

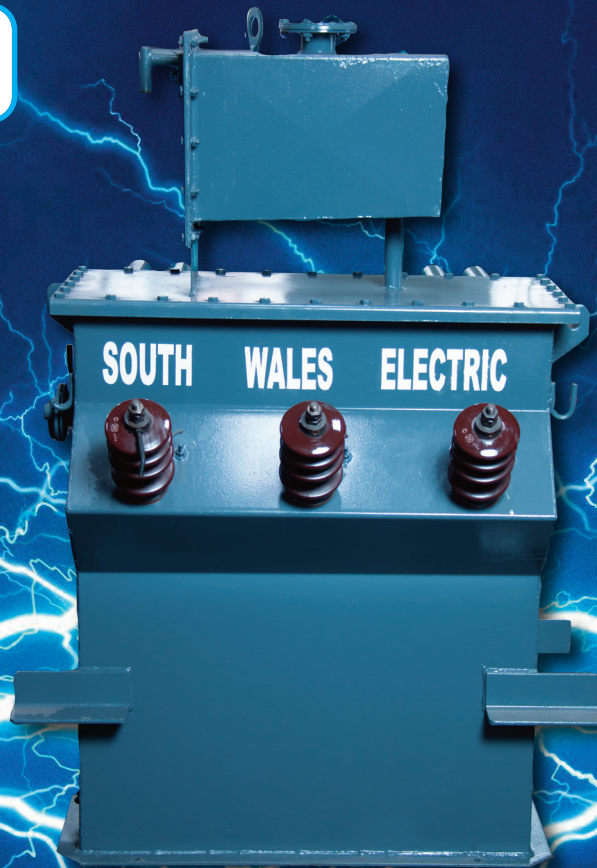
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CONTENT

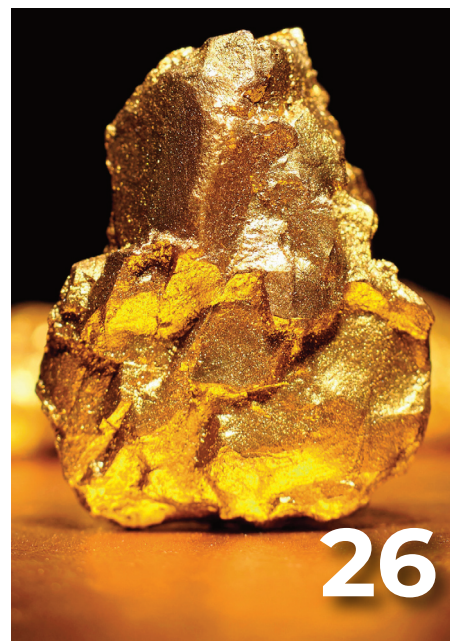
Mining Zimbabwe Magazine | MAY, 2021

INSIDE MINING ZIMBABWE

- 05 Chishanya Rare Earth Project preliminary results encouraging
- 06 Unki performance continues to impress
- 08 Ngwarati Mine back in production end of June
- 09 Shinko - creative and dynamite energy and mining solutions



- 10 Premier initiates DFS process for Zulu
- 11 Invictus Seismic Acquisition campaign to commence in Q2
- 12 The mining industry performance in the first quarter of 2021
- 15 Worker ejected from hospital after mining firm fails to pay hospital bill
- 16 Gold, Platinum, Lithium, Gas & oil - interesting prospects ahead
- 19 ZMF in strategic partnership with the Zimbabwe India Trade Council (ZITC)



- 20 Zim keen to speed exploitation as coal, oil and gas exploration risk widens
- 22 Industrial Minerals and their Potential Contribution to the Resuscitation of the Zimbabwean Economy



- 25 Chinese monopoly upsets chrome prices
- 26 Formalisation and the use of mercury in gold processing
- 28 More-so, on those two legs we stand, balance and walk
- 30 Masvingo Corruption saga Parly eyes Ministry's action

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Chishanya Rare Earth Project preliminary results encouraging

Australia Stock Exchange (ASX) listed Prospect Resources' Chishanya Rare earth elements project initial assessment preliminary results are encouraging, the company's quarterly activity report has shown.

Rudairo Mapuranga

According to the report, in line with the Company's strategy, Prospect continues to seek opportunities to generate value out of its non-core assets. During the quarter, the Company undertook soil sampling at the Chishanya Rare Earth Project to provide an initial assessment of this projects prospectively.

"Approximately 2,400 samples were collected and sieved, before being dispatched for REE analysis by SGS. Preliminary results are encouraging, and the company will provide an update in due

course," the report reads in part.

Zimbabwe according to predictions could become an alternative rare earth element's biggest global supplier as the US-China trade war intensifies.

The country could be sitting on bountiful and lucrative deposits of rare earth minerals. Reports have indicated that Zimbabwe's deposits could be second after China although exploration activities on these minerals are yet to be concluded. Rare earths are now widely used in automobiles, electronic equipment, and various fields.

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

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 also 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).

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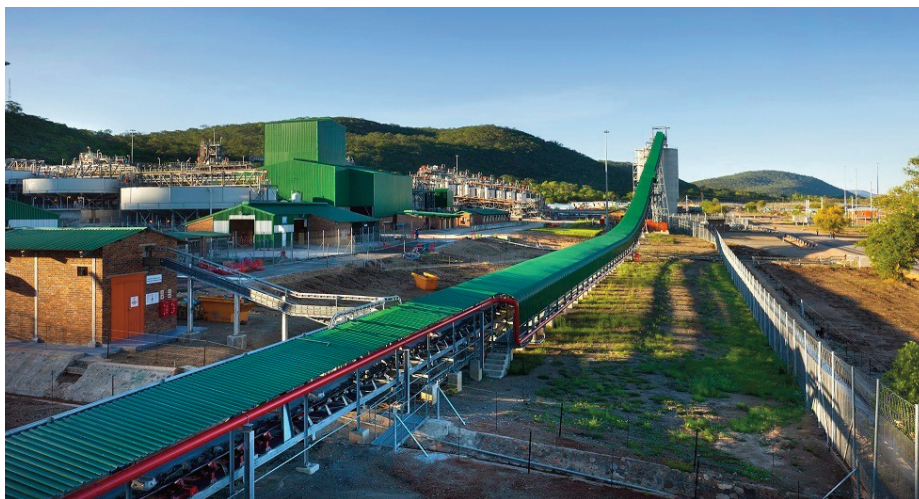
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Unki performance continues to impress



Shurungwi based ANGLO American Platinum's Unki Mine's production continues to excite as the giant recorded a platinum group of metals (PGM) increase of 4 per cent in the first quarter of 2021 compared to the first quarter of 2020 despite Covid-19 related disruptions.

Rudairo Mapuranga

The PGM production was at 50 900 ounces in the first quarter of 2021 against 49 000 ounces produced during the first quarter of the previous year.

Platinum output increased by four per cent to 22 600 ounces while palladium rose by two per cent to 20 000 ounces as the mine partly benefited from grade improvement. "Unki PGM production increased by 4% to 50,900 ounces (platinum production increased by 4% to 22,600 ounces and palladium production increased by 2% to 20,000 ounces), as the mine recovered from the impact of Covid-19 in the prior period, as well as benefiting from an increase in grade," the company said in a statement.

However, the youngest operating platinum mine in Zimbabwe PGM production in the quarter decreased by 9 per cent from 55 800 ounces produced during the quarter ended 31 December 2020 while platinum decreased by 8 per cent from 24 600 ounces. At the same time palladium

declining by 9 per cent from 22 000 ounces in the previous quarter.

Tonnes milled during the first quarter of 2021 increased by 1 per cent to 521 000 tonnes compared to the comparable first quarter of 2020 during which 516 000 tonnes were milled however there was a 5 per cent decline from the previous quarter ended 31 December 2020 from which 550 000 tonnes were milled.

Anglo American Platinum reported no fatalities during the quarter at its own-managed operations.

The Total Recordable Case Frequency Rate ("TRCFR") per million hours at managed operations disappointingly regressed to 2.53 per million hours, compared to 2.39 per million hours in the prior period, and plans are in place to address the increase in injuries, to ensure a sustained turnaround in safety performance.

Total PGM production increased by 7 per cent to 1 021 200 ounces against the prior period (Q1 2020), with platinum production 6 per cent higher at 468 100 ounces, and palladium production increasing by 9 per cent to 330 500 ounces.

The improved performance was principally attributable to the lower impact from Covid-19 in the quarter. The second wave of Covid-19 infections led to a staggering

return-to-work process to ensure effective management of Covid-19 protocols. This impacted January production, particularly at Amandelbult and Mototolo, and led to a loss of 27 000 PGM ounces, compared to the prior period, when 61 000 PGM ounces were lost owing to Covid-19 related shutdowns.

"We have had a strong production and refined production performance this quarter, despite the ongoing implications of Covid-19. Although we had no work-related fatalities in the quarter, we are disappointed with the increase in injuries and plans are in place to continue safety improvements and ensure a sustained turnaround.

Total PGMs production increased by 7%, largely due to a 17% increase in production from Mogalakwena, and despite continuing implications from Covid-19 which led to a longer return-to-work process particularly at Amandelbult and Mototolo.

We saw a strong recovery in our refined production, which increased by 59% compared to Q1 2020, as processing operations were back at normal operating capacity following the completion of the ACP rebuild in November 2020.

Since then, the ACP has been performing ahead of expectations, and able to smelt more tonnes from Polokwane smelter. Refined production, however, was affected by the planned maintenance at the Base Metals Refinery.

Sales volumes were strong in Q1, increasing 66% as refined production was supplemented by the drawdown of minor metals from refined inventory, following robust demand for these metals." Anglo American Platinum Chief Executive Officer Natascha Viljoen said.

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Ngwarati Mine back in production end of June



Zimbabwe's biggest platinum producer Zimplats' Ngwarati mine is expected to be back in full production by the end of June 2021 as the production of 6E (six elements) (platinum, palladium, rhodium, ruthenium, iridium and gold) decline.

Anerudo Mapuranga

According to the company report for the quarter ended 31 March 2021, Ngwarati Mine which reported a fatal injury when a high wall collapsed early this year is expected to be back in full production by the end of June 2021.

The temporary closure of the mine according to the company led to the decrease of ore mined by 4 per cent simultaneously contributing to a decrease by 6 per cent in 6E production.

Ore mined decreased by 4% from the December 2020 quarter due to the temporary closure of Ngwarati Mine after the incident 6E metal production in final product.

The company said that the production teams from Ngwarati Mine have been redeployed to Rukodzi, Bimha and Mupani mines.

"Ngwarati Mine is expected to be back in full production by the end of June 2021. 6E head grade decreased 3 per cent from the previous quarter due to milling of stockpiled lower grade development ore from Mupani Mine after the temporary closure of Ngwarati Mine. The lower head grade harmed 6E recovery for the quarter which was 3 per cent lower than the December 2020 quarter. 6E metal production in the final product declined by 6 per cent from the previous quarter due to the combination of lower grade and process recoveries. 6E metal production in the final product was 10 per cent lower than the prior comparable period (which benefitted from the treatment of furnace reverts stockpiled during the furnace rebuild in addition to higher 6E head grade and 6E recovery rate," the company said.

Zimplats also said that Ngwarati mine closure indirectly contributed to operating cash costs decreasing by one per cent from the previous quarter due to lower volumes of ore mined.

"Total operating cash costs decreased by 1 per cent from the previous quarter as a result of lower volumes of ore mined which was partly offset by the negative impact of the strengthening of the South African rand against the United States Dollar on imported goods and services from South Africa and higher fuel prices in line with firming crude oil

prices on the world market." The statement reads in part.

A total of US\$2.2 million was transferred from opening stocks to operating costs during the quarter as concentrate stocks were reduced in the period.

The combination of inflationary pressures and lower production volumes resulted in a 10 per cent increase in operating cash costs per 6E ounce to US\$710 in the period.

Exploration

"A total of US\$0.7 million was spent on exploration projects and US\$0.9 million was committed as of 31 March 2021. Exploration activities undertaken included Mineral Resource evaluation work comprising approximately 7 613 metres of surface diamond drilling over existing projects on the two mining leases. The exploration activities improved geological and geotechnical confidence in scheduled production."

Covid-19

"The Group recorded 24 positive COVID-19 cases during the quarter, resulting in cumulative confirmed cases since the inception of the pandemic rising to 31. All affected employees were managed in line with the Group's COVID-19 code of practice which incorporates both Zimbabwe Ministry of Health and Child Care and World Health Organisation protocols and had fully recovered by the end of the quarter. There were no COVID-19 related disruptions to operations. Zimbabwe's second wave of infections which started towards the end of the December 2020 quarter had receded by end of the quarter under review. The workforce is adapting well to the current COVID-19 operating environment," concluded the statement.

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Speaking to Hazel Mutungira who is the business development manager, she said "we intend to offer creative and dynamite energy and mining solutions to our clients through continuous development and engagement."

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Premier initiates DFS process for Zulu



London Stock Exchange-listed Premier African Minerals has initiated the Definitive Feasibility Study (DFS) for its Zulu lithium deposit, the company Chief Executive Officer Mr. George Roach has said.

Anerudo Mapuranga

The company according to Roach has made various appointments in an effect to carry out its DFS which is expected to complete by end of the year.

Premier has appointed Bara Consulting as principal engineer while Geodrill Private Limited was appointed as principal drilling contractor, Hains Engineering as Resource and Technical consultant, and Mr. CJ Male was made the site exploration manager. Mr. CJ Male has historically provided exploration services to Premier and is familiar with the Zulu lithium deposit.

The company's chief also said that he was confident that the team his firm pick to initiate DFS was going to achieve tremendous results.

"We have initiated the DFS process for our Zulu lithium deposit. We made various appointments. The principal engineer is Bara consulting, simultaneously we have engaged Bara Consulting as principal engineers for the DFS. Geodrill Private Limited as principal drilling contractor, Geodrill is familiar with the region and the location.

Hains Engineering is coming as Resource and Technical consultant while Mr. CJ Male has been appointed site exploration manager. Mr. CJ Male has historically provided exploration services to Premier and is familiar with our Zulu deposit.

With that team, I expect that we will achieve our deadline and our timeline which is in 14 months," he said.

Zulu was first pegged in 1955 and intensely explored until the early 1960s. Minor petalite production was reported for 1961 and 1962. The pegmatite bodies intruded along serpentine and sedimentary rocks over a strike length of several kilometres. The width varies between 10 and 25 metres. The

bigger pegmatites to the north of the Machakwe River are rich in spodumene and lepidolite. The smaller pegmatites south of the Machakwe River are rich in petalite. The pegmatite bodies strike N20° and dip with 70° to 90° to the west. Parts of the pegmatite are quite rich in tantalite-Mn.

In 1958, O.J. Arnett of Rhodesian Selection Trust (RST) carried out a detailed investigation of the Zulu Project area in order to establish the extent of the lithium mineralization within the pegmatites.

To date, lithium-bearing pegmatites (mainly spodumene and lepidolite) have been identified not only at vertical depths of over 200 meters but also along a strike length of some 3,500 meters as well as on the eastern part of the Zulu concession. Following the Maiden Mineral Resource Estimate on the Main Zone and the discovery of the New Zone, Premier believes that the potential exploration target for Zulu is around 120-160 million tonnes.

Invictus Seismic Acquisition campaign to commence in Q2

Invictus Energy, an Australian firm exploring oil and gas in Muzarabani, Managing Director Scott Macmillan has said the seismic acquisition campaign will commence the second quarter of 2021, due to the strong capital raise from the company. The company is looking forward to the commencing of the seismic acquisition campaign.

Mr. Macmillan said the commencing of the upcoming seismic acquisition programme will lead to a high-impact basin opening drilling campaign.

"The completion of a strongly supported capital raise has put the Company in an excellent position to complete our upcoming seismic acquisition program which will commence in Q2 and then lead to an eagerly awaited high impact basin opening drilling campaign," said Mr.

Macmillan.

Mr. Macmillan further said that the commencing of the seismic acquisition campaign will unlock doors for the company and indicate the exact position of the optimal drilling location to test the Mzarabani prospect.

"We look forward to commencing the seismic acquisition campaign in the coming quarter which will unlock additional value for the Company and delineate the optimal drilling location to test the world-class Mzarabani prospect," said Macmillan.

Subsequent to the end of the quarter, the Company awarded a seismic acquisition contract to Polaris Natural Resources Inc. for the Company's 2D seismic program in the Cabora Bassa Basin.

The Company intends to conduct, process, and interpret a minimum of 400 line kms of 2D seismic to refine the Mzarabani-1 drilling location and well path and identify additional prospective for the upcoming drilling campaign.

The Company is also pleased to have Barry Meikle join the team as Seismic Project Manager. Barry is based in Zimbabwe and has extensive experience in onshore seismic acquisition projects in PNG with Total and InterOil, and project management expertise with oil field service companies in East Africa and is a valuable addition to the Invictus team.

Polaris will begin mobilizing the seismic equipment and personnel to Harare in the coming weeks to undergo preparation for the acquisition before deploying to the field and commencing the data acquisition in Q2 CY2021.



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The mining industry performance in the first quarter of 2021

Gold is expected to contribute USD 4billion, while platinum will contribute USD 3 billion, Chrome, Iron, and Steel USD 1 billion, Diamonds USD 1 billion, Coal USD 1 billion, Lithium USD 500 million, and other minerals USD 1.5 billion.

Zimbabwe's economic establishment depends on the mining sector which is the drive to economic growth towards an upper-middle-income economy by the year 2030 as stipulated in the National Development Strategy (NDS1 2021-2025).

By Shantel Chisango

According to the Mines and Mining Development's vision towards achieving a USD 12 billion mining industry by the year 2023, Gold is expected to contribute USD 4 billion, while platinum will contribute USD 3 billion, Chrome, Iron, and Steel USD 1 billion, Diamonds USD 1 billion, Coal USD 1 billion, Lithium USD 500 million, and other minerals USD 1.5 billion.

Given the favourable international mineral prices of most mineral commodities, the mining sector is expected to bring in around USD 8 billion in export earnings during 2021.

GOLD

Being the mineral that is expected to contribute one-third towards the USD 12 billion, has not been performing well due to the pandemic which has resulted in the decline of production.

Gold recorded total revenue of USD 229.9 million from the period January-March 2021, which was 21 per cent lower than the USD 290.7 million recorded in the same period the previous year.

Gold production from January -March this year recorded a decline, with deliveries to Fidelity Printers and Refiners (FPR) standing at 3.97 tonnes in comparison with 5.72 tonnes delivered same time last year, recording a decline of 31 per cent in deliveries.

The small-scale mining sector recorded 1.586 tonnes compared to 3.571 tonnes recorded in 2020, making it a 55 per cent decline in production.

The decline in gold deliveries and production was due to Covid19 induced lockdown and the gold leakages to the parallel market.

However, with the gold deliveries recording a decline, the large-scale sector was fortunate to record a positive increase of 10 per cent, from 2.150 tonnes delivered in 2020 to 2.391 tonnes delivered this year.

WHAT TO DO TO INCREASE GOLD DELIVERIES TO FPR

In order to increase gold deliveries to FPR, Mines and Mining Development Ministry stated that "there is a need for its department to be vigilant and enhance monitoring and surveillance of the gold sector to curb leakages.

In addition, Mines Ministry opined that FPR must address financial challenges at the sole gold buyer which had caused delays in payments of gold deliveries.

The Ministry should also speed inspections and mining title allocation as none certified miners avoid selling to Fidelity for the fear of arrest from ZRP's **MINERALS, FLORA AND FAUNA UNIT (MFFU)** a section within the Zimbabwe Republic Police is mandated to monitoring and curbing illegal activities particularly that involves precious resources such as minerals. Thousands of

applications are going unprocessed for years and it is clear mines is incapacitated to carry out the critical exercise which is the main contributor to illegal mining.

PLATINUM GROUP OF METALS (PGMS)



According to the Mines Ministry records, a total of 16 874.35 Mt of PGMs concentrates at USD 114 493 797.97 were sold January to February 2021, with a total of 3 214 Mt of PGMs Matte valued at USD 250 208 177.87 also sold.

The Mines Ministry stated that the production of platinum for all producers went according to plan during the first two months of 2021.

It should be noted that exports of PGM matte increased due to the commissioning of a smelter at Unki Mine.

HIGH CARBON FERROCHROME/ IRON ORE/STEEL



A total of 31 523 Mt of High Carbon Ferrochrome valued at US D 30.630 Million was sold during the period January to February 2021 recording an increase of 45.385 and 108.76% in volume terms and value terms.

Local production continued on an upward trajectory largely in response to the bullish market, however, many small producers were yet to resume production.

A total of 195,851.97 Mt of high carbon ferrochrome valued at USD129.48 million was sold during the period January to December 2020 compared to the same period last year when 360,497.39 Mt valued at USD 278.38 million was sold.

This represents a decline of 53% in terms of value which can be attributable to softening of prices during the year 2020.

Furthermore, a total of 752,075.05 MT of chrome ore and concentrates valued at USD54.2 million were exported in 2020, compared to 715,523.60 Mt valued at USD91.7 million exported in 2019. This represents a 5% increase in terms of volume and a 40 per cent decrease in terms of value. This is attributed to the softening demand for chrome ore and ferrochrome due to the COVID-19 pandemic resulting in the fall in prices.

A total of 5,195.96 Mt of Steel valued at USD 2.865 Million was sold during the period January to December 2020 compared to the same period last year when 3,039.56 Mt valued at USD 1.935 Million were sold. This represents an increase of 71% and 48% in terms of volume and value respectively.

A total of 3,466.00 Mt of Iron valued at USD 658,850.00 was sold during the period January to December 2020 compared to the same period last year when 3,610.00 Mt valued at USD 798,150.00 were sold. This represents a decline of 4% and 17% in terms of volume and value respectively. The Covid-19 induced lockdowns across the globe led to the softening of prices of iron and steel in 2020.



DIAMONDS

A total of 239 639.90 carats valued at USD 35,2 Million were sold during the period January to February 2021 compared to the same period last year when 271 196.50 carats valued at USD 20. 9 Million were sold.

The diamond market is forecast to improve in the short to medium term amid a drop in Covid-19 cases and reduced restrictions.

Diamonds sales for the period January to December 2020 totalled USD 155.34 million which was 6% lower than USD166.05 million realized in the same period in 2019.

The decline is attributed to the impact of the COVID-19 outbreak on production.

COAL, COKE AND COKE BREEZE



A total of 27 450.50 Mt of Coal valued at USD 659 000 was sold compared to the same period last year when 16 850 Mt valued at USD 522 000 were sold. This represents an increase of 41% in volume terms and 75% in

value terms.

Limited foreign currency and flooding of mining pits negatively affected production for both local and export markets.

A total of 393,650.26 Mt of Coal, Coke, and Coke Breeze valued at USD44.18 million was sold from January to December 2020 compared to the same period the previous year when 228,399.68 Mt valued at USD 31 million were sold.

The positive growth of 72% and 42.5% in terms of volume and value respectively was mainly driven by increased production by Hwange Colliery and Makomo Resources.

LITHIUM



BIKITA MINERALS

A total of 5 146 Mt valued at USD 2.15 Million was sold during the period January to February 2021. Bikita Minerals remains on care and maintenance hence there was no production and exports made were from stockpiles.

A total of 12 670.50 Mt of Petalite valued at USD 5.1 million was sold from January to December of 2020 compared to the same

period the previous year when 58 518.35 Mt valued at USD 15.4 million were sold.

The negative growth of 66.8 % was due to the shutdown of Bikita Minerals, the only producer of Lithium in Zimbabwe which is currently under care and maintenance.

OTHER MINERALS



There was a total of USD 101.9 Million exports from January to December of 2020. This was contributed by other minerals such as Nickel, Manganese, Phosphate, Granite amongst others.

Conclusively, the Minerals Marketing Corporation of Zimbabwe (MMCZ) recorded a total of 1,7 million mt at USD 2.4 billion against the budget of 1,9 million mt valued at USD 1,860 billion making a negative variance of 8.38 per cent in volume terms and a positive variance of 28.96 per cent in value terms.

Worker ejected from hospital after mining firm failed to pay hospital bill



A Hwange based Chinese mining firm, South Mines has failed to pay hospital bills for one of their workers who was burnt by gas whilst working at the mine, founding Director of the Centre for Natural Resource Governance (CNRG) Mr Farai Maguwu has said.

Rudairo Mapuranga

According to Maguwu, the man was initially sent to the hospital but he had to be discharged because the company failed to pay for his hospital bills.

"Received from Hwange: 'This guy was burnt by gas at a Chinese mine, South Mines, two days ago and was discharged after a day because the company claimed they can't pay hospital bills. Just been to see him and spoke to him. Chinese are evil' " he said.

The Zimbabwe Advance Mine Workers Union (ZIAMU) said it was of importance for the government and trade unions to force Chinese investors to adhere to the country's laws and policies.

The firebrand mine workers' union said the Chinese embassy was supposed to keep its people in line as a measure to protect the Chinese brand.


"They need to be forced to adhere to the dictates of the Labour Act. They will never do it willingly. We believe that even the Chinese Embassy could assist in this regard. They can't be neutral when the Chinese

Brand is being soiled. Their silence could be misconstrued" ZIAMU said.

Chinese investors in Zimbabwe are infamous for ill-treating and undermining the rights of their co-workers or employees leading the general populace to despise them.

Relations between Zimbabwe and China have been strong as Harare continues to look East with biting sanctions from the West, the European Union and the United States.

However, due to some of the Chinese behaviour and approach in their way of doing business, the relations might be tainted by Zimbabweans who have developed abhorrence towards the Chinese way of doing business in the country.



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Gold, Platinum, Lithium, Gas & oil - interesting prospects ahead

There is growing optimism that the mining sector is heading towards a promising outcome with experts convinced that 2022 will be an interesting year for mining in Zimbabwe.

Rudairo Dickson Mapuranga

President Emmerson Dambudzo Mnangagwa through his vision for the country to achieve an upper-middle-income economy by 2023 set a roadmap for the mining sector to fetch US\$12 BILLION annually by 2023 with gold achieving US\$4 Billion, Platinum US\$3 Billion and Lithium is projected to account for half a billion annually while gas and oil were not articulated.

Despite the threats induced by the Covid-19 induced lockdown as well as policy issues, the sector has attracted investment both local and foreign an indication that the country has all it takes to achieve the President's Mining industry roadmap.

The performance and outlook of the mining industry have been giving hope that an interesting epoch in the sector is brewing. Despite a blurred outlook for other minerals like diamonds which have been scheduled to perform better in the President's vision for the sector to achieve US\$12 Billion by 2023, gold, platinum, lithium, gas, and oil position gives substantial viewpoint that an interesting year waits for the sector.

GOLD OUTLOOK

The performance of gold last year and early this year has not been encouraging for experts and analysts in the sector to suggest a positive outlook in 2022. However, exploration work and improved extraction by large-scale gold miners give a clear

indication that the production and deliveries of gold to the country's sole gold buyer and exporter Fidelity Printers and Refiners (FPR) is set to improve.

The country's large-scale gold producers like Caledonia Mining Corporation, Dallaglio, and Kuvimba have also been working to increase gold output in the country.

One of Zimbabwe's largest gold producers Caledonia has been advancing towards establishing a gold mining empire in Zimbabwe in an endeavour to help in the attainment of the President's vision for the mining industry.

Caledonia obtained exclusive rights to explore new gold mining claims in the Connemara North area near Chiwundura, Gweru in the Midlands province. Connemara North is in close proximity to the Glen Hume property, which is also under Caledonia focus consideration.

The option gives Caledonia the right to explore the area for a period of up to 18 months. The firm hopes to derive favourable outcomes from this effort, which will impact positively on its overall business. Increased capacity at already existing mining houses, as is the case with Blanket Mine, is one of the key anchors expected to drive the mining sector turnaround.



Caledonia is also expected to increase production at its Blanket mine in Gwanda as it managed to complete the equipping of its Central shaft which was commissioned end



of March, after which production is expected to begin to ramp up to about 80 000 oz in 2022.

Dallaglio's **Eureka Gold Mine** in Guruve, which has been closed for over two decades, is set to open this month, with the injection of 60 million dollars into the resumption of the mine. Eureka was developed as a modern gold mine in 1999, designed to produce approximately 70 000 ounces of gold per annum from an open pit before an underground operation was established. The mine has been projected to reach 100 000 oz when operating to full throttle.

Mining giant, Kuvimba Mining House has been making efforts to resuscitate mines that have been closed over the years and will cement the group's footprint in the extractive sector. The giant is set to takeover Globe and Phoenix Gold Mine after the government gave the nod to the transaction which will also see the mining group acquiring other associated mines. Kuvimba Mining House has three operating gold mines under Freda Rebecca namely Freda Rebecca Gold Mine, Shamva Gold Mine, and Jena Mine. It is expected to fetch over 10 tonnes of gold annually. The performances of Platinum mines, Zimplats, Unki and Mimosa mines in 2020 despite the threats and dangers posed by the COVID-19 pandemic is a clear indication that the Platinum Group of Metals subsector can push to become one of the most important sectors in the country.

In 2020 according to national statistics Platinum also fetched higher than gold becoming Zimbabwe's biggest foreign currency earner in two straight years. This is despite the President suggesting that the gold sector can fetch US\$4 BILLION by 2023 through his US\$12 BILLION mining roadmap.



Zimbabwe's biggest platinum producer, Zimplats Holdings Limited recorded a 79 per cent increase in sales revenue for the half-year ended December 31, 2020, after receipting close to US\$675 million.



Anglo American Platinum Limited (Amplats)'s local unit, Unki Mine's PGM production increased by 7 per cent to 55 800 ounces during the fourth quarter to December 31, 2020, compared to the same period in the prior year.



At the same time, Mimosa Mining Company produced more than 123 000 ounces of platinum in the financial year surpassing its annual production target.

Although the performance of the metals is promising and encouraging, it should, however, be noted that the platinum sector still has a long way in achieving the President's vision.

Through Kuvimba owned and posed to be Zimbabwean's biggest PGM producer, Great Dyke Mining Investment's Darwendale Mine in Norton, the government is optimistic that platinum will reach the US\$3 billion target by

2023.

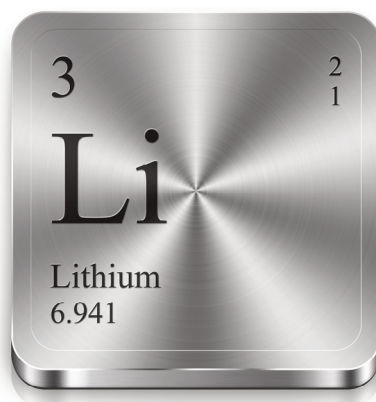
Great Dyke Investments has opened two box cuts at its site in Darwendale and would be operational by 2023.



Bravura Zimbabwe is working on resource confirmation at its platinum project in Mashonaland West province, it is unearthing investment compelling data that is expected to give impetus to the mining venture, Bravura is expected also to add in the PGM production by 2023.

Lithium outlook

According to Statista, the production of lithium minerals in Zimbabwe increased dras-



tically between 2005 and 2010, from just 1,100 metric tons to around 50,000 metric tons. This production volume has remained steady since then, only expected to increase slightly by 2021, reaching some 65,000 metric tons.

However, due to the increasing popularity of Electric Vehicle (EV) and the world stance in promoting the consumption of clean energy lithium projects in Zimbabwe have been on an upward trajectory with the majority expected to start extracting by end of 2022 an indication that lithium performance is going to increase drastically.

Zimbabwe is the world's fifth-largest lithium producer after Australia, Chile, China, and Argentina respectively having produced 1 600 metric tonnes in 2019 with a potential of accounting for 20 per cent of the global lithium demand.

The country's privately owned Bikita Minerals is currently the only lithium producer, and reportedly holds one of the world's largest-known lithium deposits of over a million tonnes, with others like Arcadia lithium mine owned by Prospect Resources, Zulu lithium mine owned by Premier African Miners, Shamva lithium owned by Mirrorplex, and Kamativi Tailings Lithium Project owned by Zimbabwe Lithium still at exploration stages. Prospect Resources the developer of the Arcadia lithium project in Goromonzi intends to commence lithium sample shipments in the second half of this year when it completes an accelerated staged development plan for the fledgeling lithium initiative while Premier African Minerals has initiated a definitive feasibility study (DFS) and a funding strategy to be applied in the future development of its Zulu lithium and tantalum project in Matabeleland.

MIRRORPLEX (Pvt) Limited's Shamva lithium project has received promising first batch results for its second drilling phase from SGS labs in South Africa. The First drilling results from 240 Rock Chip samples taken from the exposed Bonnyvale pegmatite body at the Shamva Lithium Project provided high-grade lithium assay results up to 3.13% Li₂O and surface sampling at the Loch Ness prospect at the project has revealed two more pegmatites containing high Li₂O grades up to 4.82% Li₂O.

The projects are expected to begin operations in 2022 contributing to the President's Mining roadmap. Experts believe that lithium in Zimbabwe has the potential to fetch US\$1 Billion by 2023 despite the president betting for half a billion.



GAS AND OIL OUTLOOK

The President through his Mining roadmap did not articulate the role and potential of oil and gas in the attainment of the vision 2030.

Late March the President announced that the country had discovered and confirmed it had oil in the Muzarabani area. According to Mnangagwa, Zimbabwe's oil and gas industry represented huge, unique and competitive investment opportunities given

the significant potential for value chain linkages.

The company operating the Muzarabani oil fields, Australia Stock Exchange (ASX) listed Invictus Energy, signed a petroleum exploration development and production agreement (PEDPA) with the Government of Zimbabwe. According to OilPrice.com Zimbabwe's Muzarabani oil and gas exploration project has made it to the list of this year's Top Five oil and gas Wildcat drilling compiled by leading global energy price, research and

analysis site.

The Muzarabani wildcat will be drilled around October-November 2021 to a total depth deeper than 4000 metres and will aim to confirm the prospect's prospective resources of 4.5 Trillion Cubic feet. The year 2022 is posed for exciting productions in the mining sector as experts believe that the production of gold, platinum, and lithium is set to rise while a possible beginning of oil and gas drilling is expected.

ZMF in strategic partnership with the Zimbabwe India Trade Council (ZITC)



ZMF President and ZITC President Dr Asif Iqbal

The Zimbabwe Miners Federation (ZMF) has made strides towards achieving President HE Emmerson Mnangagwa's vision for the mining sector becoming a US\$12 BILLION industry by 2023 subsequently leading to vision 2030 with the economy achieving an upper-middle-income earner through its partnership with Zimbabwe India Trade Council (ZITC).

Rudairo Mapuranga

The partnership will through various initiatives promote trade, investment and beneficiation to strengthen artisanal and small scale mining growth and development as well as the formalisation and regularisation of the industry.

According to ZMF President Ms Henrietta Rushwaya, the partnership is a fulfilment of the organisation and government vision to enhance and capacitate artisanal and small scale miners at the same time promoting the "Open for business" mantra.

"Government and ZMF have over the past three years worked tirelessly and aggressively seeking ways to enhance the capacity of artisanal miners in various ways. Zimbabwe is actively participating in international programmes that will gather much-needed sector data and transparency to enhance feasibility and investment into

the sector." Ms Rushwaya said.

ZMF seeks technological collaborations for the development and access of market indicators for certain minerals and sales platforms, expert and technical advice on geology, reliable supply of equipment and parts. It is proven that through the provision and supply of small scale equipment such as compressors, hammer mills, jaw crushers, water pumps an immediate increase in productivity has been registered amongst its miners dotted around the country. The federation also seeks the development of programmes to boost capital access and productivity and training to improve mining skills, occupational safety and health education.

The ZITC President Dr Asif Iqbal said India was prepared to promote the plight of small scale miners in Zimbabwe through a technological exchange in line with environmentally friendly and green mining. Through the ZMF-ZITC partnership according to the ZITC President small scale and artisanal miners from Zimbabwe together with the experts in the industry will have an opportunity to study Mining and mining technology at the School of Mines in India.

Dr Iqbal also said that ZMF and ZITC were looking forward to creating a major mining conference in 2021 as India seeks to promote President Emmerson Dambudzo Mnangagwa's dream for the mining sector in Zimbabwe to become a US\$12 Billion sector by 2023.

"We are planning to have a mining conference to bring Zimbabwean and Indian miners together in achieving the 2023 vision. We would want to collaborate with one of the schools of mines in India so that we promote technological exchange. We are looking forward to Zimbabwe India mining relations." He said.

ZMF encourages collaborations of buying and selling of raw minerals and discussions surrounding beneficiation in the form of wash plants, scrubbers, flotation, gravity, magnetic separators, casting, refractory, blasting, grinding among others.

The Federation has inspired India to tap into the country's vast mineral wealth opportunities and gain a sense of understanding of the limitless opportunities that exist for expansion and collaboration within Artisanal and small scale mining operations as the country is speeding up the ease of doing business and creating reforms to reduce the cost of doing business which will encourage successful engagement and re-engagement with the international community.

Zimbabwe has a huge and highly diversified mineral resource base dominated by prominent geological features, the country has huge mineral potential characterized by about 60 economic minerals whose commercial profitability has been proven.

The partnership is a fulfilment of the organisation and government vision to enhance and capacitate artisanal and small scale miners

Zim keen to speed exploitation as coal, oil and gas exploration risk widens



The pace to which current coal, oil, and gas projects are moving is evidence that government is keen to see speedy exploitation of reserves as the country could be at risk as the world is eager to stop direct funding of the minerals' exploration as it plans to phase out fossil fuel, Deputy Minister of Mines and Mining Development Hon Polite Kambamura has said.

Rudairo Mapuranga

Recently South Africa's Nedbank has announced that it will stop direct funding of new oil and gas exploration as pressure from environmental groups to stop funding fossil fuel-based projects widens, fossil fuels are considered as a major risk to global plans to tackle climate change.

The Deputy Minister said the extraction of these resources was moving at a large scale

as the government was releasing mining claims held for speculative purposes under the "use it or lose it" policy.

The government according to the Minister was developing a coal policy that will facilitate the exploration of coal bed methane gas.



Deputy Minister of Mines P Kambamura

"Current coal projects that are on course and the pace with which they are moving is evidence that government is keen to see speedy exploitation of coal reserves. Coal ground held for speculation is being released for consideration by serious investors who will explore, develop and extract the resource within set timelines and conditions. The government is also developing a Coal Policy which will facilitate the exploitation of Coal Bed Methane gas," Deputy Minister Kambamura said. Last month seven European countries vowed to halt the support of fossil-fuel projects abroad joining the United States and other European countries in stopping funding for energy infrastructure projects in developing countries that depend on coal, gas, and oil. This ban has been viewed by experts as a gesture with nothing or very little to do to reduce the world's carbon emissions.



Hon Edmond Mkaratigwa

Africa as a whole due to lack of modern infrastructure accounts for less than 4 per cent of annual global carbon emissions. The fossil-fuel infrastructure that already exists in Africa is carbon-intensive save for a few countries like South Africa, Egypt, Tunisia, and a few.

According to the Parliamentary Portfolio Committee on Mines and Mining Development Chairperson Hon Edmond Mkaratigwa, it was important for the government of Zimbabwe to consider developing new and cleaner technologies at the same time speeding the extraction of the resources the country already has so that it can benefit.

"It's an interesting reality that we are faced with as Zimbabwe and many other developing countries as the energy net is closing

in. In the case you have referred to, what we need is a pragmatic two-pronged approach in which we locally invest in developing new and cleaner technologies as we also draw benefits from investments we already have as time still permits," Mkaratigwa said. Hon Mkaratigwa said it was of importance for the government to consider other ways of doing business by prioritizing local research, investments and infrastructure development since time is not on the side of Zimbabwe to fully utilise her resources in a way that will fully benefit her.

"What we may need is thinking outside the box relative to resource mobilisation and not dependent on traditional lines of credit alone, if we have to survive. Time is limited and if we do it the normal way, we may lose on both ends and if that happens, it will even be more expensive for us as a country.

"In that context that will definitely affect Zimbabwe and we can only speed our preparedness for that time bomb by resourcing the processes including through related local research and infrastructure development, otherwise this will set back our development. Whereas the 24 years have been set, considering the nature of mining projects, in reality, we may only have around 15 years of beneficial use of those resources as many other investments are needed before we finally fully draw meaningful benefits," he said.

Zimbabwe has been urged to embrace renewable energy sources that give it cheaper and reliable energy as well as mitigating climate change. The country is in the process to install solar plants as it attempts to move from fossil fuels.

However, several coal, oil, and gas projects are underway with the famous Muarabani oil and gas project which has made it to the list of this year's Top Five oil and gas wildcat drilling compiled by leading global energy price, research and analysis site, OilPrice.com.

This project brings optimism as this will make the country energy self-sufficient, create employment, grow the economy and bring huge downstream benefits.

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Industrial Minerals and their Potential Contribution to the Resuscitation of the Zimbabwean Economy

By Lyman Mlambo, Chairman of the Institute of Mining Research

Industrial minerals are non-metallic minerals that are mainly used as raw materials in the industry, for example, chemical, fabrication and construction industries. As building materials, they are characterized by the following attributes:

- (i) they are geologically abundant and more uniformly distributed in the earth's crust than metals;
 - (ii) they need little processing; and
 - (iv) many are normally supplied and used in large quantities wherever they are used;
 - (v) they easily substitute for each other in use (especially building materials); and
 - (vi) they have low values per unit quantity or volume compared to metals, especially precious metals.
- Examples of industrial minerals found in Zimbabwe include phosphates, magnesite, asbestos, limestone, graphite, and feldspar .

The characteristics of industrial minerals are in stark contrast to those of precious metals such as gold, platinum-group-metals (PGMs), and silver; base metals such as copper, nickel, tantalite, iron ore, chromium, lithium, lead, zinc, tin; light metals such as titanium, magnesium and aluminium; iron and steel alloys such as manganese, molybdenum, cobalt, chromium, nickel and tungsten ; and fuel metals such as uranium and thorium . Metals are less abundant, less uniform in terms of distribution in the earth's crust, are costly to explore, mine and process, and are easily recyclable.

The most commonly extracted industrial minerals in Zimbabwe include phosphate, limestone, graphite, asbestos, feldspar and magnesite . Other industrial minerals include quartz, clays, gypsum, kaolin, perlite, talc, andalusite, kyanite, muscovite, etc. Industrial minerals occur in various places

throughout the country's 10 provinces. The table below gives the most common industrial minerals, areas where they occur, estimated reserves and qualities (grades). From columns 2-4 of the table, it is clear that the country's occurrences and endowment of industrial minerals are very significant.



Industrial Mineral	Occurrence in Zimbabwe	Estimated Potential Reserves	Estimated average resource grade
Limestone	Zvishavane, Umzingwane, Shurugwi, Shamva, Rushinga, Nyanga, Lupane, Marondera, Makoni, Mutasa, Makonde, Hurungwe, Gutu, Gwanda, Mberengwa, Mazowe, Mudzi, Murehwa, Muzarabani, Mwenezi, etc. (many areas)	Cement manufacture and agriculture lime quality available; scarce is quality for ferrochrome industry.	>80% calcium carbonate common.
Phosphate	Buhera	97m tons	13% Phos. Pentoxide
Asbestos	Zvishavane, Mashava	>42m tons (for only 2 mines). Zimbabwe has the	Good quality

		bulk(iest) known world's resources of high quality.	
Graphite	Karoi-Hurungwe, Hwange	1.2m tons	Carbon content of 22.80%
Feldspar	Harare	Large deposit	
Magnesite	Kadoma	Large reserves	
Black Granite	Mutoko, Murewa, Mt. Darwin.	Ubiquitous in North-East of the country.	Of rare quality and great dOcor, which is well noted internationally.

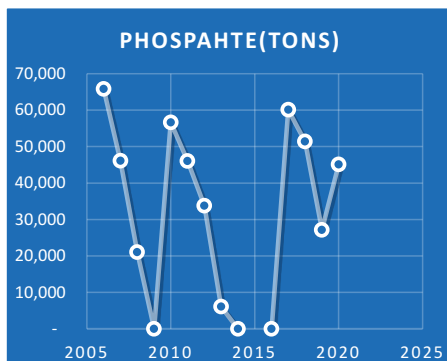
The only producer of phosphate in Zimbabwe is Dorowa Minerals Limited mine in Buhera District of Manicaland Province . Limestone has recently been produced by Sternblick Mine in Harare, Coleen Bawn Mine in Gwanda, Dunkerry Mine in Bindura, Earlyworm Mine and Mbebi Mine in Mazowe, of which Coleen Bawn Mine is operating, Dunkerry Mine is under resuscitation while the other three are not operating. Feldspar used to be produced at Mistress Mine in Harare whose operations have ceased. There are three asbestos mines in the country Shabanie Mine in Zvishavane, and Gaths Mine and King Mine in Mashava. These mines used to be the lifeblood of the

respective small towns during their operational days; however, the Zvishavane Mine is not operating, while the other two are undergoing dewatering (resuscitation) after a long time of non-operation. Magnesite is being produced by Kadoma magnesite Mine in Kadoma, while graphite is being produced by Lynx Mine in Chinhoyi.

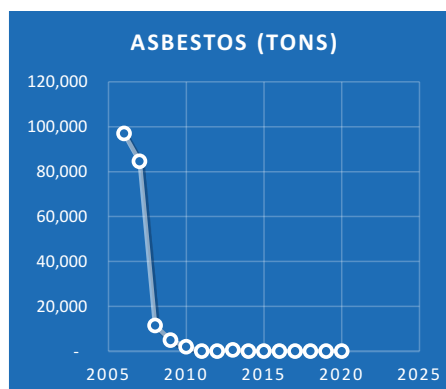
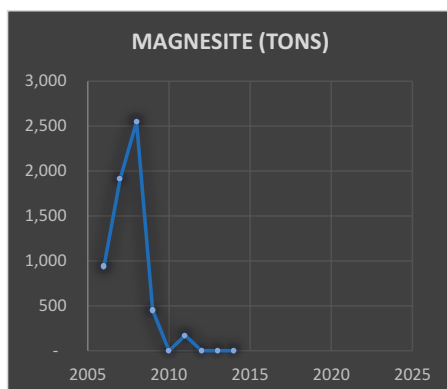
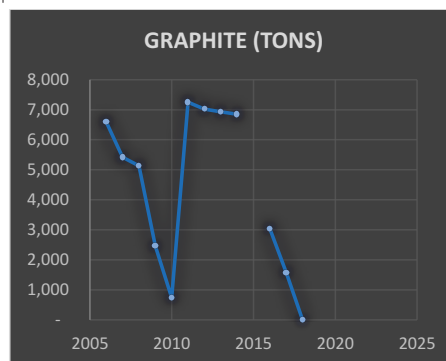




The Chamber of Mines of Zimbabwe reports production figures for asbestos, graphite, magnesite, and phosphate, among other minerals. The graphs below show the production trends for the four industrial minerals from 2006 to 2020 (where gaps exist for phosphate, graphite and magnesite, the figures could not be obtained). With the exception of phosphate, the production of the other three minerals has been on a very clear downward trend. This downward trend is reflective of most industrial minerals in the country. We can



for phosphate is explained by the fact that Dorowa Minerals Ltd increased capacity utilization on the back of a US\$5 million facility from the Reserve Bank of Zimbabwe. Several factors explain why industrial minerals have recently not been explored and extracted significantly in Zimbabwe. Most of these factors are linked to mainly three characteristics of these minerals. They are geologically common and uniformly distributed in the earth's crust, which implies that they tend to occur in most countries, thereby limiting their international demand facing a particular country like Zimbabwe. They are also low-unit-value products and yet very costly in terms of transportation because of their bulkiness. They, therefore, are not very attractive products for international investors relative to other mineral types. Their demand would normally be anchored on the existence of a large and vibrant domestic industrial base – construction,



note that phosphate production, having declined continuously from a 2010 sub-peak of almost 57,000 tons down to zero tons, suddenly rose after 2016 and has since then fluctuated at reasonably high levels albeit on a slight downward trend. The good story

manufacturing and chemical industries. Zimbabwe's industry has been declining since the late 1990s thereby making the production of industrial minerals less viable. For example, the depressed agricultural

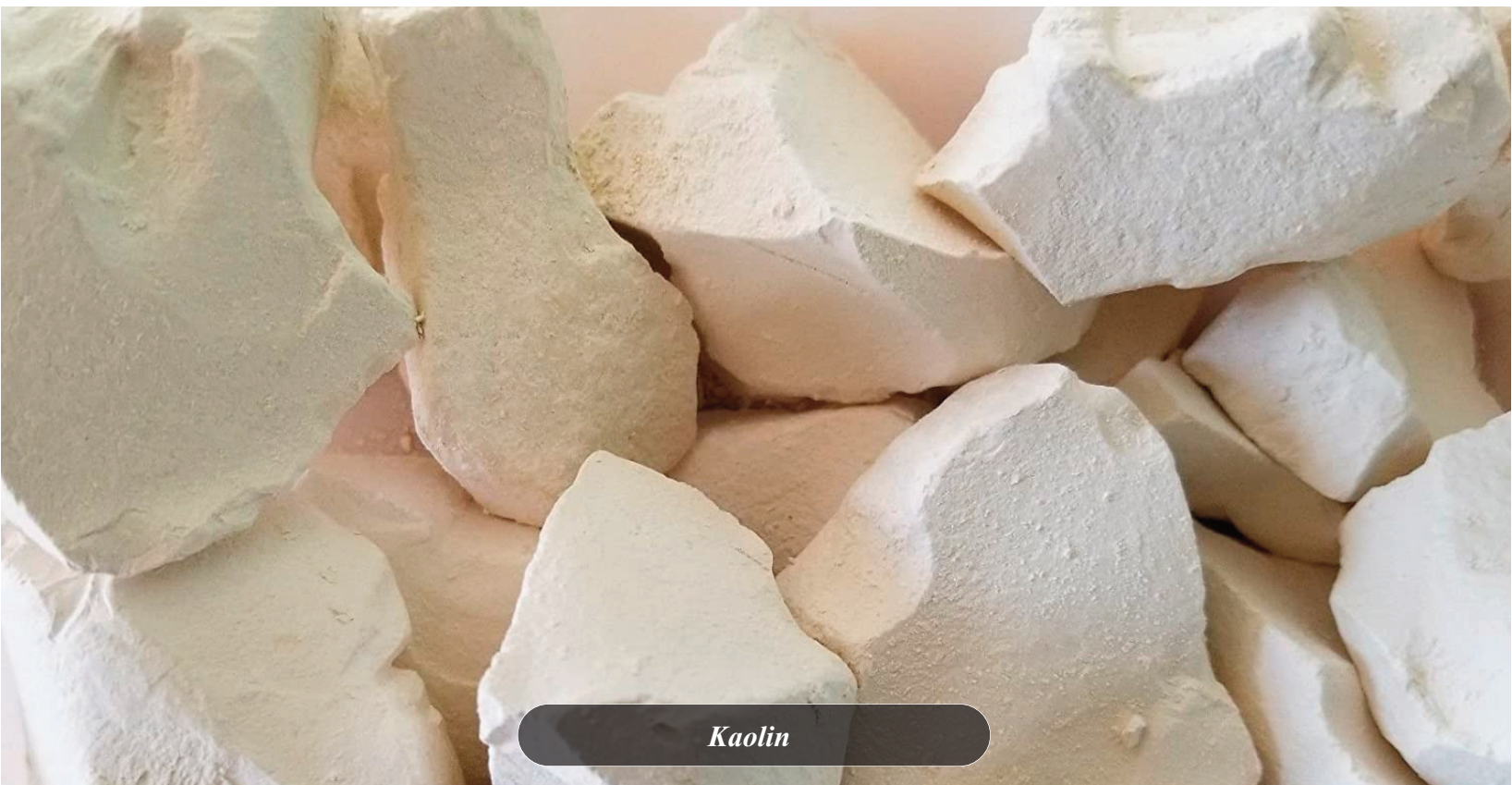
sector in the country occasioned by a chaotic land reform programme has reduced local demand for limestone as input into production of agricultural lime, while the slowdown of the construction industry has also seen the demand for limestone in cement manufacturing going down.



However, the importance of industrial minerals to the development and industrialization of a country is undoubted, which is why they are termed 'industrial' minerals.

They make the construction of roads, bridges, dams, common buildings, industrial complexes, railway facilities, airports, and the manufacture of various chemicals like fertilizers, et cetera possible. Kennedy Magomo (2014) enumerated the many applications of industrial minerals such as in the manufacture of abrasives, absorbents, agricultural cement, ceramics, glass, paint, pigments, flame retardants, refractories, electronics, and in processes like foundry, oil well drilling, and filtration. Therefore, the potential for these minerals to contribute to the resuscitation of the comatose economy of Zimbabwe, in particular the achievement of the US\$12 billion mining industry by 2023 and the upper middle-income status by 2030, is huge.





Kaolin

Industrial minerals have a greater edge to develop local linkages, both downstream and upstream (production linkages), than other minerals, given that they are mainly for use of local industry. They are therefore critical, even strategic, in the transformation of the Zimbabwean economy as envisaged by the Africa Mining Vision. Firstly, they are inputs into various processes and manufacture of a wide range of industrial products (without industrial minerals Zimbabwe will not have a viable industry again).

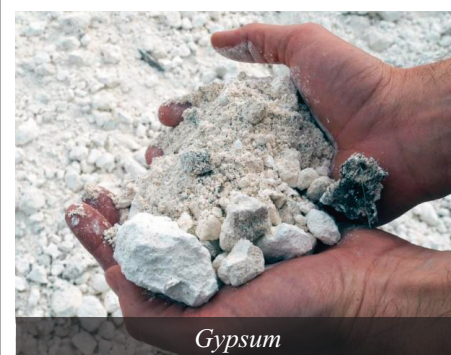
Secondly, their development and production create the much-needed employment and also demand for various other goods and services in the local economy, which tends to assist development of small-medium enterprises supplying various implements and technical services required. Their extraction processes are also characterized by low set-up costs because of the simplicity of the processes (mining and processing). Thus, in summary, a focus on the production of industrial minerals has the clear potential to resuscitate the Zimbabwean industry directly (those using the minerals to produce end-use products) and indirectly (those

supplying goods and services to facilitate their production).

The spin-offs from industrial mineral production include enhanced domestic resource mobilization through an expanded tax base, resuscitation and optimal utilization of dormant infrastructures such as railway lines, power, water, communication and logistics. These infrastructure facilities will have multiplier effects on the rest of the economy as they can be used by other economic activities such as agriculture, forestry, logging, horticulture and tourism. With the industrial minerals being bulk, their supply chain is not as susceptible to illicit financial flows as are the other minerals such as precious metals and precious stones. While many of the industrial minerals are suited for domestic industrial use, several can be exported, such as phosphate (with the by-product magnetite), gypsum, vermiculite and kaolin.

There is, therefore, a need for the country to prioritize the production of industrial minerals through various measures such as improving infrastructure, providing tax incentives to

both primary producers and industries that locally absorb these minerals into their industrial processes, for example in the production of tiles, tissue paper, toothpaste, glass, and general foundry. There is also a need to direct more effort into exploration and evaluation of industrial mineral deposits in the country so that the country can match production plans for these minerals with the industrial development needs of the country. The finance side needs to be addressed, where the Reserve Bank can provide facilities to producing and dormant mines, the same way it did to Dorowa Minerals Limited, in order to increase capacity utilization levels in the sub-sector. A greater focus on these minerals will make the US\$12 billion mining industry target clearly achievable given the simplicity and low cost of starting operations in the sub-sector.



Gypsum

Chinese monopoly upsets chrome prices



The government has been called to intervene in the chrome sector against the Chinese monopoly on the pricing of the mineral as miners continue to lobby for the metal to attract its true value.

Anerudo Mapuranga

The chrome sector growth continues to be undermined by poor prices offered by buyers which miners have labelled predatory and parasitic pricing of the commodity.

The miners are calling the government through the Minerals Marketing Corporation of Zimbabwe (MMCZ) to bring in buyers from other countries as a way to naturally rebalance and stabilizing pricing at the same time stopping aggressively low pricing tactics.

A total of 31 523 tonnes of High Carbon Ferrochrome valued at USD 30.630 Million was sold during the period January to February 2021 being an increase of 45.385 and 108.76 per cent in volume terms and value terms.

Local production continued on an upward trajectory largely in response to the bullish

market, however, some small producers were yet to resume production due to predatory buying of the commodity.

A total of 195,851.97 tonnes of high carbon ferrochrome valued at USD129.48 million was sold during the period January to December 2020 compared to the same period last year when 360,497.39 Mt valued at USD 278.38 million was sold.

This represents a decline of 53% in terms of value which can be attributable to softening of prices during the year 2020.

Furthermore, a total of 752,075.05 tonnes of chrome ore and concentrates valued at USD54.2 million were exported in 2020, compared to 715,523.60 tonnes valued at USD91.7 million exported in 2019. This represents a 5 per cent increase in terms of volume and a 40 per cent decrease in terms of value. This is attributed to the softening demand for chrome ore and ferrochrome due to the COVID-19 pandemic resulting in the fall in prices.

A total of 5,195.96 tonnes of Steel valued at USD 2.865 Million were sold during the period January to December 2020 compared to the

same period last year when 3,039.56 Mt valued at USD 1.935 Million were sold. This represents an increase of 71 per cent and 48 per cent in terms of volume and value respectively.

A total of 3,466.00 tonnes of Iron valued at USD 658,850.00 was sold during the period January to December 2020 compared to the same period last year when 3,610.00 Mt valued at USD 798,150.00 were sold. This represents a decline of 4 per cent and 17 per cent in terms of volume and value respectively. The Covid-19 induced lockdowns across the globe led to the softening of prices of iron and steel in 2020.

Zimbabwe has the second-largest high-grade chromium deposits in the world, behind South Africa, with reserves of around 10 billion tonnes with high-grade ore. However, for the past years, the country has failed to produce a million tonne of the metal per annum preferring chrome from South Africa which is in constant supply.

According to the International Chromium Development Association, Zimbabwe produced just 866 000 tonnes of chrome ore in 2019, accounting for only 2.5% of global output. China is the biggest consumer of chrome in the world as well as the top stainless-steel producer globally importing over 11 billion tonnes per annum with Zimbabwe contributing less than 6 per cent of the total imports.

Although the country is targeting to transform its mining industry to a US\$12 billion sector by 2023, the sector currently generates about US\$2 billion per annum, with chrome exports contributing US\$15 million.

Formalisation and the use of mercury in gold processing



Sharon Tsuru

Mercury is one of the top ten dangerous chemicals. According to the World Health Organisation, its effects on the nervous, digestive, immune, and respiratory systems as well as the kidneys, skin and eyes have been proven to be fatal.

By Sharon Tsuru

Its use is banned in more than one hundred and fifteen countries in the world and that list includes more than fifty countries in Africa. However, the Zimbabwe small scale mining sector which produces more than half of the nation's bullion has the majority of these miners using mercury to recover gold. While countries like Peru, China and Mexico among others are profiteering from the production of this element, its high time Zimbabweans realized that mercury is doing more harm than good. It is sabotaging the development of the mining sector subsequently limiting economic growth.

The use of mercury is "purported" to have been banned in Zimbabwe. There are reports indicating that Zimbabwe has ratified the Minamata Convention banning the use of mercury in mining and regulatory measures for its release from industrial equipment like

boilers, incinerators and power stations among others. It is sad to note that the use of mercury is still common and that the metal is very easily accessible to anyone who wants it. How mercury finds its way into the country is an untold tale that has corruption inscribed all over it. The government needs to implement policies that will force people to stop using it because it affects even people who are not using it firsthand.



Reference can be made to the public health incident that occurred in Minamata, Japan, between 1932 and 1968, where a factory producing acetic acid discarded waste which included high amounts of methylmercury into the Minamata Bay that sustained the livelihood of local residents who, for a long time did not realize the fish were contaminated with mercury. It caused a disease that affected approximately fifty thousand people and 2000 cases of Minamata disease were officially documented. The disease causes brain

damage, paralysis, incoherent speech and delirium. If mercury continues to be used it places the whole nation at risk.

Continued use of the element can be attributed to many factors that include lack of knowledge of alternative measures to use, lack of resources/capital to invest in machinery, scarcity of water in mining environments and general resistance for change among others.

The density of Au can be manipulated to recover it from gangue using centrifugal vessels like the Knelson concentrator or shaking tables. The diamagnetic characteristics of gold can also make it recoverable using magnets. Further purification can be done by acid washing and smelting using borax as a flux.





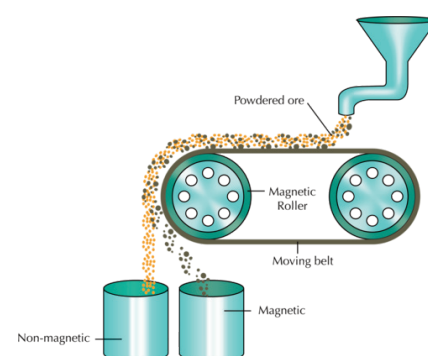
That being said, the government has a huge responsibility to enforce policies that will subsidize the use of mercury as well as promote the small scale mining sector by providing either machinery or loans to help the miners and sponsoring seminars where miners are taught of other means of gold extraction. Encouragement of local engineering entities manufacturing equipment will improve the mining industry considering we have the resources and the knowledge required. It will also aid beneficiation of other minerals like iron, chrome, copper etc as well as value addition. This would boost the economy way more than the illegal importation of mercury. What makes it worse is that no tax is collected by ZIMRA on mercury sales because its sale is not formalized though it is not also outrightly prohibited.

Besides polluting the environment, the use of mercury inhibits efforts to formalize the small scale mining sector. Due to its density, large quantities of “quicksilver” can be sold, transported and used in concealed operations that can be very difficult to monitor. While sodium cyanide is hazardous to health and the environment, of essence is to note that the designs of the circuits in which it is used make it easy for the Environmental management agency to

monitor and well as the revenue authorities to track payments of taxes and royalties since the operations would be too big to hide. It has the potential to promote gold leakages to the black market as well since gold produced in most of these operations cannot be accounted for hence the nation at large will continue to suffer and the small scale miner will forever be called “Mukorokoza”.

Cyanide, which is a strong lixiviant for gold, is an equally strong lixiviant for mercury. According to Sharpe (1), simple and complex cyanides of mercury are limited to the oxidation state of two and dissolve as the $\text{Hg}(\text{CN})_2$ and $\text{Hg}(\text{CN})_4^{2-}$ complexes of mercury. 200-500ppm of mercury is left as residue in the ore after amalgamation is done hindering the recovery rate of the cyanidation process. This means that more cyanide will be needed to leach the ore. It would be better if miners would just crush their ore to the required degree, use density separation techniques to recover free gold then leach using cyanide, a process that has a higher recovery rate compared to amalgamation with mercury.

While one may argue that many people are sustaining their livelihoods through the sale of mercury, significant consideration should be made to the fact that if mercury is



completely eliminated, mines will be mechanized and the mining machinery making industry will improve thus creating employment.

In short, the use of mercury in the Zimbabwean small scale gold mining industry is to a great extent limiting the growth of the industry in terms of formalizing mining activities, payment of taxes and environmental management subscriptions, accountability of gold produced as well as inhibiting the mechanization process of the industry. Mineral beneficiation has a great potential of uplifting the economy of Zimbabwe especially if the government promotes local machinery and equipment manufacturing companies. Zimbabwe has various raw materials in abundance.

More-so, on those two legs we stand, balance and walk



Mining in Zimbabwe is mainly comprised of Large Scale as well as Small Scale and Artisanal.

By Edmond Mkaratigwa & Albert Maipisi

The country set the US\$12 billion Mining Industry target achievable by 2023. This target is achievable through collective and integrated efforts underscored by the principle of leaving no one behind. Introspecting our practice in this sector, empirical evidence should not confirm that some are indeed left behind. The speed with which the country is moving in promoting Large Scale Mining should comparably and equitably reflect progress among the Small Scale and Artisanal Miners too. None should be left behind for the sake of the other because the two complement each other towards the overall Mining Sector target.

In reality, the attraction towards promoting the greater in magnitude is always high but the main target Zimbabwe is chasing is sustainably increased output. Whosoever contributes to the achievement of the target has to be equally promoted. Different

programmes for the different mineral production categories in the country should be appropriately targeted. A lot of negatives have been witnessed against the Small Scale and Artisanal Miners' domains and many key solutions are already on cards locally and to a greater extent throughout Africa. Even so, there is disquiet and impatience among those who belong to this category of miners. The shared assumption is that they are neglected while their bigger cousins are prioritized yet they are equally important and more-so, on those two legs we stand, balance and walk towards the Mining target and the broader national vision.

In Zimbabwe, fewer policy framework enablers are targeting the Small Scale and Artisanal Miners. There are however many success stories locally and globally, where this group of miners has been adequately supported through economic and legal enablers. The merits of this category are that it is comparably made up of less economically sophisticated personalities

who are mainly local in origin and loyal to the government policies and legal frameworks. This is not to discredit the contributions vastly being made by the Large-Scale Miners but, wealth distribution can be improved where the Small Scale and Artisanal Miners are adequately supported because their benefits easily cascade to the last mile towards the poorest from where most of them emerge from.

This group of miners is unique and have particular characteristics variant from those of Large-Scale Miners. They are dependent on rudimentary tools and are usually the forerunners of Large-Scale Miners, through their explorative acumen. Areas they endure to mine are mostly indicatively resourceful. These miners are further easily displaced and lack in terms of significant capital to improve their mining capacities. Many foreign miners and lesser locals have sought fortunes in Zimbabwe from zero and they have made it.

The speed with which the country is moving in promoting Large Scale Mining should comparably and equitably reflect progress among the Small Scale and Artisanal Miners too

Through reinvestment of their proceeds, they have very inspiring stories to tell yet some Small-Scale and Artisanal Miners have started with nothing and are almost equally close to their starting point at which they mostly lacked. There is minimum graduation to being larger and definitely, there are many of their dreams not seeing the light of the day.

Particular institutions and frameworks exist but they are not inclusive enough to boost potential among the Small-Scale and Artisanal Miners. Legally, this group of miners is bunched together with Large Scale Miners in terms of operational requirements yet they have limited competitive advantage while institutionally, in existing administrative structures, the Small-Scale Miners are not satisfactorily represented except through their associations. It was going to be more beneficial to create a desk or administrative portfolio responsible for identifying and addressing the challenges faced by this category of miners within the existing framework and establishment. Their challenges are many and need a targeting approach to ensure that Zimbabwe in addition to meeting and exceeding its 2023 mining target, further

grooms substantial local wealth creators from among those aspiring, brave and hardworking mining citizens.

Primary issues are being addressed and the main one is the acquisition and operationalization of the Cadastre System. Dealing with this primary issue has to be followed by a raft of measures towards activation of the levers that should strengthen the Small-Scale and Artisanal Mining sector in Zimbabwe. These miners have to leapfrog from being subsistence miners to owners of real wealth. Moving from the subsistence mindset has to be created first at institutional level where the carrot can be dangled to awaken people's initiation, resolve and sight of possibilities. Investment in such institutional frameworks and indication of going that direction stirs creativity and positive channelling of such energies.

There is a general increase in interest in investing at home even by the diasporans but most of them can only start from being Small-Scale and Artisanal Miners. They eye the bigness but they need a starting point that should facilitate their entry and growth. Security of mining tenure and title is key and

as the Cadastre System and farmer-miner relations murky issues are being addressed, that should be followed by immediate take-off of promotional commitments towards growing the long-time junior investor. The aim has never been of making Small-Scale Miners permanently small but to have them metamorphosize with time to have them progressively and significantly continue to enlarge the existing capacity of contribution as is being made by the Large Scale Miners in national and global economic participation and development. The focus should be more so, on those two legs through which we stand, balance and walk ourselves out of the poverty traps most of the citizens are into; achievable by focusing on both local and foreign sources of capital, capacities, capabilities and goodwill.

[Edmond Mkaratigwa (Ph.D. Candidate of Energy, Innovation and Sustainable Technologies and Chairperson of the Parliamentary Portfolio Committee on Mines and Mining Development) & Albert Maipisi (Ph.D. in Disaster Management and Public Administration)] - Published ideas are entirely views of authors and cannot be attributed to their current positions.



Masvingo Corruption saga Parly eyes Ministry's action



Hon E Mkaratigwa Mines and Mining Development Parliamentary Portfolio Committee Chairman

The Parliamentary Committee on Mines and Mining Development has promised to keep the Ministry at task regarding the corruption allegations raised against the Masvingo Mines office.

Rudairo Mapuranga

Speaking to Mining Zimbabwe the committee chairperson Hon Edmond Mkaratigwa said the portfolio was going to warrant that the Ministry take action to safeguard justice.

"The Ministry of Mines is taking action and if it is not, then they have reneged on their duties and obligations. As the Portfolio Committee on Mines and Mining Development, our ears and eyes are open expecting justice to take its course where it is not seen or felt to be upheld.

In addition to the story as the precursor, the Committee will go dealer to ensure that such matters are handled in the best justiciable way.

Administrative justice should always prevail in all government departments in Zimbabwe as such behaviours have the propensity to

tarnish our image if not pursued in toto." Hon Mkaratigwa said.

Mkaratigwa said the government was intolerant to corruption as such miners should be protected by the laws of the country. He said his committee was going to ensure that justice is served that laws and policies may not be just on paper without implementation.

"Miners are protected through existing institutional structures, processes and systems which they should always access throughout the country otherwise a right not claimed is as good as inexistent. The best protection of all rights is in existing legal and administrative frameworks including the judiciary and parliament.



**Ministry of Mines
& Mining Development**

It's already known that our government is intolerant to corruption and the first to come have to be served first except in justifiable

moments, within the principles of justice, equality, and equity, public interest, respect of property rights, and security of the same rights.

The government is actually advancing the upholding of such principles. As Parliament, after establishing the veracity of that case, which we are already doing, we will advance justice." Mkaratigwa said.

The Masvingo Provincial Mining office has been hit by corruption allegations with the Mining Engineering, Geology, and Survey departments sucked in what could be a criminal cartel meant to defraud miners of their mining rights.

It is alleged that TSMG Mining syndicate sought pegging services to peg a chrome claim in Chegwite through Masvingo Mines Geologist named Malunga. Upon finding that the area was chrome rich TSMG Mining syndicate claims Malunga allegedly informed his colleagues to craft stories and excuses meant to deprive the TSMG of their right to own the claim legally.

It is said that the syndicate (TSMG) was initially advised that the area was free to peg, however after submission of notification and registration fee through the help of an approved Prospector named Tinashe (whose work was a reference from Engineer Claud Shonhai) the syndicate was told that the area was under Save conservative when the syndicate questioned the truth of the Ministry's position, goal posts were shifted that the area was under ZMDC.



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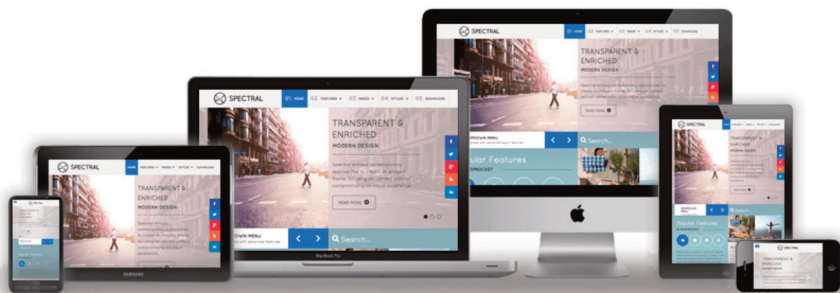
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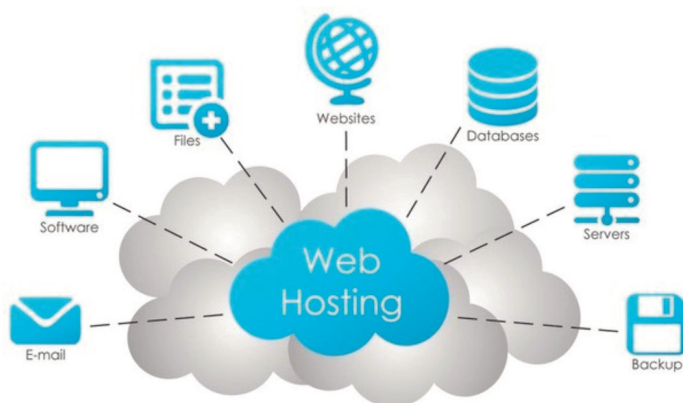


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