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BENEATH THE SURFACE

COVID-19 AND BEYOND

Current challenges in an industry that plans 20 years in advance.

THE GREAT UNKNOWN.

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CURRENT CHALLENGES IN AN INDUSTRY THAT PLANS 20 YEARS IN ADVANCE.

The great unknown.

The new world has begun, or has it? Whilst we are in this period of uncertainty everyone is speculating what will become of the world as we knew it. How will humankind react to this COVID 19 virus and how will business deal with this new world. Mines will as always need to pre-empt the requirements of the world, 10 to 25 years into the future to provide the resources required.

The shutdown of non-essential and deep-level mines will have given the industry time to consider how to not only deal with the start-up of operations but also how to prepare for a similar Black Swan type event in the future.

The mining industry has always been at the forefront of preparing for unusual and out-of-the-ordinary events as they generally operate outside of major centres and new supplies could take days' or even weeks to be available.

So what is the current market outlook?

The market for resources will continue to be depressed for the 2020 year as the long lasting impact of Covid-19 has decimated global growth. The continued geo-political issues that plagued 2019 with US-China trade war will likely continue in 2020 as it is anticipated that a ramp-up in protectionism rhetoric will occur in the run up to the US elections later in 2020.

With the world has seemingly stopped anywhere, for a period of about 3 weeks to 2 months with lockdowns, in some form or another in all major countries. China had locked down their manufacturing sector since end of January and is only starting up factories in early April 2020. This has resulted in worldwide harbours reporting significant declines in volumes of between 50% and 75% in this period. Factory activity in China plunged to its worst level on record in February 2020.

These factors will all contribute to a slow start-up for the mining community once the lockdowns are over and no immediate bounce in demand.

So what will change if any and how to react to that challenge

The immediate future will challenge the industry to ensure the virus does not spread through their communities. The majority of mines and their employees operate in very close proximity of their surrounding communities and should the virus spread through these communities, the impact could be devastating. Not only will the loss of lives potential be catastrophic but the psychological impact could cause mistrust between the community and the industry.

Thus the challenge is how does an industry that requires a big workforce that operate in small enclosed spaces operate in a Covid-19 world. Each mine will have to determine what works best as there will be no one-size fits all solution for the industry. The solutions will range from taking additional personal protective equipment to regular testing and smaller shift-work forces. These all come at a cost, be it added production costs or less production output resulting in low profitability. These cost pressures along with depressed market prices will be difficult for the industry to deal with.

In the medium to long term the industry will push harder than before for mechanised mining and a reduction in workforce. This is a capital intensive process but considering how the majority of the industry has worked to reduce debt and shore up their cash reserves and balance sheets, now may be the perfect opportunity to upscale the mechanisation of the mines.

The industry will have to rethink their modus operandi. The safety of the workforce and community will need to come first. This will include how rotational staff is transported to and from mines all across the world, from Chile to Africa and Australia.

Greater emphasis on the mechanised mines, remote drilling and blasting will be the order of the day. These will be challenging times for the industry. The major miners will adapt and has the balance sheets to afford the short term change requirement in the environment, the marginal and junior miners will be where jobs will be lost and companies become financially distressed. If they can get the balance right between workforce optimisation and mechanisation will the mines ultimately become more profitable in the future, which will bring opportunities of a different kind.

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TECHNOLOGY: ENHANCING MINING SAFETY AND PRODUCTIVITY DURING AND AFTER COVID-19

Technology remains one of our most potent tools to fight Covid-19 and maintain business productivity. Investing in these tools will, have value beyond the current lockdown

Mining is among the first sectors to open under Level 4 lockdown restrictions. Unlike some other industries, mines cannot operate remotely and require consistent labour inputs at scale to be productive. While the Minerals Council South Africa has released essential guidance for keeping workers safe during Covid-19, we should not underestimate the role that technology can play in augmenting mining safety and efficiency during this time and in the future. Technology is not new to mining, especially in issues of safety and productivity, but has been a contentious discussion given the need to balance these issues with those of job preservation.

Rather than changing the need for this debate, Covid-19 has highlighted the urgency of striking a real balance between the number of people on-site at any one time and the need to maintain safety and hygiene control. The need to mine has not changed, but how we mine has.

Here's what some of the technology can do.

Drones: Enhancing safety and accuracy

Manually measuring mining stock is time-consuming and prone to error. Drones, by contrast, can fly over a stockpile and take images to understand its length, breadth and depth. This data is then run through our algorithm to measure stock volumes based on these inputs. All of this can be done remotely, allowing assessors and inventory controllers to work from home and reduce the risk of spread.

Drones can also be used to assess excavation risks by flying over specific areas of a mine and tracking geological and structural changes over time. This data is then fed into a machine learning algorithm, which can predict those areas at risk of collapse. This allows mines to proactively protect workers by moving them so that productivity can be sustained without unnecessary risks.

Internet of Things: More information means more efficiency

Covid-19 has also raised the critical role technology plays in everyday operations, as such using less-tangible concepts like the Internet of Things (IoT) to allow businesses to embed send-and-receive technology into everyday objects. The new pandemic reality means that mines should consider attaching IoT-enabled sensors with unique identifier codes to components of plant equipment to monitor their longevity. This allows them to predict wear and tear and anticipate problems before they happen. Parts and labour can then be scheduled and planned ahead of time in line with Covid-19 requirements rather than in response to a critical breakdown.

This kind of maintenance function highlights the benefits of creating a digital twin of a mining operation, where a physical mine is spatially mapped onto a digital platform, giving insights into a mine's efficiency and operating conditions. As an information-rich resource, it allows mines to both predict and adjust their operations to enhance safety and efficiency. A mine could then, for instance, use virtual reality to simulate a blast environment and gauge the best places for explosives so as to minimise hazards and lost time injuries or LTIs. During Covid-19, digital twinning would also allow a mine to manage its health protocols and where/how it allocates work placements in advance, ensuring that safe distancing is followed.

This is not limited to physical work only. Robotic process automation can be used to automate many labour-intensive, high-volume back-office processes like invoice reminders, goods receipts and purchase orders so employees can focus on higher-value tasks.

A new era of mining

Embracing some of the technological step-changes in mining has value far beyond the current pandemic. Even as mines enforce reasonable social precautions in a physical labour environment, technology can augment these precautions and also improve productivity, predictive scenario planning, supply chain management and reporting over the longer term.

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IS NOW THE TIME TO INVEST IN SOUTH AFRICAN GOLD MINING?

Gold price may be booming but it's unlikely to attract any investment into South Africa's gold mines

Gold has historically been a safe haven in times of uncertainty. With economies and stock markets around the world crashing as a result of the ongoing COVID-19 pandemic, investors have once again flocked to buy gold, with demand resulting in gold reaching a 7 year high of >$1,700/oz in recent days.

Gold's latest run is spurred by cash injections to mitigate the severe impact of COVID- 19 on the global economy. Governments worldwide are signing off on massive stimulus measures on top of the near-zero interest rates and quantitative easing in the hopes of jumpstarting businesses.

One would think that the high gold price would encourage more investment into South African gold mines, however market price is only one consideration and there are other factors that investors take into account and may, in fact, place more emphasis on.

The history of gold in South Africa goes back to 1873 when the first large-scale production began when alluvial deposits were discovered at Pilgrim's Rest, followed shortly by gold discovery in Witwatersrand in 1884. The discovery of gold in the late 19th century gave rise to the development of the city of Johannesburg, Egoli, or the City of Gold and for many years, South Africa was the world's primary gold producer.

This is no longer the case and South Africa's gold output has continued to decline for several decades. From peak production of around 1,000t in 1970, the nation's gold output fell to 130t in 2018, with South Africa now only accounting for c.4% of the world's gold production.

This decline, however, is not a result of a depletion in reserves and one would be wrong to assume that South Africa is running out of gold. In fact, over 50% of all gold reserves are found in South Africa, with the Witwatersrand Basin remaining the largest gold resource in the world. The decline in production over the decades has been driven by a combination of closure, maturing assets and industrial strife which has created an inhospitable operating environment. Investors, and especially foreign investors, are not attracted to South Africa's mining industry. The industry has its challenges and many have stated that it's simply too complicated to invest in South Africa's mining industry – from the stringent BEE requirements to the constant changes the Government can, and does, make to the Mining Charter, resulting in significant uncertainty for investors. And it goes without saying that industrial action by the workforce, ultimately leading in higher wage costs year on year, and load-shedding by Eskom also play part in deterring investors.

And it's not just new investment that is being deterred. Even the leading gold miners headquartered in South Africa are now focusing elsewhere, with Anglo Gold Ashanti recently selling the last of its South African mining assets and exiting the South African market to focus on "looking offshore for less risky investments". That being said, it is not all bad news, with Australian company Theta Gold Mines so far injecting c. R1 billion into establishing a mine in the historical gold mining Mpumalanga town of Pilgrim's Rest. Theta Gold Mines' venture is a re-awakening of the giant gold field where South Africa's first gold rush started in 1873, with a plan which could see 6 million ounces mined over the next 20+ years.

It's clear that with new technology many of the old mines in South Africa could potentially be re-opened and it could be viable to mine deeper to access the plentiful reserves that are still deep below the ground. However, this would require significant capital investment and the key is whether South Africa can attract investment, especially when the rest of Africa is becoming more accessible and less risky to invest in the mining sector.

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A DIFFICULT MONTH FOR NATURAL RESOURCES COMPANIES

The combination of the oil price war triggered by the underlying, ongoing dispute between Russia and Saudi Arabia and pressures on commodity prices from the global spread of coronavirus are creating an unprecedented international crisis that unsettles the Natural Resources sector – not just the oil and gas companies but mining companies too.

Some oil traders expect prices to continue to fall within the next few months. As a result, global oil and gas exploration and production investments are expected to fall considerably. In addition, staffing and supply shortages for key services and the provision of key equipment may delay the delivery of projects further. Conversely, however, with the cancellation of projects due to uncertainty around the availability of funding, any companies which were fully funded or had cash on balance sheet, may see an opportunity to secure better rates in the services market and bring projects on line under budget.

Gold companies may benefit from an increased commodity price as a result of people looking to securitise their funds into the classic, historic security that is gold. If you look at the current trends in the gold price the commodity has already started to tick back up but commentators are now starting to note that gold prices may rally further. Traditionally investing in gold has seen many as the way to ride out the peaks and troughs of the sector space.

Regarding the impact on commodity miners, those mining for battery metals and gemstones may have a different angle on the impact of COVID-19 than just pricing considerations. A lot of mines are located in remote, relatively undeveloped areas of the world where medical supplies and access to hospitals are severely limited. Mining can also be a labour intensive business with many workers either coming from local areas or flying in and flying out on shift patterns. With the speed of the spread of the virus many mining companies are swiftly taking measures to lock down their operations and increase their onsite medical support. Likewise, restrictions on travel is hampering the fly in and fly out workers and operational changes are under review already.

The capital markets will make up their own mind about the sector in time but the shorter term requirement for access to funds, for some, will become even more of a challenge than it already was.

To mitigate risk factors facing the sector, natural resources companies will need to cut costs, re-forecast capital projects over the shorter term and likely longer term too, implement revisions to logistics, review their contracts for the application of provisions covering extraordinary circumstances and supply chain operational provisions, and, to determine when to speak to lenders / debt providers to deal with marginal or breached covenants – not just about the short term but about the longer term too.

A number of governments, all around the world, have enacted stimulus packages to support businesses of all natures during the pandemic.

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PANDEMIC PAY INSIGHTS FOR MINING & METALS COMPANIES

While the impact of Coronavirus is still playing out globally, many businesses around the world are well under-way with implementing their business continuity programs.

In response, BDO REMSMART have put together Pandemic Pay Insights, an initiative that brings together our collaborative mining and metals subscribers and extended network to capture rapid knowledge sharing and technical approaches to human resource planning and remuneration strategies during the COVID-19 response.

Summary of COVID-19 response practices reported to 30 March 2020

1. General Trends

- While the majority of organisations have a pandemic plan, more than 20% had not yet initiated a response, this is significant
- Of the organisations with a response plan, over 50% made it companywide, with around 10% initiating a COVID-19 task force and 5% an HR plan
- Response plans were widely being communicated via email, intranet or formal training
- Over 90% of organisations initiated new workplace hygiene standards including: hand sanitiser stations, increased availability of hygiene supplies, no hand-shaking, temperature screening, additional cleaning and education. On FIFO sites, staggered meal times, closure of wet mess halls and minimising face to face meetings were common tactics.
- 20% of organisations were still allowing non-essential visitors to site
- 31% of organisations reported having on-site medical facilities, capable of isolating and treating infected patients

2. Remuneration and workforce trends

- An equal proportion of the workforce were reported to have the opportunity to work from home as those who didn't
- Potential approaches to remunerating employees during a lockdown were mixed, with more than a third of businesses (40%) planning to pay pre-Corona wages, and the majority either planning for a mix of pay and leave, or other measures including staggered salary reductions, stand downs and redundancies.
- For on-site employees, the majority of organisations were preparing for reduced allowances to keep more employees in a job

Pandemic Pay Strategies

The current instability of our global economy and speed of change locally is going to continue, if not increase over the next few months, and as such, businesses will be forced to introduce new pandemic pay measures to minimise loss of workforce during this time.

The following considerations could support greater retention and wealth distribution tactics if implemented together, or in part:

Reduce Fixed Remuneration

- Mutually agreed pay reductions
- Consider available JobKeeper grants (in Australia)

Equity in Lieu of Fixed Pay

- Incentives can be shared with individuals who helped create it
- Possible workforce wide approach

Variable Pay vs. Value Creation

- Consider incentives for efficiencies, working smarter, saving costs etc.

Reduction in Hours

- An alternative to redundancies • Communicate potential shortened hours to retain staff

Longer Rostered Swings

- Longer swings could protect against spread of infection and show loyalty

Reduced Allowances

- As an alternative to terminating staff

To further assist with processing and strategising workforce crisis approaches, we've developed the following steps to consider.

Pandemic Workforce Prototype:

1 Instil Ethical Protocols

Protect Employees
minimise spread of the virus

Show Stewardship
take timely action using the data at hand, at the time

Build Trust
regular, transparent communication goes a long way

Equity
be honest providing service in an equitable manner, including the special needs, cultural values and religious beliefs of a diverse workforce

Reciprocity
when individuals are asked to perform duties for the benefit of the company, ensure their acts are appropriately recognised

2 Stop Unecessary Movement

Events
cancel both internal and external gatherings and remodel to a virtual meeting

Social distancing
enforce social distancing measures when coming together is essential

Remote working
if working from home is possible, enable your teams to do so now

FIFO
consider changing roster patterns for greater risk reduction

3 Up The Training

Clarity
focus on distribution of the latest information, dedicate time to communicating expectations and changes direct to an employee's inbox or phone

On-site resources
where people are still required to attend work, lift awareness through visual posters and materials

Etiquette
develop site specific policies and online training around hygiene practices that make sense for your business, don't just redistribute generic information

4 Be Holistic

Mental Health
recognise there will be significant emotional strain experienced at all levels of the workforce, put initiatives in place to improve connectedness and support

Empowering HR
give human resource managers a leadership seat to drive decision-making and information sharing

Employee Assistance Programs
remind employees of the immediate counselling support available where an EAP program exists

* Survey responses were taken from Australian based mining and metals companies between March 15th and March 28th.

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