stepping out of the political shadow

Peru's recent instability is not stopping mining investment

As Peruvian families celebrated Christmas together last December, there was a certain level of trepidation as to what may happen in the new year. Alberto Fujimori’s pardon by President Pedro Pablo Kuczynski (PPK) left many of Fujimori’s critics in shock after months of political unrest that led to the impeachment process of PPK, which the president narrowly avoided. 2018 arrived with uncertainty but the status quo nervously returned. A new and, so far, stable cabinet has coincided with rising metal prices, increased metal export revenues and further speculation that a new wave of mining projects will begin construction. 2017 represented a year of hope that the mining industry was starting to turn following years of decline. 2018 seems to be confirming that the upcycle has finally arrived.

“After months of political unrest that led to the impeachment process of PPK, which the president narrowly avoided, 2018 arrived with uncertainty but the status quo nervously returned. A new and, so far, stable cabinet has coincided with rising metal prices, increased metal export revenues and further speculation that a new wave of mining projects will begin construction.”

NEW YEAR, NEW PROJECTS?

The Ministry of Energy and Mines has defined five key objectives for 2018. These include making feasible the existing pipeline of projects, some of which have been pending for many years now. Speculation surrounding key potential investments continues to grow: there is expectation that projects like Mina Justa, Quellaveco, Pampa de Pongo and Corani will begin construction over the coming months, although the triggers are yet to be pulled. As an example, Anthony Hawkshaw, president and CEO of Bear Creek Mining, remained cautious regarding Corani’s potential construction schedule: “There is only one chance to build a project correctly. It is wiser to spend additional time and investment now on engineering than to rush ahead. We are being deliberate, thorough and patient to minimize potential risks.”

“The political noise is not affecting the main vectors of the country’s economy. With improved mineral prices, mining companies are embarking on expansions, brownfield explorations and improved productivity projects, and those are certainly going ahead.”

- Victor Gobitz, president, Peruvian Institute of Mining Engineers (IIMP)

As Peruvian families celebrated Christmas together last December, there was a certain level of trepidation as to what may happen in the new year. Alberto Fujimori’s pardon by President Pedro Pablo Kuczynski (PPK) left many of Fujimori’s critics in shock after months of political unrest that led to the impeachment process of PPK, which the president narrowly avoided. 2018 arrived with uncertainty but the status quo nervously returned. A new and, so far, stable cabinet has coincided with rising metal prices, increased metal export revenues and further speculation that a new wave of mining projects will begin construction. 2017 represented a year of hope that the mining industry was starting to turn following years of decline. 2018 seems to be confirming that the upcycle has finally arrived.

“The political noise is not affecting the main vectors of the country’s economy. With improved mineral prices, mining companies are embarking on expansions, brownfield explorations and improved productivity projects, and those are certainly going ahead.”

- Victor Gobitz, president, Peruvian Institute of Mining Engineers (IIMP)
partners in our sustainability projects. We sense that many of our communities want more mining activity.”

To ensure new mining projects can be developed in Peru, mining companies have adapted their engagement with the local populations and many are now doing more to build closer ties. Elsa Atoñes de Mayolo, CEO and general manager at Bear Creek, has made community relations a priority for the Caraní project. “We have been developing skills and business ideas within the community to create long-term benefits. Mines are always temporary and cannot support the community forever, so it is important to guarantee the long-term future of the local populations,” she said.

Meanwhile Luis Rivera, executive VP Americas at Gold Fields, the company running the Cerro Coroña mine, declared: “We are used to working in Cajamarca. It is not the easiest environment, but since we started there has not been much opposition. We hope to working in Cajamarca. It is not the easiest environment, but since we started there has not been much opposition. We hope that, with the election, the political side of things will be more favorable to mining moving forward.”

“Meanwhile Luis Rivera, executive VP Americas at Gold Fields, the company running the Cerro Coroña mine, declared: “We are used to working in Cajamarca. It is not the easiest environment, but since we started there has not been much opposition. We hope that, with the election, the political side of things will be more favorable to mining moving forward.”

Jorge Leon Benavides, leader of the Peru delegation to PDAC at the Canada Peru Chamber of Commerce, shared similar hopes with regard to the upcoming election, particularly in Cajamarca. “In Cajamarca, communities were told that they would receive support for agricultural development, but seven years after the suspension of Conga, that region continues to be one of the poorest areas in the country. Now, many people want mining investment to be back. The regional governor is an anti-mining activist, so whoever replaces him should bring positive change.”

- Anthony Hawkshaw, president and CEO, Bear Creek Mining

“We have to be patient as there is only one chance to build a project correctly. It is wiser to spend additional time and investment now on engineering than to rush ahead. We are being very deliberate, thorough, and patient to minimize potential risks at Corani.”

-GOLD FIELDS

For us, development means going beyond, overcoming the limits and parameters of the industry. Therefore, we are committed to the safety and well-being of our employees. Also, we focus on creating sustainable value by applying good practices that promote the improvement of our neighbors’ quality of life and the protection of our environment.

Buenaventura, 65 years of responsible mining contributing to Peru’s development
Since 2012, Peru has increased its copper production every year and 2017 was no different. After the spectacular increase of 2016, driven by the expansion of Cerro Verde and the addition of MMG’s Las Bambas, output increased by a moderate 3.9% last year, with a total output of 2.45 million tonnes of fine copper. Cerro Verde is still the largest producer of copper with 501,800 mt/y, followed closely by Las Bambas, which achieved its first year of full production with 453,000 mt/y, a 37.5% increase from its 2016 figures. Peru’s third giant copper unit is Antamina, which yielded 439,200 mt/y.

Other mines that produce more than 100,000 mt/y include Glencore’s Antapaccay (206,500 mt/y), Chinalco’s Toromocho (194,700), Southern Copper’s two units (Cuajone at 161,100 mt/y and Toquepala at 145,000 mt/y) and Hudbay Minerals’ Constancia (121,800 mt/y).

Overall, Peru’s copper production continued to close the gap with Chile. The neighboring country saw its red metal output decrease slightly to 5.5 million mt/y. Record monthly production in Chile in December 2017 was not enough to compensate the effects of the strikes at Escondida earlier last year. Following Chile and Peru, China is the third largest copper producer globally with output of approximately 1.9 million mt/y. The Peruvian government has set a goal of increasing copper production by 30% by 2021 to further cement Peru’s position as the second largest producer of copper, globally.

With respect to zinc, Antamina regained top spot in production with a 69% increase in output, representing 442,500 mt/y of zinc. The spectacular change is probably explained by the erratic nature of the geology in skarn deposits, as well as a conscious decision by the company to boost zinc output and take advantage of the current high prices. Antamina’s exceptional performance helped Peru’s overall zinc production increase by more than 10%, to a total of 1.47 million mt/y. Antamina is 33.75%-owned by Glencore, which also recently took a controlling stake in Volcan, Peru’s second largest zinc producer with a 69% increase in output, representing 442,500 mt/y of zinc. The spectacular change is probably explained by the erratic nature of the geology in skarn deposits, as well as a conscious decision by the company to boost zinc output and take advantage of the current high prices. Antamina’s exceptional performance helped Peru’s overall zinc production increase by more than 10%, to a total of 1.47 million mt/y.

China is the third largest copper producer globally with output of approximately 1.9 million mt/y. The Peruvian government has set a goal of increasing copper production by 30% by 2021 to further cement Peru’s position as the second largest producer of copper, globally.

Bambas, which achieved its first year of full production with 453,000 mt/y, a 37.5% increase from its 2016 figures. Peru’s third giant copper unit is Antamina, which yielded 439,200 mt/y.

Other mines that produce more than 100,000 mt/y include Glencore’s Antapaccay (206,500 mt/y), Chinalco’s Toromocho (194,700), Southern Copper’s two units (Cuajone at 161,100 mt/y and Toquepala at 145,000 mt/y) and Hudbay Minerals’ Constancia (121,800 mt/y).

Overall, Peru’s copper production continued to close the gap with Chile. The neighboring country saw its red metal output decrease slightly to 5.5 million mt/y. Record monthly production in Chile in December 2017 was not enough to compensate the effects of the strikes at Escondida earlier last year. Following Chile and Peru, China is the third largest copper producer globally with output of approximately 1.9 million mt/y. The Peruvian government has set a goal of increasing copper production by 30% by 2021 to further cement Peru’s position as the second largest producer of copper, globally.

With respect to zinc, Antamina regained top spot in production with a 69% increase in output, representing 442,500 mt/y of zinc. The spectacular change is probably explained by the erratic nature of the geology in skarn deposits, as well as a conscious decision by the company to boost zinc output and take advantage of the current high prices. Antamina’s exceptional performance helped Peru’s overall zinc production increase by more than 10%, to a total of 1.47 million mt/y. Antamina is 33.75%-owned by Glencore, which also recently took a controlling stake in Volcan, Peru’s second largest zinc producer with a 69% increase in output, representing 442,500 mt/y of zinc. The spectacular change is probably explained by the erratic nature of the geology in skarn deposits, as well as a conscious decision by the company to boost zinc output and take advantage of the current high prices. Antamina’s exceptional performance helped Peru’s overall zinc production increase by more than 10%, to a total of 1.47 million mt/y.

China is the third largest copper producer globally with output of approximately 1.9 million mt/y. The Peruvian government has set a goal of increasing copper production by 30% by 2021 to further cement Peru’s position as the second largest producer of copper, globally.
Global Business Reports | PERU MINING 2018 PRE-RELEASE

**Cerro Corona was scheduled to shut down in 2023. That meant that, from 2018, we would have had to start closure activities, reducing our footprint and our workforce. We made it an urgency to extend the mine life.**

-Luis Rivera, Executive VP Americas, Gold Fields

La Arena and Shahuindo mines; and Gold Fields produced 166,000 oz of gold at Cerro Corona, a medium-sized, highly-profitable mine in Cajamarca that also provides important copper volumes (gold equivalent production is 314,000 oz).

Gold Fields has recently added seven years of mine-life to Cerro Corona, and the mine is now expected to be running until 2030. Gold Fields has recently added seven years of mine-life to Cerro Corona, and the mine is now expected to be running until 2030. Gold Fields has recently added seven years of mine-life to Cerro Corona, and the mine is now expected to be running until 2030.

**La Arena and Shahuindo projects such as resourcing water, constructing pads and building a transmission line are also key. Near-mine and satellite geological deposits in the north corridor of Shahuindo provide us potential targets to extend and maximize value at this operation,** said Phil Dalle, vice-president and managing director of Tahoe Peru.

**“We are developing a project to separate the sulphides from the silicates. This will improve the secondary recovery of the gold that is in the sulphides, and will add to our production from 2019 onwards. We are also looking at an additional project to recover gold from the tailings,” he said.**

Hochschild Mining, traditionally a primary silver producer, has been increasingly leaning towards gold production with the impulse of the Inmaculada mine. Hochschild produced 203,601 oz of gold in Peru last year, and 165,000 of those ounces came from this flagship asset.

**Finally, silver production in Peru also decreased by 1.6%, totaling 188.4 million ounces. Buenaventura is the country’s main gold producer and the largest in Latin America, while it was also the world’s second largest silver producer, only after Mexico.**

**“We are expanding capacity from 7,000 mt/d to between 9,500 mt/d and 10,000 mt/d. This will firmly rank Condostable as the second largest underground mine in Peru. We have stabilized the C1 cost of copper at US$1.55/lb and, with the expansion it can be reduced to US$1.25/lb.”**

-Adolfo Vera, president and CEO, Southern Peaks Mining

**“2018 was a great year for Pallancata as it was very profitable, with the development of the higher-grade Pablo Pisos areas. Although the grade will now fall with the development of the main body, the tonnage will increase and so will production, from 7.5 million oz/y to approximately 9.5 million oz/y,” continued Bustamante, who added that the company’s main focus is on developing its brownfield projects to fill up the spare capacity currently available at the Arcata, Pallancata and Ares plants.**

**Overall, Peru maintains a key position in precious metals mining and development. In 2017, it remained the world’s sixth largest gold producer (and the largest in Latin America), while it was also the world’s second largest silver producer, only after Mexico.”**

**“We are expanding capacity from 7,000 mt/d to between 9,500 mt/d and 10,000 mt/d. This will firmly rank Condostable as the second largest underground mine in Peru. We have stabilized the C1 cost of copper at US$1.55/lb and, with the expansion it can be reduced to US$1.25/lb.”**

-Adolfo Vera, president and CEO, Southern Peaks Mining
“Exploration expenditures in Peru grew by 34% in 2017”

What is the vision of this government for the mining sector?

We have a clear strategy through five objectives, which includes a new one for 2018. Our first is to promote new investment in exploration. Our goal is to increase Peru’s share of the global exploration budget from 6% to 8% by 2021. The second is to facilitate the development of the industry’s project pipeline. New projects this year will represent US$10 billion to US$12 billion investment over the next three to four years and overall there are US$56 billion worth of projects in the pipeline. The third objective is to keep supporting projects that are in operation and are potentially going to expand. For example, our goal for copper is to increase production by 30% by 2021 and keep our position as the second largest copper producer in the world.

The fourth objective is to continue the implementation of our strategy on formalizing mining. In 2017, we formalized 5,000 mines and our goal by 2021 is to increase this to between 50,000 and 60,000. This will cover 90% of the miners that have registered for the formalization process. Finally, our new objective is the remediation of environmental legacies. We want to create one organization to look after the remediation process and there is a clear scheme to distribution and it is the responsibility of the local and regional governments to invest that money correctly. On top of this, this administration introduced the Social Advancement Fund last year, already worth 50 million soles, to prepare the social conditions in areas that have projects at the feasibility stage.

What is the Ministry doing to streamline the permitting process for exploration?

In December 2017, we published a new regulation that will shorten the bureaucratic process in regards to environmental permitting. This will not have an effect on the environmental standards but will increase the efficiency in obtaining an exploration license. We are also increasing our direct contact with investors to attract more investment. Overall exploration expenditures in Peru increased by 34% in 2017 year-on-year, reaching US$500 million.

What projects do you expect to start in 2018?

After the bid for the world-class Michiquillay project, won by Southern, we expect Chivacola to announce Toromocho’s expansion. By the second quarter of the year, Minsur could start building their Mina Justa copper mine. Anglo American’s Quellaveco, Bear Creek’s Corani and Jirachao’s Pampa de Pongo are expected to start this year as well, so we are anticipating the announcement of a new project every other month in 2018. In 2017, we saw an annual increase of 15% in total mining investment to US$49.4 billion, and we are expecting a 20% increase in 2018.

What is the government doing to redirect the tax revenue from mining to the local communities?

50% of all income tax paid by companies is already redirected to the mining regions and local communities through the mining canon. There is a clear scheme to distribution and it is the responsibility of the local and regional governments to invest that money correctly. On top of this, this administration introduced the Social Advancement Fund last year, already worth 50 million soles, to prepare the social conditions in areas that have projects at the feasibility stage.

What is the Ministry of Transport and Communications doing to promote infrastructure development in mining?

The Ministry of Transport and Communications has proposed a number of studies for building railways that includes linking Apurimac, home of Las Llamas, to the coast. All of the government’s proposals for infrastructure will be focused on mines that are already in production. Mines are becoming less remote due to the natural development of the country and this lowers capital costs. In the past, companies would take responsibility for the entire copper but now they are collaborating with third parties to reduce costs.”
Gaining Momentum

Juniors are back to life and Peru offers enormous potential for them

Following the recovery of metal prices in 2017, financing for junior exploration companies has increased and with that, exploration in general. In Peru, one of the Ministry’s key objectives for 2018 is to promote new investment in exploration and increase Peru’s share of the global exploration budget from 6% to 8% by 2021. A key observation from the number of junior exploration companies in Peru is the vast geographical scope they are active in. Spanning all corners, from the tip of Peru near Lake Titicaca, to near Huaraz in the Andean mountains, and the Sechura desert near the Ecuadorian border, exploration companies are seizing the opportunity to explore Peru’s untapped mineral richness.

COPPER

As Peru continues to cement itself as the second largest producer of copper in the world, a number of exploration projects gather pace across the country. Regulus Resources continues to focus on its AntaKori copper project in Cajamarca, northern Peru, located immediately next to the Tantahuatay gold-silver mine owned by Cominco, a joint venture of Southern Copper and Buenaventura. Cominco and Regulus have actually signed an agreement to carry out collaborative exploration in the area, which will certainly benefit the advancement of the AntaKori project. AntaKori has a 43-101 resource of 295 million mt at 0.48% copper, 0.36 g/mt of gold and a little more than 10 g/mt of silver. Regalus’ campaign for 2018 will be approximately 18,000 meters of drilling, and the company has already released the results of six holes. John Black, CEO of Regulus, said: “We have been very pleased with the results, particularly as the drilling was at the southern margin of the previously known mineralization. Although the grade was a little lower than the average, it represented a 400 meter extension to the previously drilled area and provides considerable growth to the project.”

Regulus wants to use the current campaign to update the resource estimate, however John Black warned that it will take more time than that to realize AntaKori’s full potential. “AntaKori is a very large project and we must be patient to fully capture the opportunity. Although it is difficult to predict what will happen with the price of gold, we do know that copper will be in shortage for the foreseeable future and demand will keep increasing. A benefit of higher metal prices is that more capital is available and this will allow us to move the project along more quickly.”

Meanwhile, in the south of the country, Kaizen Discovery has continued to focus on their Pinaya project, located in between Arequipa and Puno. Pinaya, previously explored by AM Gold and Rokmaster Resources, sits in the same belt as Glencore’s Tintaya deposit and presents typical skarn and porphyry copper-gold mineralization. After some delays created by the Peruvian government’s consulta previa process (prior consultation with the local communities), Kaizen’s drill program this year will have two primary components, according to Kaizen’s president and CEO, Tom Peregoodoff: to extend the resource laterally and to explore the potential of some deeper areas. For this, the company
will use Typhoon, a proprietary technology of HPX, Kaizen’s major shareholder. “Typhoon enables the user to penetrate much deeper into the ground. This is especially important in areas where you have resistive cover in the case of Pinaya, a primary focus of application into the ground. This is especially important enabling the user to penetrate much deeper by Kaizen’s partners, Kochu of Japan, who will be earning a 20% participation in the project.” Peregoff said.

Regulus Resources

John Black,
CEO,
Regulus Resources.

Of course such a large project brings significant risk associated to it. Through recent reengineering, the company has reduced the estimated cope of the project to a US$558-million figure, which is still high for a junior company. Anthony Hawkshaw, president and CEO of Bear Creek, said that there is still space for optimization, in aspects such as treatment, processing and metallurgical recovery: “There are areas to save money and initial engineering observations have identified possible cost reductions,” he assured. Bear Creek has recently updated its long-term pricing assumptions to US$14/oz silver and US$1.10/lb zinc. Under the company’s economic studies, the payback at Coras would be three years, but with the current spot prices of zinc, it could be shorter than that. In terms of permitting, the company expects to receive its construction permit and complete the prior consultation process over the second quarter of 2018.

In the zinc space, Tinka Resources updated its NI 43-101 resource estimate for Ayawilca, its flagship project in the department of Pasco, central Peru, which provided a 130% increase in the zinc resource. The new resource consists of 42.7 million mt with 5.6 billion pounds of zinc content (2.5 million mt Zn) as well as some indium, silver and lead. In 2018, Tinka is set to complete a 15,000 meter drilling campaign and will target new areas, including Zone 3 and Chaucha, as well as an extension of Central, South and West Ayawilca. Graham Carman, president and CEO at Tinka Resources said: “This drilling campaign will aim to add more high-grade resources to our portfolio and further improve the economics of the project. In parallel, a detailed metallurgical study will occur in Q2 2018 and then we will complete our preliminary economic assessment (PEA) over the second half of the year.”

Ayawilca also hosts a tin resource, which also increased in the latest 43-101 report of November 2017 for a total of 10.5 million mt containing 145 million lbs Sn. “The tin lies deeper so will probably not be mined from the start, yet we would like to include the tin in our upcoming PEA as the tin realization is very high in terms of grade. We will need to do more metallurgy and see what we can incorporate this year,” Carman said.

Asked about a potential joint venture or an outright sale of the project for investors. Lupaka’s financial position has recently improved with the sale of the Crucero project to GoldMining and the closing of a forward gold sales agreement providing US$7 million in funding for development of Invicta. Will Ansley, CEO of Lupaka Gold, gave more details about the company’s plans: “We intend to operate at an initial 350 mt/d. We have an initial mine plan which outlines...
Engineering and Construction

Providers eagerly await the transition from the studies and the early works to the execution of multi-billion dollar projects

During the downturn, engineering and construction firms had to downsize and alter their approach that had brought much reward during the boom years. In order to survive, firms created synergies between different offices across the Americas, focused more on operations, diversified into new sub-sectors and modified their cost approach to be competitive in the marketplace. As investment returns, engineering companies need to expand again, but the question that remains is by how much.

MINERS IN A RUSH TO ACT?

Paul Murphy, manager for South America at Mining Plus, an Australian consultant, has seen the Peruvian market stabilise this year: “From 2013 through 2016, we observed many companies cutting back on greenfield and brownfield investment, rather electing to simply optimize their current operations. Throughout 2017, there was a distinct change with bigger greenfield and brownfield study scopes (Exploration, PEA, PFS and FS) returning to the market.” As a result of these developments Mining Plus, which has built its office in Peru around a strong base of OPFs in exploration, will undertake an aggressive expansion in 2018 with the aim of doubling their team. When discussing whether he believed companies would rush to drill this year, Murphy said: “The mining cycle is driven by fear and greed. Companies have been fearful and conservative for the past three or four years, and now the sentiment is changing very quickly to one where they are fearful, but in a completely different way. Fearful that if they do not act immediately, they will miss out on this coming cycle of higher commodity prices.”

Meanwhile Alfredo Remy, regional director for Advisory and Business Improvement at Hatch, believes that the cycle of commodity prices is moving in the right direction: “We have good expectations that it will help the industry become more dynamic.”

OPERATIONS SPECIALISTS

During the downturn, certain consultancy firms transitioned from being a provider of EP&M or copex projects to become specialists in greenfield, due to the lack of new mining projects being developed.

MEMBERSHIP

GREAT AND RENEWED BENEFITS FOR YOUR COMPANY

DYNAMIC NETWORKING PLATFORMS

INVITATIONS TO EXCLUSIVE CPCC EVENTS

B2B MEETINGS (ONE ON ONE)

BUSINESS PLATFORMS

COMMERCIAL AND EDUCATIONAL MISSIONS

WORK COMMITTEES

VALUE VOUCHERS FOR YOUR COMPANY

BENEFITS PROGRAM

MAPLE REWARDS

MORE INFORMATION

January 2018
worldwide. With tight budgets, mining players needed to do better and sustain their business models. Pierre Montauban, country manager at Hatch, believes that his company discovered a niche in operations, specifically operational readiness, and wants to continue expanding in this sector before competition increases. “For the expansion of Antamina, the ramp up only took three months, much faster than the average time. Las Bambas was more complicated but still only took five months, which is world-class for an operation of that size,” he related.

With 95% of the Peruvian business in mining, Hatch Peru has become well known across the wider organization for its work in operational readiness, specifically in the early phase between the conceptual, pre-feasibility and feasibility stages. While the new cycle may present good opportunities for project engineering, Montauban commented that Hatch will continue to develop its operational expertise moving forward.

PUBLIC WORKS ON HOLD

The Lava Jato corruption scandal has caused many public projects related to tailings dams to be delayed in Peru, therefore the enhancement of mining activities in the country’s water sector. Stantec, is still interested in water, power and public sector projects in Peru. However, mining currently represents 80% of the company’s project portfolio, with a vast majority of those assignments being in the mining industry.

SYNERGY AND M&A

Synergy became a key concept in the downturn as companies and offices brought together their diverse range of expertise in a bid to not only survive, but grow. Companies merged, and regional offices began to collaborate more. Hatch not only pushed for synergy between its Chile and Peru offices, but also acquired Indisa in Colombia. This acquisition has been very successful, and Hatch now has a strong presence in Colombia.

The Lava Jato corruption scandal has caused many public projects related to tailings dams to be delayed in Peru, therefore the enhancement of mining activities in the country’s water sector.

THE IMPORTANCE OF WATER

Hatch, believes that his company discovered a niche in operations, specifically operational readiness, and wants to continue expanding in this sector before competition increases. “For the expansion of Antamina, the ramp up only took three months, much faster than the average time. Las Bambas was more complicated but still only took five months, which is world-class for an operation of that size.”

-Pierre Montauban, country manager, Hatch

“Water for Everyone” did not precede on the grounds of political instability. During the downturn, the former MMH put a strong emphasis on diversification. Looking forward, Alberto Coya, country manager at Stantec, is still interested in water, power and public sector projects in Peru. However, mining currently represents 80% of the company’s project portfolio, with a vast majority of those assignments being in the mining industry.

“The issue of water scarcity is likely to become more prevalent throughout the 21st century. Water management firms are constantly aiming to improve their service line, not only to be more cost efficient and productive, but also to be environmentally friendly. WSP, that mainly works in water management services in hydrology and hydrogeology, recently patented a technology of directional drilling for pit dewatering. This process has reduced the amount of drilling needed as well the number of pumping stations required. By maintaining a drier pit, you reduce the number of explosives needed, you increase efficiencies and you reduce maintenance costs,” assured Fernández.

Alberto Coya of Stantec also commented on the mining companies’ efforts to prevent disasters related to tailings dams. “There have been a number of cross-examination studies by companies in the industry, especially related to tailings facilities. Policies and standards have not changed that much since the Samarco disaster, however companies are much more vigilant in monitoring these standards and ensuring that there are no mistakes during engineering, construction, operation and closing.”

CONTRACTORS-IN-WAITING

A number of contractors diversified their portfolio of services during the crisis, while also focusing on increasing their number of open projects to provide a steady cash flow. OHL, which arrived in the mining sector in 2012, has expanded its range of action. “In the past, the market probably saw OHL as a company focused on earthmoving, but we can do much more than that. For example, we are currently executing three tailings dams’ contracts, none of which are for earthmoving,” said Martín Fernández, mining manager Latin America at OHL.

Ricardo Vega, president of OHL, highlighted that mining generated 77% of OHL’s net income in 2012, has expanded its range of action. “In the past, the market probably saw OHL as a company focused on earthmoving, but we can do much more than that. For example, we are currently executing three tailings dams’ contracts, none of which are for earthmoving,” said Martín Fernández, mining manager Latin America at OHL.

Global Business Reports | PERU MINING 2018 PDAC EDITION
project for the crushing, agglomeration and transportation facility for Tahoe Resources’ Shahuindo project, in Cajamarca. “This is a state-of-the-art plant and, thanks to OHL’s procurement capabilities, we can adapt the crushing systems, the conveyor belts and the grasshoppers to the needs of the client. It is a tailor-made solution,” said Vega.

In 2018, OHL will continue working at the Shahuindo, Antamina and Las Bambas projects, whilst also undertaking early works at Quellaveco. One of the company’s goals for 2018 is to enter the underground mining segment as well. “We have very strong expertise in tunnelling for civil works, but we have never applied that expertise to an underground mining operation,” said Fernández.

The issue for large contractors looking to enter the underground space is that most mines in Peru so far are in the small to medium size range. The country’s largest underground operation is Cerro Lindo, with a daily processing capacity of 20,000 mt/d. The expected large underground projects will probably come from ageing open pits, like Yanacocha, for instance. Even so, contractors are already taking position because potential contracts in this space will be very significant due to the volumes involved. Bynucut, for instance, has already set a foot in the country through its partnership with San Martín. The Australian company’s business plan is to target underground mines that will require production faces of five meters by five meters.

Greg Jackson, managing director of Byrnecut Offshore, emphasized the use of the latest technology is key when you are dealing with such large equipment underground: “Byrnecut invests heavily in innovation and developing practical solutions. Examples include real-time 3D scanning technology to measure shotcrete thickness and minimize wastage, mechanical fan hanging devices to improve safety, modern ejector trucks and R&D in alternative underground truck technology.”

UNDERGROUND SPECIALISTS

Peru has a rich history in underground mining, which has brought necessary technological innovations to an ever-changing underground mining landscape. Robocon, one of the key contractors offering rock support through shotcrete application, is currently focused on narrow tunnel development, as per its clients’ demands. “Typically, our clients have faces of four by four meters, but now they want to advance in tunnels of three by three meters [...] Through Tecnomecánica, our technological arm, we are developing new machines in collaboration with other manufacturers in Peru and abroad that already have some technologies for narrow-vein operations,” said Enrico Sattler, managing director of Robocon in Peru. Robocon has been working for Volcan (now Glencore) since 2006 and for Pan American Silver’s Huanor and Morococha mines since 2012. When discussing Robocon’s most recent activity, Sattler commented: “We started operations in Tambomayo and Uchuchacua for Buenaventura, and we began working in Yanacocha in 2017, in collaboration with AESA. Our most recent client is Sociedad Minera Austria Duivaz, where we are transitioning from a dry shotcrete operation to a mechanized, wet shotcrete operation in narrow tunnels.”

Sattler stated that further milestones for this year will include Robocon’s development of its own scalers and the widening of its service portfolio to provide a more comprehensive ground support solution to clients. Finally, Turm Raise Boring has increased its involvement in production drilling thanks to the development of the SBM 400 SR machine. While raise boring has traditionally been used for ventilation needs, Marc Blattner explained the usage of the SR machine: “What we do is a burn hole: a hole in the center of the blast zone, which provides a cavity for the blast area to collapse into. The SR model is not only an upgrade of our traditional raise boring machine, but it is actually a new method of production which did not exist before.”

In 2017, Turm grew from 11 to 15 mines, three of which are dedicated to production activities, and is also expanding into Chile, where the company expects to grab bushole contracts with Codalco at El Teniente. As a company that engineers and develops its own machines, increased mining activity worldwide may result in more revenues coming from the outright sale of equipment to miners. “We will see Turm’s growth coming not just from contracting, but also selling machines into the Peruvian market, which so far we have tried not to do. It seems that the mines are going back to the mentality of the 1970’s and they want to buy their own equipment again. We are flexible enough to offer ourselves to run the equipment with a contract or provide all the maintenance, and also to train our clients’ operators if required,” said Blattner.
of the brand. That would save many costs in terms of infrastructure, and would give mining companies the flexibility to change the equipment to improve efficiency over the life of the mine.”

Atlas Copco chose Peru for the global launch of the battery-powered Scoptram STT at Southern Peru’s Condable copper mine. Now, under the Epicor brand, this machine is running its first tests in altitude conditions at Nena Resources’ Mucocha operation. Besides the Scoptram, Epicor already has battery-powered Dumpers, Boomers and Simbas for production drilling.

NEW PROJECT OPPORTUNITIES

The expected development of several mining projects in 2018 and 2019 with a combined cash of several billion dollars presents opportunities for equipment manufacturers, especially those involved in construction activities, like Volvo Peru. The company offers the FMX trucks, widely used in earthmoving activities, as well as the whole range of its Volvo Construction Equipment line, a business previously handled by a distributor, which the company decided to take over directly in 2016. Besides, in 2014, Volvo acquired the mining truck business of Terex and, from April 2018, these units will be sold under the Volvo brand for the 45 to 100 short ton range. “2017 was very positive as we sold to key customers that already had Volvo trucks but not Volvo construction equipment. In 2018, we expect a positive continuation of this trend with a favorable mining environment and the commencement of new projects, like Quellaveco. Even in underground mines where we do not have a strong influence, we are selling our product range to the communities that rent equipment to the mines,” affirmed Enrique Ramirez, VCE business director at Volvo Peru.

The development of new projects will have an effect on expanding the different equipment fleets across the board, offering opportunities as well for companies specialized in equipment components, like Austin. Previously known as Austin Westech designs, the company has optimized the technology behind the steel. We have optimized the JEC LD tray, that fuses the best of Austin’s JEC and Westech designs. Tim Mitchell, VP business development South America at Austin, gave more details about this product: “There is a lot of engineering behind the steel. We have optimized the JEC LD by reducing the tray weight, which has a significant effect on the payload. Over the long run, the difference in productivity is huge, and can result in production increases in the millions of tonnes.”

The JEC LD is already working in Colombia and Peru in operations including Cerro Verde, Southern Copper, Constancia and Shougang.

UNDERGROUND EXPANSIONS

The improvement of the market has clearly been felt across the underground spectrum. Indeed, higher base metal prices have drastically improved the economics of many mines, encouraging operators to engage in more dynamic budgeting after years of severe cuts in investment. Normet, a Finnish company specialized in underground equipment, had good results in 2017, according to Franklin Pease, its general manager in Peru. “We started to see many companies renewing their fleets and activating the investment programs they had put on hold during the crisis.”

Normet is mostly known in Peru for its Alpha 20 shotcrete sprayers and its Tomado shotcrete mixers, but the company offers a wider portfolio of solutions that go hand-in-hand with the mechanization of underground mining. Perú’s latest safety regulations oblige operators to mechanize certain processes, such as scaling or certain jobs at height, where Normet’s range of equipment can be of help. Pease affirmed that innovation and mechanization have certain limitations, especially in narrow-vein operations: “When you have small tunnel sections, you do not have all the equipment you need to mechanize the operations. Narrow-vein mining is a very small percentage of the total underground mining in the world, but we need to adapt to the different needs of the market [...] Changes will happen sooner or later as an example; most mines will mechanize the charging of the stopes, because you will reduce the amount of explosives needed.”

The lack of mechanization in narrow-vein operations opened up a business niche that the very large OEMs probably did not find to be large enough for them. Yet, it is a significant market worldwide. Resemin, a Peruvian manufacturer of underground equipment, has specialized in exactly this segment, and is capitalizing on its innovation efforts to achieve dramatic growth rates (50% in 2017) as the mining market picks up. Resemin produced 92 units last year and the company has expectations to reach the 150-unit/year mark soon. For this, however, the company will have to set up additional manufacturing capacity, as its 9,000-square meter plant in Lima is already working at full speed. “Our most successful product lines are the roof bolters and the Muki,” related James Valenzuela, CEO and chairman of Resemin. “There is now greater demand for equipment for smaller tunnels of three meters by three meters, this is why the Muki is constantly described as a game-changer. We are the market leader in narrow-vein machines and the Muki is the complete solution for that sort of environment because it has four applications: drilling, scaling, roof bolting and cut-and-fill mining. It can quadruple productivity compared to a manual drill.”

“A battery-powered machine can bring significant savings in areas such as mine ventilation, by having smaller tunnel sections and avoiding the operational delays related to fumes underground.”

-Ángel Tobar, general manager, Epicor

“Franklin Pease, general manager, Normet

“...the new safety regulations now require for certain tasks to be mechanized, like the scaling process or certain jobs at height. We have a number of platforms with different configurations for those needs.”
Another important milestone for Resemin’s corporate growth was its purchase of Schopf, a Stuttgart-based manufacturer of underground loaders. With this acquisition Resemin received all the technology and engineering capability of Schopf as well as the brand, and now the company will begin manufacturing Schopf loaders in Peru, initially the 3.5 mt payload model and will progressively move up the product range to the 18 mt payload loaders. Valenzuela emphasized that now Resemin has the full offering. “We have a complete line of products for underground mining, and the loader market is three times the size of the market for drilling rigs. It is an enormous growth opportunity for us.”

PLANT SOLUTIONS

Companies involved in the processing facilities are also gearing up towards the new wave of projects, as well as the service and maintenance contracts associated with an increasing installed capacity. Eaton, a company specialized in electrical and industrial solutions, opened up a service center in Arequipa in 2016 with the idea of serving projects along southern Peru’s industrial solutions, opened up a service center. Javier Schmal, managing director for Latin America at Martin Engineering, provided more details.

“One of Martin Engineering’s flagship products is the CleanScrape solution for conveyor belts. A belt cleaner that does not require any servicing or adjustment until the end of its wear life. “Often, with cleaning systems you need to constantly make adjustments, which is not ideal,” related Schmal. Beyond productivity, this minimizes the exposure of technicians to the risks presented by large equipment.”

Martin Engineering has solutions working at different large mines, including Southern Copper’s units, Cerro Verde, Las Bambas and Miski Mayo. “With the acquisition of Schopf, we now have a complete line of products for underground mining, and the loader market is three times the size of the market for drilling rigs. This year we are starting to manufacture Schopf loaders in Peru.”

“Anywhere you have to handle a large amount of bulk material and industrial vibration solutions.”

One of Martin Engineering’s flagship products is the CleanScrape solution for conveyor belts, a belt cleaner that does not require any servicing or adjustment until the end of its wear life. Often, with cleaning systems you need to constantly make adjustments, which is not ideal, related Schmal. “Beyond productivity, this minimizes the exposure of technicians to the risks presented by large equipment.”

Martin Engineering has solutions working at different large mines, including Southern Copper’s units, Cerro Verde, Las Bambas and Miski Mayo. “With the acquisition of Schopf, we now have a complete line of products for underground mining, and the loader market is three times the size of the market for drilling rigs. This year we are starting to manufacture Schopf loaders in Peru.”

“With the acquisition of Schopf, we now have a complete line of products for underground mining, and the loader market is three times the size of the market for drilling rigs. This year we are starting to manufacture Schopf loaders in Peru.”

- James Valenzuela, CEO and chairman, Resemin

During the hard times, providers’ margins were pushed to the limits. The price wars among competing suppliers, desperate to keep their contracts, allowed mining companies to stay competitive but the urge to save costs also created other problems related to quality and service. Luckily enough, the industry is now producing minerals at a comfortable price range and increased profitability. While that should not translate into cost overruns, the relationship between miners and providers should be one of mutual benefit that looks at a long-term sustainability for both parties.

Exploration was probably the segment that suffered the most, because the level of activity was drastically reduced or, in some cases, stopped altogether. Jorge Granda, general manager of AK Drilling International, a Cerro Verde contractor, with a fleet of 25 track rigs, in the Peru and operations in seven countries, explained that the low volumes of work available and high pressure on drilling rates mades the downturn a difficult period to adapt to. “During the crisis, the procurement specialists within the mining companies were empowered to take many decisions about which contractors to use. Seeing the drilling service as a commodity means that you will only pay attention to the final price, and this is shooting yourself in the foot.”

Geotec, another drilling contractor, has also seen a positive trend in the market, and indeed the company doubled its sales in Las Bambas, we incorporated seven hands-free rod handlers, so the whole drilling campaign was hands-free. This year we have won a contract to introduce intelligent machines for rod handling in underground mining. It is the first hands-free diamond drilling campaign for underground mining in Peru.”

Arenas highlighted that some mining companies are willing to engage in long-term drilling contracts, like the three-year assignment Geotec has at Yanacocha, because they know the drilling rates will increase very soon. Asked about the investment required to incorporate the hands-free rod handlers, he explained: “If you include the training required, a hands-free rod handler for a surface drilling rig can cost US$600,000, while a brand-new drilling machine costs US$600,000. Not all clients are willing to pay substantially more for their drilling, but for us this amount needs to be seen as a long-term investment where we are also improving productivity, efficiency, and safety.”

Mining Services
Price is still a big driver but the technical side of proposals is increasingly important

- James Valenzuela, CEO and chairman, Resemin

During the hard times, providers’ margins were pushed to the limits. The price wars among competing suppliers, desperate to keep their contracts, allowed mining companies to stay competitive but the urge to save costs also created other problems related to quality and service. Luckily enough, the industry is now producing minerals at a comfortable price range and increased profitability. While that should not translate into cost overruns, the relationship between miners and providers should be one of mutual benefit that looks at a long-term sustainability for both parties.

Exploration was probably the segment that suffered the most, because the level of activity was drastically reduced or, in some cases, stopped altogether. Jorge Granda, general manager of AK Drilling International, a Cerro Verde contractor, with a fleet of 25 track rigs, in the Peru and operations in seven countries, explained that the low volumes of work available and high pressure on drilling rates mades the downturn a difficult period to adapt to. “During the crisis, the procurement specialists within the mining companies were empowered to take many decisions about which contractors to use. Seeing the drilling service as a commodity means that you will only pay attention to the final price, and this is shooting yourself in the foot.”

Geotec, another drilling contractor, has also seen a positive trend in the market, and indeed the company doubled its sales in Las Bambas, we incorporated seven hands-free rod handlers, so the whole drilling campaign was hands-free. This year we have won a contract to introduce intelligent machines for rod handling in underground mining. It is the first hands-free diamond drilling campaign for underground mining in Peru.”

Arenas highlighted that some mining companies are willing to engage in long-term drilling contracts, like the three-year assignment Geotec has at Yanacocha, because they know the drilling rates will increase very soon. Asked about the investment required to incorporate the hands-free rod handlers, he explained: “If you include the training required, a hands-free rod handler for a surface drilling rig can cost US$600,000, while a brand-new drilling machine costs US$600,000. Not all clients are willing to pay substantially more for their drilling, but for us this amount needs to be seen as a long-term investment where we are also improving productivity, efficiency, and safety.”

Mining Services
Price is still a big driver but the technical side of proposals is increasingly important
“A positive development is that the clients have realized that price cannot be the only driver. You can adjust your costs up to a certain limit, but you cannot really let that affect your workers because drilling is a specialized service.”

-Jorge Granda, general manager, AK Drilling International

Granda of AK Drilling affirmed that the introduction of these new technologies, however, should not be seen as a ‘one-size-fits-all.’ “At AK Drilling we were one of the first contractors to use these technologies for an oil and gas project in Colombia. In the oil and gas industry, you spend months on the platform, and each pipe weighs half a tonne. In mining exploration, the rods weigh 36 kilograms, and you are on a platform just a couple of weeks. In mining, you need an agile setup and competitive costs. [...] At the end of the day, it is the end user who needs to decide what is best for each particular project.”

NEW BLASTING TECHNOLOGIES

If 2017 could be seen as light at the end of the tunnel for exploration-related companies, the blasting market remained tight with the arrival of new competitors and a continued focus on cost reductions and productivity. For Exsa, one of Peru’s main rock fragmentation companies, innovation was instrumental to assure the company its strong positioning in the open pit segment, where it has a 45% participation. Through the introduction of the Quantex technology, clients obtained cost reductions of 30% in the blasting process and 80% reductions in CO2 emissions, according to Gustavo Gómez Sánchez, the firm’s general manager.

Gómez Sánchez highlighted that the second half of 2017 allowed for an increase of work volumes but that the higher price of ammonium nitrate presented some challenges as well. Moving forward, Exsa will continue expanding its scope, offering specialized blasting services for construction and non-production activities, and leveraging its brand-new initiation systems plant in Peru: “This is the only new plant built in the region for more than 20 years. As the plant will not use lead and is far more efficient, being 100% automated.”

Gómez Sánchez also highlighted the fact that 2017 was mainly based on commodities, which has a great advantage, because 2015, is also increasingly focusing on regular supply relationships for mining clients rather than spot commodity trades. The company’s innovation was mining by 30% last year, triggered by contracts in water treatment and flotation with large copper producers. Claudia Marchini, country manager of Ixom, declared: “Our chemicals business was mainly based on commodities, which allowed us to start relationships with large customers and increase our volumes in the past. After that, the fall of copper and other mineral prices represented an opportunity for us to offer specialty chemicals for mineral processing.”

CheMICAL SUPPLIES

Like rock fragmentation companies, providers of chemicals are also moving away from the mere supply of products to offer higher-value solutions and consultancy support. Quimtia, a company with a footprint in the wider region but whose mining practice is mostly focused in Peru, has seen specialists increasingly overshadowing the more traditional business of commodity trades, where the company provides copper, sulphate, sodium cyanide and activated carbon.

It was on the environmental front that Quimtia started its diversification: “Due to the numerous gold and silver mines that have to deal with cyanide contamination in discharge streams, there was a strong opportunity to implement related solutions in the Peruvian market,” said Eduardo Galdo, sales manager of mining at Quimtia. “We started to treat this type of discharge, eliminating cyanide, removing other contaminations like extra metals, regulating the pH and reaching standards that the law required. These environmental solutions took our portfolio to another level!”

Today, advanced filtration technology, like the hydrogen peroxide used for cyanide destruction, contributes to 30% of Quimtia’s business, while other niche products used to improve recoveries in both leaching and flotation processes already make up 20% of revenue. Moving forward, these two segments (environmental care and metallurgical recoveries) should continue to grow for Quimtia, said Galdo: “We are working with Nalco to develop their WaterShed business in Peru. This technology increases water recovery while improving deposits and increasing the life of a tailings dam. We believe that it is now the perfect opportunity to implement it, as tailings dams reach full capacity.”

Ixm, a company created from the divestment of Orica’s chemicals division in 2015, is also increasingly focusing on regular supply relationships for mining clients rather than spot commodity trades. The company’s innovation was mining by 30% last year, triggered by contracts in water treatment and flotation with large copper producers. Claudia Marchini, country manager of Ixom, declared: “Our chemicals business was mainly based on commodities, which allowed us to start relationships with large customers and increase our volumes in the past. After that, the fall of copper and other mineral prices represented an opportunity for us to offer specialty chemicals for mineral processing.”

“Ixom covers several business areas across the mining industry food chain, including the development of emulsifiers for explosives, and it has a plant in Chile where it produces flotation agents. Marchini gave more details about the importance of creating tailored products for the different mines: ‘We have specific products and applications to improve productivity in oxides or sulfides of copper, lead and precious metals. In copper concentration, we develop customized collectors according to each specific ore mineralogy,’ she concluded.”
"As mineral prices increase, Peru will be in the spotlight this year"

Carla Martínez and Jorge León Benavides

CM: General Manager,
JLB: Leader of Peruvian delegation to PDAC
Canada Peru Chamber of Commerce

What are going to be the highlights of your participation in PDAC 2018?
CM: The delegation to PDAC is one of our key initiatives every year. This year the group consists of nearly 200 people. Our main activities include the Peru booth inauguration, the CEO luncheon, the Peru Day and the networking cocktail. During the Peru Day, speakers will include Vice-president Martín Vizcarra, who is also Peru’s ambassador to Canada; Minister of Energy and Mines, Ángela Grossheim, who has important announcements to make; Minister of the Economy, Claudia Cooper; and Julio Velarde of Peru’s Central Bank. The aim is to show global mining companies and investors the new strategy to attract investment to Peru in areas such as environmental, social and tax issues.

How is the government tackling the bureaucratic delays that have affected exploration in Peru over the last years?
JLB: Until recently, our exploration regulation was too complex and not very favorable for exploration. For instance, any money you spent on exploration did not count as part of the company’s investment. The current vice-minister understands very well the dynamics of mining investment and has promoted a regulation to expedite processes for exploration, which is excellent news for investors.

How is total mining investment picking up in Peru?
JLB: For 2018, we expect investments of US$5.7 billion in Peru. Only with the projects that have been approved so far, we have US$40 billion worth of investment between now and 2021. For that to happen we will need to overcome some social issues. While Quellaveco seems to be advancing rapidly, there are projects like Tia Maria where there is a need for a stronger relationship with the local communities. As mineral prices increase, Peru will be in the spotlight this year. It is not just about individual deposits; investors also look at countries that offer upside potential in the long run, countries that offer legal and economic stability. This is something that Peru has proven to have over the last two decades. Investors look at countries with investment grade and those that are open to the markets –Peru has free-trade agreements with 75% of the world. With all these conditions in place, we have high expectations for the mining industry this year as we believe this will be the start of a new mining boom. Now it is the time for Peru to attract the big fish in the mining industry worldwide.

How does the industry handle the environment and what is your opinion of the formalization process?
JLB: In 2014, Peru hosted the COP20 and, as part of this, the country aligned very well with the world’s environmental standards. The problem we have is illegal mining in Madre de Dios where people expose themselves to mercury and terribly harm the environment. With the formalization process, for the first time in Peru’s history we have 5,000 artisanal miners that have joined the legal system. This is not so many if compared to the total numbers, but it is a great first step by this government. In the past, other governments just looked away.