Operators should avoid running tires in abrasive or abusive conditions when wet, or at a minimum, they should gently maneuver in wet conditions. "A wet tire cuts 10 times easier than a dry tire," says Ray McElroy, manager of technical services at BKT. Even overwatering your site or your haul roads with the water truck can increase the potential for deep cuts on a tire.

Likewise, you want to go easy on your maneuvers when operating on pavement in high temperatures. "In Phoenix, when it's 120 degrees outside, they'll leave 1/32nd of rubber on the pavement every time they turn the wheel," says Ron Tatlock, global manager of training for BKT.

Coaching operators: things to do

In addition to avoiding certain behaviors, you should coach your operators on how to improve tire life, says Justin Brock, marketing manager, construction and Tweel, Michelin North America. These include:

Check tires for correct pressures. Every shop should have a master air gauge, and all drivers should have an accurate pressure gauge and be instructed to check the tires on their equipment or truck daily as a best practice, or weekly at a minimum. Make sure that sealing valve caps are in place. A tire that is run 10 percent underinflated will lose 10 percent in tread wear and will come out of service quicker. A tire that is 20 percent below the optimal air pressure will experience casing fatigue that could lead to a catastrophic failure or a zipper rupture. If the tire has been run 20 percent underinflated, it should be removed from the vehicle and scrapped.

Conduct a visual inspection prior to operating. Look for signs of irregular wear in the tread or shoulder and examine the tires for bubbles or bumps, which may be caused by air infiltration or foreign objects. Look for signs of cutting, chunking, stone drilling or debris penetration, signs of irregular wear, deep cracks, cuts or other major problems. If any symptoms of tire damage are discovered during inspection, do not operate the vehicle until a trained service technician can diagnose the severity of the problem and make the proper repairs.

When it comes to equipment fluid management, little mistakes can add up to big problems

It's always a good idea to follow best practices in any maintenance program. But what about avoiding worst practices when it comes to fluid management? Here are some of the things you should work to eliminate from your shop's maintenance routines.

Improper oil storage

Big construction fleets often have their oil delivered in drums or bulk containers. If those sit out in the elements, heating up and cooling down and getting rained on, moisture in the form of humidity can get sucked past the gaskets on the bungs. Water in your oil means water in your engine and corrosion and loss of lubricity. A simple solution for this is to store them under a roof and use desiccant breathers.

Moving from bulk storage to the machine also introduces opportunities for contamination. Sometimes technicians will use a spare container that had been used to handle other products such as coolant, transmission or hydraulic fluid. Even small amounts of these other fluids will compromise the effectiveness of your lube oil and cause error readings in an oil analysis report.

Operators should understand that running a machine hot can shorten the life of the engine or ruin the oil as well. As engine temperature increases, the oxidative life of the oil decreases. Lube oil oxidation today is a big deal in the heavy equipment world and today's engines are running hotter than engines from just a few years ago. This is one of the reasons the oil industry developed a new lube oil standard, API CK-4, which requires heavy-duty diesel engine oils to better resist oxidative degradation.

Reacting to red flags

When you get your used oil analysis, take time to study the results, don't just scan for red flags and then put them in a drawer. When fleet managers see a red flag on an oil analysis report, they have to pull the machine from the field and find out what's going on. This is reactive maintenance, rather than proactive. In many cases by the time you see a red flag, there's probably already some damage to the engine.

Oil analysis is all about trend lines. When you get a sample that shows something wrong, you probably had a previous sample that gave you a hint. Getting ahead of the problem like this enables you to schedule maintenance before it becomes an emergency and then disrupts operations.

Confusion about coolants

Coolants are often the most commonly mishandled part of a fluid management program and frequently misunderstood. But there are two distinctly different types of coolant – older conventional fully

fully formulated and the newer extended life (or organic acid technology or OAT). These two coolants protect engines from corrosion in different ways. Anytime you mix the two, you dilute or reduce their effectiveness.

The problem arises when someone tops off a radiator with the wrong fluid. Maybe the maintenance manager uses the right coolant. But does the operator know this or the field service technician, a contracted service provider, a driver or whoever first notices the low coolant level?

In mixing two types of coolants, you are setting yourself up for possible catastrophic corrosion. This corrosion can eat a hole from the coolant side of a cylinder liner to the oil side. And by the time you see coolant show up in your oil samples, it's too late. Major damage has been done.

The solution is to make sure everybody – mechanics, operators, drivers, contract maintenance people – understands the brand and type of coolant used and the dangers of mixing two formulas. This requires training and perhaps an operator care program so that somebody topping up in the field doesn't accidently put in the wrong coolant.

The second line of defense is to monitor coolants with test strips made for your coolant type. Wet these simple paper strips with coolant in the system. If they turn one color, you're good to go. A different color means your coolant doesn't have a high enough percentage of the right additives to prevent corrosion.

Another recommended step is to check the freeze point of the coolant with a hygrometer, or for more accurate results, a refractometer. This will tell you if your coolant is too diluted with water, which also reduces its anti-corrosion properties.

If the coolant is out of spec, it's not usually necessary to drain and refill the entire system, which on some machines can require dozens of gallons. Coolant vendors offer concentrated coolants to allow customers to bring the coolant levels to the recommended freeze points. A freeze point correction chart will show you how to adjust your coolant so that it is at the proper level. Correction fluids are used to restore additive content to recommended levels. These two procedures enable you to bring your equipment's coolant back into spec without draining the cooling system.

Your coolant vendor can help you establish these procedures. A good practice is to test the coolant every time you change the oil.

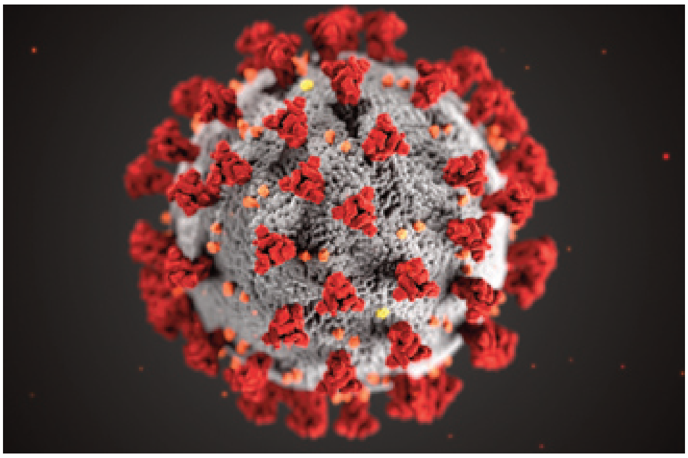
Ignoring grease intervals

While greasing a machine isn't the most technical task, doing it at the right intervals and using the right product are important. It's a simple rule but often ignored–put less grease in more frequently rather than more grease in less frequently.

When you pump a lot of grease through a joint, most of it is wasted. The amount of grease that is doing the lubrication is actually very small. The mechanical motion of the joint tends to squeeze that grease out over time. Until it gets re-greased, it's going to have no lubricant in the joint. So overextending grease intervals is not a good idea. This is why central grease systems work so well. They give a tiny bit of grease frequently. Grease can also get contaminated. By greasing more frequently, you purge the contaminated grease.

Moly greases, those that contain a small amount of molybdenum, are better at sticking in a joint. But you should find the OEM's specifications for all greasing applications and stick to them. For example, a heavy-duty grease with tackifiers works better on joints under a heavy load. But those greases aren't good for things like lubricating U-joints on drive shafts, with their small needle bearings and passageways.

The mining sector in the COVID-19 pandemic era



Despite being exempted from operating throughout the Covid-19 pandemic period, the mining sector faced several challenges which saw chrome industry grinding to a halt. Unki Mines, Hwange Colliery Company Limited and How mine confirmed some of their staff tested positive for Covid 19.

By Shantel Chisango

According to 2020, Survey Data, miners pointed out that their operations were significantly impacted by the pandemic which resulted in higher output costs and the expense of unplanned spending for covid19 on protective materials.

“All respondents (100%) indicated that their cost of production increased due to unplanned expenditures on preventive material including face masks, hand sanitisers and testing kits. All respondents (100%) also highlighted increased importation logistical costs due to increased insurance and transportation costs as some transit areas were closed.” Source: Survey Data 2020.

Moreso, another obstacle brought by Covid19 was sluggish commodity demand and market shutdown which harmed mineral demand, survey findings indicate that the most affected were base metals and ferrochrome producers.

Covid19 resulted in a decline in mineral output due to depressed mineral prices, with the majority of miners suspending their operations except for gold miners who registered an increase in gold prices amid the covid19.

Survey findings show that 40% of respondents indicated that their performance was weighed down by depressed mineral prices, with most ferrochrome smelters suspending their operations. On the contrary, gold producers reported that gold prices surged during the covid-19 pandemic and therefore were little affected.

Furthermore, the mining industry had the challenge of importing explosives and fuses needed for drilling and blasting processes due to travel restrictions resulting in the reduction of production capacity.

Speaking to Mining Zimbabwe, a small-scale miner in Mashonaland Central complained about the explosives shortage, saying, “Mining business currently is low, we have had challenges of acquiring explosives and fuses thus it has reduced the production capacity and in some cases leading to downtime of tools and equipment.”

ZIMPLATS

However, despite the negative effect brought by Covid19 to the mining industry, some mining companies like Zimplats (leading Platinum mining company in Zimbabwe) recorded positive results. Commenting on the performance of the company, Zimplats Chairman Fholisani Mufamadi said the company performed exceptionally well regardless of Covid19.

“I am excited to be writing to you, our valued stakeholders, as your Company posted excellent results despite the challenging environment in which the COVID-19 pandemic wreaked havoc the world over,” he said.

The Company recorded a profit of US$261.8 million for the year, an improvement of 81 per cent from US$144.9 million in the previous year due to the rise in revenue from improved metal prices and the decline in exchange losses from US$20.2 million in FY2019 to US$4.8 million (US$868.9 million in FY2020 as opposed to US$631 million in FY2019).

Furthermore, the company managed to pay the final instalment of US$42.5million on the Revolving Credit Facility with Standard Bank of South Africa.

"I am happy to report that your Company paid the final instalment of US$42.5 million on the Revolving Credit Facility with Standard Bank of South Africa. In addition, the Group generated enough cash to pay dividends amounting to US$45 million," said Mr Mufamadi. Zimplats is progressing with all its major projects which include the US$264 million Mupani Mine development project and completion of the US$101 million Bimha redevelopment project.

Currently, US$99.5 million has been invested in the construction of the Mupani Mine and US$98.8 million has been invested in the redevelopment of the Bimha Mine.

CALEDONIA

Zimplats is not the only company that managed to produce positive results during the Covid19 era, Caledonia Mining Corporation, a gold producer, which operates Blanket Mine in Gwanda has also succeeded in defying the impact of Covid19 by recording enormous production.

Chief Executive Officer (CEO) Steve Curtis applauded the wonderful work the company managed to produce despite the Covid19 impact on business.

Mr Curtis said "The production of 13,499 ounces in the second quarter is an outstanding achievement given the challenges faced during the quarter as a result of the COVID-19 Pandemic. To have achieved a 6.2% increase in the comparable quarter of 2019 during a period where our workforce and supply chains were disrupted is a performance of which every employee should be justifiably proud. Thankfully the virus has not affected our operations or the broader Zimbabwean gold mining sector too seriously although we remain vigilant."

Currently, the company is working on the production guidance for 2021 which is 61 000 ounces to 67 000 ounces while guidance for 2022 is about 80 000 ounces.

On a positive note, surveys in the mining sector 2020 State of the Mining Industry Survey Report 27 has shown that employment in the mining sector was not that much affected for 80% of miners indicated that their employees were only affected by 0-10%, while the remainder were affected by 10-20%.
The government continues to ensure that the Covid19 initiatives are practised by all business sectors as a way to curb the spread of the pandemic and also to avoid the closure of industries if the pandemic continues to rise.

ZIMASCO and Afrochine

On the 25th March 2020, Portnex shut down its Zimasco ferrochrome plant in Kwekwe after prices of the alloy fell to four-year lows on weak demand caused by the coronavirus outbreak. Afrochine downgraded and started operating below 50% of installed capacity. Production at the miners has since increased.

ZCDC

COVID 19 pandemic struck affecting China which accounts for 15% of the global diamond market. The lockdown in China not only meant that diamond sellers had to close shop for at least 2 months but buyers could also not get out and shop for jewellery. The development hit the diamond producer hard to the point that ZCDC failed to pay salaries.

ZCDC spokesperson said "We had problems paying our salary arrears to workers and we have been updating them on the challenges that we had which were emanating from Covid 19 challenges. These challenges are not peculiar to ZCDC but have been felt across the whole sector, it's a situation that we are addressing actively. We have been optimistic in our outlook and we have resumed diamond sales so we are actively addressing those constraints, we can safely say we are finally navigating out of the woods," Chagonda concluded.

Small scale mining – the baby that needs serious attention


Source: WESTERSOE/ISTOCK.COM

Artisanal and small-scale mining (ASM) has become an important sector in Zimbabwe, creating jobs for the rural communities, contributing to the country's economic development, sustaining livelihoods among other important things.

But despite all this, the sector is not being fully supported in Zimbabwe especially in terms of funding and capacity building.

It is facing challenges such as gold marketing, lack of mechanised equipment and finance, perceived lack of recognition and consultation, high charges, absence of a clear mining policy that promotes small scale mining and centralisation of mining services among a plethora of challenges.

In fact, the sector is drowning in serious challenges that need urgent attention for it to continue playing its role.

Why should the government pay attention to this sector?

A report by the International Labour Office (ILO) says small scale mining needs to be supported because it helps to stem rural-urban migration, maintaining the link between people and the land and it makes a major contribution to foreign exchange earnings.

It also enables the exploitation of what otherwise might be uneconomic resources, and it has been a precursor to large-scale mining.

The report also says "small-scale mining can and should be encouraged by creating the operating environment that encourages the use of best practices for mining and occupational health and safety and environmental protection."

The sector has become of paramount importance for the country to achieve its US$12 billion mining industry by 2023. The gold small scale mining sector is expected to contribute up to 12% of total exports.

Job creation

Globally, artisanal mining has grown from 10 million in 1999 to potentially upwards of 20-30 million, according to reports. This increase provides a rich policy ground for promoting a good job agenda. In Zimbabwe, more than 500 000 people are believed to be employed in this sector. Researchers also have estimated that the small-scale and artisanal mining sector in Zimbabwe benefits over 1,5 million people excluding equipment and service providers.

Rural development

Linked to the job creation is artisanal mining's added value as part of rural livelihood diversification strategies where it is one avenue of income generation, another report reveals. Research has shown how artisanal mining assists rural households in building more dynamic and resilient livelihood strategies portfolios by, for instance, 'dovetailing' artisanal mining and farming economies. Further, it is a stimulus for trade and subsidiary business development around mine sites just as evidence in industrial or larger-scale mining operations, it said.

Source of revenue

Reports also say small scale mining is also a major producer of minerals indispensable for manufacturing popular electronic products, such as laptops and phones. For example, 26% of global tantalum production and 25% of tin comes from small scale mining.

On the global front, small scale mining is recognized as a considerable source of revenue for millions of people in about 80 countries worldwide.

In 2016, Zimbabwe's gold mining sector as a whole, consisting of both artisanal and small-scale mining and large-scale gold mining, contributed 2.6% of gross domestic product (GDP), 18% of exports, 28% of mining output, and 1% of government revenues (royalties only) and employed 7.1% of the labor force. ASM is perceived to contribute significantly to these figures and, therefore, to the growth and development of Zimbabwe's economy.

Veteran Miners Ms Sheila Mabasa and Mr Fletcher Mbizo of Moflegosh Mine

What does the government need to do?

The government can support the small scale mining sector through making payments on time, end Fidelity Printers and Refiners (FPR) monopoly, provide funding for small scale miners, proper formalisation among other interventions. These interventions are, however, not exhaustive.

Make payments on time

Fidelity Printers and Refiners (FPR), the country's sole gold buyer, needs to reduce the turnaround time for payment of gold delivered by both large and small-scale producers. Currently, the turnaround time for payment is not sustainable. It forces producers to sell their gold in the black market.

In his 2021 national budget, Finance minister Mthuli Ncube acknowledged this and promised to rectify it. He said lead times will be reduced from maximum of two weeks to a week for large scale producers and on spot payments will be done to small scale producers from the current maximum lead time of five days.

End FPR monopoly

The southern African nation currently forces gold miners to sell their bullion to FPR and then it pays them 70% in dollars and the remainder in local currency. Parliamentary Portfolio Committee on Mines and Mining Development chairperson Edmond Mkaratigwa last year revealed that the current monopoly "is breeding inefficiencies within Fidelity and the black market is capitalising on these, for example, we are told in some cases Fidelity is taking up to four weeks to pay for deliveries and the miners are saying this is unacceptable."

"So our view is that there is a need to liberalise the marketing of gold. Fidelity Printers should not remain the sole buyer of gold in the country in order to attract investment into the industry," he said.

Gold output plunged 30% in the first 10 months of 2020 from a year earlier while exports of the precious metal slumped 23% to $697.7 million during that period, according to the Reserve Bank of Zimbabwe.

Hence, there is a need for the government to end the FPR monopoly over the marketing of gold in the country.

Make funding available

Small scale miners need to be supported financially. They need finance to kick start their dream projects and buy equipment, machinery and tools. Without these things, the sector is bound to collapse.

Refreshingly, Ncube hinted in his budget that he will introduce the Mining Industry Loan Fund which supports small-scale miners through prospecting grants, mining establishment loans, plant and equipment procurement loans, among others. He, therefore, capitalized the Mining Industry Loan Fund with 198.5 million.

As a way of conclusion, the government needs to pay serious attention to the small scale mining sector due to its contribution to the economy in terms of job creation, forex earnings among others. The sector should be supported also because it is drowning in challenges.

Without government full support, the sector is bound to fail and for crying out loud government should invest in FORMALISATION.

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, Shurungwi, 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, Bulilimamangwe, 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