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GUEST COMMENT

IAN R. COLES
(HEAD OF GLOBAL MINING)
MAYER BROWN



Some commentators predict that by 2035, 50% of all cars sold in the world will be electric. General Motors has also announced that it will stop producing carbon fuelled cars by that year. Each of those electric vehicles (EVs) will need a battery, a significantly more substantial and complex unit than the internal combustion engine model. While battery technology remains a dynamically changing proposition, a single car lithium-ion battery pack might typically contain: 8 kg of lithium; 35 kg of nickel; 20 kg of manganese; and 14 kg of cobalt.

The amount of these metals required to enable the projected production of EVs implies a startling increase to the current global production profile. Lithium production, for example, would need to increase seven fold between 2020 and

2030. While there is no shortage of lithium in the ground, that increased requirement implies an enormous investment in new projects. On the other hand, resources are concentrated.

More than 50% of lithium resources are in Chile. 80% of graphite resources – also required for batteries – are in China, Brazil, and Turkey. For cobalt, the principal issue is the concentration of both global production and resource in the Democratic Republic of Congo (DRC), more than 50% in each case.

While researchers are looking at ways to produce a battery which does not need cobalt (likewise nickel, which has also recently increased significantly in price), none of the alternatives look particularly close. Diversification is occurring in the countries where exploration activity is taking place. In the end, however, nothing can be done to move minerals in the ground to a different jurisdiction.

While recycling will no doubt be an important factor, it cannot in any way meaningfully contribute over the next 5 – 10 years. In addition, with the exception of cobalt content, recycling the metals in a battery is not technically easy or financially efficient – at present it is probably cheaper to mine lithium than to recycle it. Recycling capability is also currently concentrated in China, Japan, and South Korea.

EVs are obviously intended as part of the solution to global warming and related environmental issues, however this is by no means a one way street. Mining has an environmental impact and the enhanced demand arising from the EV phenomenon will shine a light on that impact. Sourcing lithium from salars in Chile and elsewhere in South America raises issues concerning the depletion of groundwater in an already arid environment. Child labour concerns in the DRC have always surrounded cobalt production. Environmental, social, and governance considerations in supply chains have become increasingly important, with guidelines – such as those published by the Organisation for Economic Co-Operation and Development – now being followed in the EU. Conflict minerals are also now increasingly regulated.

The polymetallic and other nodules lying on the ocean floor are rich in the metals required for batteries (in addition to those already mentioned, they could also be a significant source of rare earths). However, with the exception of diamonds, nobody has to date managed to exploit this resource on a commercially successful basis.

Minerals in the ground are frequently geographically dislocated from where they are required. Possibly the most extreme example is with rare earths, where something in the region of 80% of usable material comes from China. On the contrary, the US produces nothing, and is 100% reliant on imports of metallurgical grade bauxite for the production of aluminium. Governments, having woken up to the supply chain problems with these strategic minerals, have been writing policies to address these issues at quite a clip.

The US Department of the Interior published its initial list of strategic minerals in 2018. With the exception of copper, the list included virtually all the battery metals. The UK and the European Commission have similar committees and/or action plans. In the end though, while these initiatives may focus the mind on the issue at hand, finding a solution is more problematic. While something can be done to encourage further exploitation of minerals in the ground, nothing can be done to change their location. **GMR**

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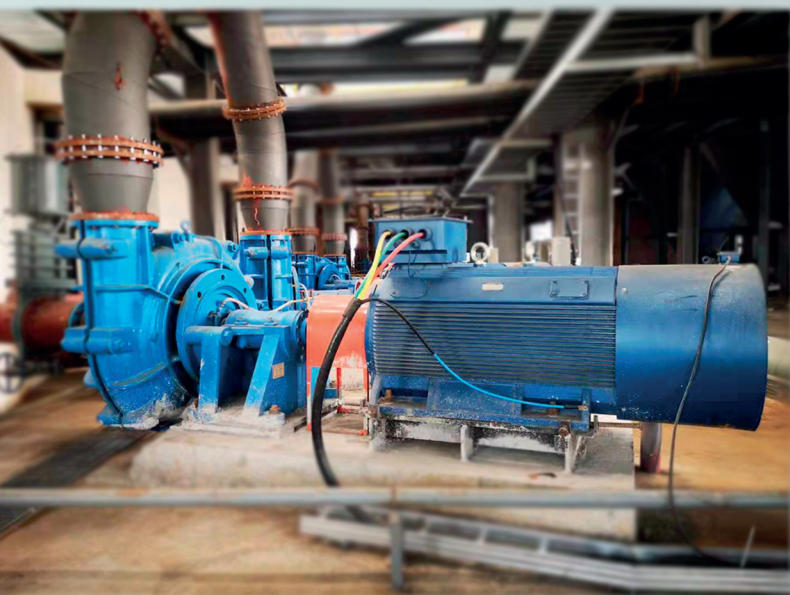
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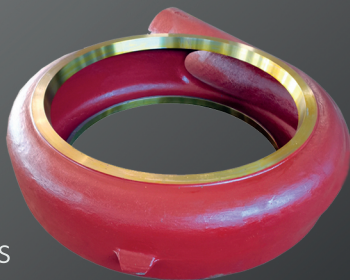
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WORLD NEWS

CANADA Artemis awards mining fleet supply for Blackwater Project

Following a competitive bid process, Artemis Gold Inc. has executed binding agreements with Finning (Canada), a division of Finning International Inc., for the supply of a primary and ancillary mining fleet for the company's Blackwater Gold Project in Central British Columbia, Canada. The company has also concurrently executed a credit-approved commitment letter for an equipment lease facility with Caterpillar Financial Services Ltd associated with the primary and ancillary mining fleet, as well as an agreement with Caterpillar Inc. regarding the supply of a future zero-emission haul fleet.

Under the supply agreements, Finning has secured equipment pricing for the primary fleet until 31 December 2024, subject to minor index and foreign exchange adjustments. Finning has further agreed to delivery dates for the primary and ancillary fleet in order to support mine development for Blackwater. The supply agreements secure the supply of equipment, as well as the

supply of parts and labour, the latter of which will support the equipment availability guarantees provided by Finning.

The credit-approved equipment lease facility with Cat Financial provides for up to CAN\$140 million in equipment financing on terms consistent with the assumptions contained within the company's 2021 feasibility study technical report – entitled 'Blackwater Gold Project NI 43-101 Technical Report on Updated Feasibility Study', dated 10 September 2021. The equipment lease facility remains subject to customary conditions precedent, including the finalisation of the master lease agreement and related documents.

Through the agreement with Caterpillar, the company has the option to place orders for Caterpillar's zero-emissions haul trucks, currently under development, for shipments beginning in 2029. The fleet transition signifies a key milestone of the project and will substantially reduce the carbon footprint of Blackwater's operations.

AUSTRALIA OZ Minerals announces option to acquire Kalkaroo project

OZ Minerals has signed a conditional binding terms sheet with Havilah Resources Ltd setting out the basis of a new strategic relationship in the prospective Curnamona Province in South Australia, including the option to acquire the Kalkaroo project.

The Kalkaroo project consists of a mineral resource estimate of 245 million t at 0.45% copper and 0.39 g/t gold, announced by Havilah in 2018, with Havilah having a large exploration tenement holding in the Curnamona Province.

The terms sheet provides OZ Minerals with a study period of up to 18 months (option and alliance period) to evaluate the potential of the Kalkaroo project and the option to acquire 100% of it for a purchase price of AUS\$205 million. OZ Minerals may elect to not exercise the Kalkaroo option at any time during the option and alliance period, provided 5000 m have been drilled or a shortfall payment (metres not drilled multiplied by AUS\$400) is paid to Havilah. In addition, the agreement provides a deferred contingent consideration of AUS\$65 million, upon a 30% uplift in Kalkaroo's measured

and indicated resource estimate, as well as a copper price linked contingent payment in each year of production up to a maximum cumulative amount of AUS\$135 million.

Under the strategic alliance, OZ Minerals will pay Havilah AUS\$1 million per month during the option and alliance period, with 50% of the payments directed towards Havilah identifying and advancing nearby exploration opportunities within the Curnamona Province. Including the monthly payment, OZ Minerals expects to spend up to AUS\$76 million during the option and alliance period to undertake studies and for exploration activities at the Kalkaroo project and on alliance activities.

OZ Minerals will have certain rights to accelerate exploration in discoveries of copper dominant mineralisation in the alliance area and to participate in developing any related projects.

Funding options for any potential acquisition of the Kalkaroo project will be evaluated by OZ Minerals during the option and alliance period.



WORLD NEWS

DIARY DATES

PDAC 2022 Convention
13 – 15 & 28 – 29 June 2022
Toronto, Canada & Online
www.pdac.ca/convention

Euro Mine Expo 2022
14 – 16 June 2022
Skellefteå, Sweden
www.euromineexpo.com

Electra Mining Africa
05 – 09 September 2022
Johannesburg, South Africa
www.electramining.co.za

International Fair EXPO KATOWICE 2022
06 – 09 September 2022
Katowice, Poland
www.expo-katowice.com

Mining Indonesia
14 – 17 September 2022
Jakarta, Indonesia
www.mining-indonesia.com

Coaltrans Asia 2022
18 – 20 September 2022
Bali, Indonesia
<https://conferences.coaltrans.com/asia-2022>

CONEXPO-CON/AGG 2023
14 – 18 March 2023
Las Vegas, USA
www.conexpoconagg.com/conexpo-conagg-construction-trade-show

To stay informed about the status of industry events and any potential cancellations of events due to COVID-19, visit *Global Mining Review's* events page: www.globalminingreview.com/events

AUSTRALIA BUMA Australia signs contract with Bowen Coking Coal

PT Delta Dunia Makmur Tbk has announced that its subsidiary, PT Bukit Makmur Mandiri Utama (BUMA), through its Australian subsidiary, BUMA Australia Pty Ltd, will immediately commence new mining services for Bowen Coking Coal's Broadmeadow East metallurgical coal project. The new Broadmeadow East contract is valued at AUS\$320 million, over a three-year term, with the option to extend for a further year.

The project is located 25 km northeast of the township of Moranbah, within the Central Bowen Basin in Queensland. BUMA Australia has successfully operated in the immediate vicinity for 14 years at the BHP Billiton and Mitsubishi Alliance's (BMA) Goonyella project. The project is expected to produce 4.8 million tpy of ROM coal over four years.

This new contract further strengthens BUMA Australia's presence in the Bowen Basin, with >10 years of operating history at BMA's Blackwater metallurgical coal mine and 14 years of operating history at BMA's Goonyella metallurgical coal mine. On 22 February 2022, BUMA Australia announced that it had secured a new AUS\$550 million, five-year contract extension at BMA's Blackwater mine.

BRAZIL Horizonte Minerals breaks ground at Araguaia Nickel Project

Horizonte Minerals Plc, a nickel development company with assets in Brazil, has officially commenced construction and broken ground at its flagship Araguaia Nickel Project.

A ground breaking ceremony was held on 18 May 2022, marking the transition of the project from development to the construction phase. This Tier 1 project has a 24-month construction timeframe with Stage 1 (first line) target production of 14 500 tpy of nickel. Araguaia will be a large high-grade scalable, low-cost producer, with a long mine life and will be a low-carbon source of ferronickel.

The company has awarded the majority of the key long-lead equipment contracts including, the award of the furnace, earthworks contract, the EPCM contract, and now broken ground. A significant amount of progress has been made in the four months since project approval, focused around early works and site preparation ahead of the main mobilisation of the earthwork's contractor, basic and detailed engineering and the tender and award of a number of key process equipment packages.

As at the end of April 2022, the company had awarded contracts totalling US\$204 million with a further US\$66 million of contracts to be awarded imminently, on budget. In total this represents approximately 50% of the pre-contingency project direct CAPEX.



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WORLD NEWS

CHINA Epiroc to relocate operations from Japan to China

Epiroc, a leading productivity and sustainability partner for the mining and infrastructure industries, will relocate the production and development of drill rigs for surface construction from Japan to its facility in Nanjing, China. The production facility in Yokohama, Japan, has been sold and will be closed. Epiroc's customer centre will be relocated in the Yokohama area to keep supporting

customers in Japan with product and application know-how as well as to provide overhauls, rebuilds, and upgrades of their existing fleets.

In Nanjing, the manufacturing will benefit from larger-scale production, sourcing and logistics infrastructure, which will increase efficiency. The Yokohama production facility will be closed by mid-2023.

MONGOLIA Thiess executes Oyu Tolgoi contract extension

Thiess has recently executed a contract extension at the Oyu Tolgoi (OT) copper mine in Mongolia through the company's longstanding joint venture, Thiess Khishig Arvin (TKAJV).

The Thiess team of 120, including 75 new hires, has safely and successfully completed almost 50% of the planned extension works. This includes building a 6.4 km concrete conveyor decline (6 m-wide and 150 mm thick); change/locker house with a capacity of 100 lockers for

personnel to work for future projects; and an 80-man refuge chamber at UG stockpile 24 with compressed air system, painting whitewash on wall and epoxy resin on floor.

In 2021, the team delivered a significant milestone at the boxcut and decline project, achieving the final breakthrough in the conveyor decline tunnel, connecting the C2S conveyor to surface tunnel to the existing OT underground mine.

This was underpinned by a safety achievement of 3 million-man hours with no lost time injuries.

CANADA Critical Elements secures lithium project rehabilitation approval

Critical Elements Lithium Corp. has announced that the Québec Minister of Energy and Natural Resources has approved its rehabilitation and restoration plan concerning the Rose Lithium-Tantalum Mining Project.

The approval of the rehabilitation and restoration plan is a prerequisite to the granting of the mining lease that will be necessary to move forward with the project. The rehabilitation and restoration plan contains, in particular, the description of the rehabilitation and restoration work relating to the project, as well as a detailed estimate of the expected costs to be incurred for completing the work.

Now that the rehabilitation and restoration plan is approved, the corporation must furnish a guarantee covering the anticipated cost of completing the work required under the rehabilitation and restoration plan, in accordance with the schedule of payments established pursuant to applicable laws.

With the approval of the plan, the company is making progress in the overall approval process for the project.

In August 2021, Critical Elements announced that the Federal Minister of Environment and Climate Change had rendered a favourable decision in respect of the proposed Rose project. In a decision statement, which included the conditions to be complied with by the company, the Minister confirmed that the project is not likely to cause significant adverse environmental effects when mitigation measures are considered.

The final remaining step in the project's approval is the completion of the provincial permitting process, which runs parallel to the federal process. Pursuant to the James Bay and Northern Quebec Agreement, the provincial environmental assessment is conducted jointly by the Cree Nation Government and the Government of Quebec under the Environmental and Social Impact Review Committee (COMEX).

The provincial assessment is well advanced and has undergone several rounds of questions from COMEX that have been answered by Critical Elements.

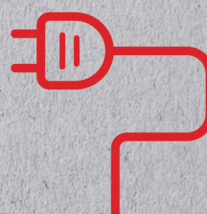
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ADOPTING ADVANCED TECHNOLOGY IN SOUTH AMERICA

Nikhil Kaitwade, Future Market Insights, India, explains how the adoption of advanced technology and mining processes is helping to accelerate mining activities in South America.

Latin America holds one of the largest mineral reserves in the world: Brazil is the fifth largest mineral producer in the world, Peru offers the highest quality silver and zinc, and Suriname is one of the world's largest producers of bauxite. Owing to such hefty reserves, the South American mining industry is highly profitable and generates a lot of revenue annually. In order to stabilise the post-pandemic market, various mining companies in the region have adopted a variety of innovative concepts, such as smart mining and surface mining.

The adoption of such innovative and modern mining techniques will allow them to enter the next generation of mining when used in conjunction with modern technology. According to Future Market Insights' report on

Latin America's Mining Equipment Market,¹ easy access to cheap raw materials, lower mining taxes, and a constant influx of foreign investment into the industry could push the Latin American mining equipment market to a new level.

This article answers some important questions, and includes techniques that can be used to improve mining operations in the area, such as how to take an environmentally friendly mining approach by using surface mining.

Use of Internet of Things to bolster smart mining in South America

Mining is a risky profession. Various health hazards to miners include traditional problems with hearing to



complete hearing loss caused by excessive noise, respiratory disease caused by coal dust inhalation, and chemical hazards. Furthermore, miners live in tough conditions due to unpredictable climates and surface temperatures.

Mining companies are adopting new technologies that are cost effective, highly efficient, and not harmful to human life. South American mining companies are eyeing Internet of Things (IoT) powered technologies that can resolve the aforementioned issues and improve business and production efficiency.

These companies are promoting smart mining by developing IoT powered sensors and wearables such as smart vests, smart helmets, or smart caps that can monitor employees' health remotely, allowing supervisors to reduce the risk of fatigue-related injuries among machine operators and truck drivers. In an event of emergency, supervisors can track and monitor workers' location and condition through smartwatches and helmets.

As gas leaks and toxic contaminants pose serious health risks, IoT sensors are installed in hazardous location.

These sensors trigger the alarms in case it detects such leaks in the mine. For instance, a closed side setting (CSS) measurement device called 'C-Gap', has recently been introduced in South America through San Cristobal in Santiago, Chile. A C-Gap system allows operators to measure the closed side setting of gyratory, jaw and cone crushers, which improves safety standards, productivity, and costs.

Using this system, closed side setting can be measured on hoses varying in length from 3 – 30 m with CSSs between 7 – 220 mm. This device eliminates the need to continuously use lead weights or any other rudimentary methods, and have built-in sensors to detect the body temperature and pulse rate of the miners.

Surface mining – an environmentally-friendly approach

Traditional mining operations are harmful to the environment due to its carbon emission. Erosion, loss of biodiversity, and soil, groundwater, and surface water pollution are among its adverse effects on the environment.

In comparison to other mining methods, surface mining can provide superior flexibility, safety, recovery, grade control, and environmental conditions, according to Future Market Insights' report.² Surface mining, as the name suggests, is done on the surface in contrast to closed cast mining. Surface mining is a recently accepted technique launched in South America using surface miner drums, cutting bits, and portable drilling units.

One such example of surface mining is located in Cachapoal, Chile. The MVC Copper Project is an opencast copper mining project that conducts large scale surface mining in South America. The owner of the project, Amerigo Resources, has scheduled to operate it through 2037. According to estimates, the mine produced 71.037 million t of run-of-mine (ROM) in 2020, and approximately 25.224 million t of copper.

In the past, the mining area had to be blasted, which caused a lot of pollution. However, with surface miner drums, cutting bits and similar instruments, only the necessary portions can be dug without emitting pollutants. Therefore, mining will only be possible within the deposit area; these operations require no drilling, blasting, storing of explosives, or downtime.

Another mining method gaining traction is helicopters carrying drilling units. Surface mining in conjunction with drilling operation is more efficient, less polluting, and sustainable. However, drilling is the preferred method of mining in especially remote locations. For example, Orezone Drilling's Atlas Copco CS 1000 diamond core drilling units are designed to be transported by helicopter or by truck. Heli Portable drilling units can be broken down into seven parts so they can be moved, set up, and produced quickly in remote areas.

South American companies adopting modern mining equipment

South American mining companies use a wide variety of equipment with innovative technology. Mining testers are used by different companies to test parameters such as heat, noise, raw materials, and other substances found during mining. By doing so, workers can avoid direct contact with materials and avoid accidents.

The main purpose of mining lubricants is to maintain mining equipment and prevent breakdowns. Not only does it reduce the cost of equipment replacement, it also helps prevent accidents at the mining site.

Another widely used device in South America is grinder and crusher equipment. These devices enable sand making, grinding and crushing. With the introduction of these devices, the concept from mining to mill and semi-self-sustaining milling (SAG) became widespread in the region. Their demand is also increasing due to an increase in mining and trading of various precious metals, including gold and silver, as these devices are much cheaper and more efficient to buy.

A new generation of crushers called 'The QI442 Impactor' was recently launched by Sandvik. The CI621 Prizec Impactor included in this new product improves safety and serviceability during maintenance. The crusher is also equipped with a new rotor position

and locking system, as well as a new hammer lock wedge, ensuring quick removal and installation. Therefore, this product makes the best use of worn parts and maintains tighter adjustments during operation.

Efficient conveyor solutions for mining

The mining industry uses conveyor systems to move products ranging from bolts to pallets in manufacturing and distribution facilities. With industrialisation and the desire to automate processes in mining operations, new conveyor solutions have become necessary in this sector.

Metso Outotec has received an order for a heavy-duty conveyor system for a mine in South America. This delivery consists of overland conveyors with high reliability, including a single flight conveyor of up to 2 km. It has a delivery capacity of over 9000 tph, running at speeds up to 6 m/sec. Minerals' 1Q21 orders received show an order value of approximately €10 million.

With Metso Outotec's overland conveyor solutions, opencast and underground operations are equipped with reliable and cost-effective material transportation. The company's patented Energy Saving Idlers mean long-distance conveyors can reduce belt tension, save significant energy, and extend the life of rollers, enabling a lower cost of maintenance over the equipment's life and a more sustainable operation.

Additionally, the company provides post-installation services and maintenance, as well as a full range of belts, accessories, and components for a variety of applications. Metso Outotec conveyors are constructed from high-quality materials and are based on a decade of engineering experience and extensive testing.

Conclusion

The mining sector has always been the driving force of South America's economies. Some of the largest producers of base and precious metals are based in South America.

The region is believed to have the capacity to double or triple current levels of output, particularly in base metals, with continued exploration. Moreover, the country enjoys macroeconomic and political stability, with the mining industry accounting for nearly 60% of the country's exports.

Governments are seeking foreign investment in the mining industry to develop their geological resources. A considerable amount of revenue and jobs are generated by the mining industry for the state. With all these developments on the way and lenient government regulations pertaining to mineral exploration in the region, the mining industry in South America is sure to prosper more and reach new levels in the future. **GMR**

References

1. Future Market Insights, *Latin American Mining Equipment Market Overview*, <https://www.futuremarketinsights.com/reports/latin-america-mining-equipments-market>
2. Future Market Insights, *Surface Mining Market Overview*, <https://www.futuremarketinsights.com/reports/global-surface-mining-market>



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