

# GLOBAL BUSINESS REPORTS



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## LATAM NORTH AND CARIBBEAN MINING 2025



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## Dear Readers,

Global Business Reports (GBR) has covered the mining industry all over the world for over two decades, yet this global industry takes different forms under specific conditions – such as on an island in the Caribbean. With great enthusiasm we present for you the uniqueness of the mining industry in Latin America North and the Caribbean.

As with all our inaugural editions, this publication is guided by two fundamental questions: Why this region, and why now? It is no spoiler to give away that this region offers top-grade, top-tier copper, gold and silver, buried among a mix of geological styles. Geological formations like the Andean Belt, the Cauca region, the Faja de Plata, and the Guiana Shield have become hotspots in the race to replenish global resources. And it is not just GBR who says this; majors like Barrick Mining, Freeport-McMoRan, and Wheaton Precious Metals have recently taken an interest in these belts.

Yet, this is also a region that has previously burned investors. Uncertainties have crept in the cracks between compelling success stories and cautionary tales, and in the confusions of proactive and protectionist governments. This area is of a particularly vast and varied geography, with Mexico usually bundled up with its North American peers, and the rest of the countries fading into the hazy label of “Latam,” overshadowed by giants like Chile, Peru, or Brazil. This sub-region that sits in the center has rarely been put at the center. This has left investors wanting a guide that allows them to scan for opportunities, benchmark peers, identify suppliers with local experience, and build regional platforms beyond single-country strategies.

The *Latam North and Caribbean Mining 2025* report is therefore designed to fill these gaps. Unlike GBR’s country-specific reports, this edition adopts a regional formula to promote cross-border investment. Each country is given room to shine individually, while also being woven into broader narratives. Over four months, we spoke to 90 key decision-makers, including the CEOs of 55 producing and exploring companies, 25 service and equipment providers, and 10 representatives from governments, associations, and financial institutions.

We hope that once again we managed to provide an understanding of a place through mining and of mining through a place. We are grateful to all who contributed to this research, and they are the true authors of the insights that follow.



**Alfonso Tejerina**  
 Director and General Manager  
 Global Business Reports (GBR)

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\*Interviews were conducted between January and May 2025.



LATAM NORTH AND CARIBBEAN  
MINING 2025  
GBR SERIES

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# INVESTMENT

“

Many investors remain cautious, recalling the value-destructive M&A boom of 2010–2012. This may offset some of the enthusiasm of higher prices, with real pressure to stay disciplined.

”

Mitchell Krebs  
CEO  
**COEUR MINING**

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CARIBBEAN MINING 2025

Image courtesy of C3 Metals





## Defining the Region

### A place in the sun

With hundreds of North-American listed mining companies operating across South America, flights between the two continents increasingly contain busy mining executives who shuttle between Toronto and Lima, Phoenix to Santiago and other North-South permutations. More often than not, they skip over Central America and the Caribbean entirely, with the occasional layover in Panama City. It was on such a north-to-south business commute that Canadian prospector Simon Ridgway found himself gazing out of the airplane window at the volcanic terrain of the Central American region and wondering. This was the region where he would help discover several deposits over the coming decades under Gold Group Management, the company he leads. This is also the region of focus for this report.

Lifting our perspective even higher than that 35,000 feet airplane view, we can define the “Latam North and Caribbean” as the Greater Central American region stretching from the US-Mexico border to the Equator line, including both Latam countries in Central America, the Caribbean, and the northern stretch of South America, as well as two non-Latin outliers: English-speaking Guyana and Dutch-speaking Suriname, which are regularly grouped with the Caribbean.

There are 10 countries of mining relevance in this rather disbanded region:

**Mexico**, the world’s top silver producer, ninth-largest gold producer, and tenth-largest copper producer, certainly does not fly under the radar of investors, yet, in some ways, it is still avoided, so to speak. Last year, mining FDI in Mexico dropped by 56%, at US\$1.53 billion (2024) versus US\$3.49 billion (2023), according to official figures from the ministry of economy. With the change of government in 2024 came hope, and with hope for change, amplified uncertainty.

**Colombia**, the second most established mining jurisdiction in the region after Mexico and Latam’s biggest coal producer, is not doing better. Colombia sits at the bottom of the Fraser Survey’s Policy Perception Index, the fourth worst after La Rioja (in Argentina), China, and Niger. Colombia’s main redeeming feature as a mining destination is the promise of an under-explored gold-copper belt, and a reprise with the upcoming 2026 elections.

While Colombia’s lack of presence at the PDAC Convention in Toronto this year was expected and Mexico’s iconic booth was noticeably missing, **Guyana** and **Ecuador** attracted significant attention. With Guyana’s thriving oil industry and Ecuador’s two large-scale mines, the two countries are luring investors into the region. Investors are also warming up to more uncertain but geologically enticing **Suriname, Jamaica, Nicaragua** and **Guatemala**, each enlivened by recent activity.

**Panama** and the **Dominican Republic** feature strongly on the world’s mining map, each feted for the region’s top tier assets, in copper and gold, respectively. They could have easily served as lodestars for investment in the region, but their journeys to success have been fraught with obstacles. In Panama, First Quantum Minerals (FQM)’s multi-billion operation has been suspended, while in the Dominican, Barrick Mining has been carefully advancing the expansion of the Pueblo Viejo gold mine, which involves a sensitive resettlement.

While investors are well-aware of world-class operations like Barrick’s Pueblo Viejo gold mine in the Dominican Republic, they are also hyper-aware of the uncertainties that have limited the mining activity in the country to just one operation. Difficulties around permitting, combined with anti-mining sentiment, have made investors circumspect about the region.

Though we do not have the data for these 10 countries specifically, Latin America as a whole is the region with the most ESG-impact allegations by local communities out of all regions, according to the IEA. The location of assets, often conflicting with indigenous lands and in highly biodiverse mesoamerican hotspots, as well as the impacts of mining-related disasters like dam collapses and massive contaminations, are all contributing to the tension. The exact factors behind a strenuous social license, as well as responses from mining operators, are more amply discussed in a separate article.

With the risk of stating the obvious, this is a highly heterogeneous region: varieties in climates, topography and altitude inform different technical mining environments, while differences in culture, governance and population dynamics inform different political regimes and societal beliefs around mining. Whereas Mexico, Colombia and Nicaragua are led

by leftist governments, Guyana falls more in the center-left, and Panama, Ecuador, the Dominican Republic and Jamaica follow a center-right ideology. The region features a mix of tradition and technology, myth and modernity: in places like Mexico, mining goes back 500 years, while in countries like Ecuador, large-scale mining has just taken off about five years ago. Superstitions that claim gold will disappear if women enter mines coexist with some of the most successful gender-diversity programs.

In fact, the region’s heterogeneity also explains why it is sometimes overlooked by mainstream investors (and media). Its fanned out geography and ensuing diversity make it hard to be bundled up into a single region, which results in a lack of dedicated data. Data on specific countries often fades out against bigger jurisdictions. In industry reports, Mexico tends to be placed together either with North American countries or Latam countries, behind which it features as a more marginal player. The rest of the countries are often too small to even be avuncularly accounted for in regional Latam mining reports. Service providers themselves often serve this region from elsewhere in North or South America. Without enough data and without the ability to act as a group, the region fails to attract critical mass when it comes to investment interest. This lack of information is both a reason why the region is overlooked and why we wanted to cover it at GBR, making sure that top-tier assets and truly enticing investment opportunities do not go amiss.

The region holds some of the largest undeveloped projects in gold (like Lumina Gold’s Cangrejos), silver (such as Vizsla Silver’s Panuco) and copper (like SolGold’s Cascabel), as well as extraordinary growth stories (like G Mining Ventures), some of the highest yielding stocks (like Lundin Gold) and some of the highest grades in the world (like Mako Mining’s San Albino mine), as well as highly prospective and pristine exploration frontiers (like Jamaica).

For these reasons alone, this region deserves to be more than a layover in our North American and South American research, but a destination in itself. We hope our report will help the region establish its place in the sun.

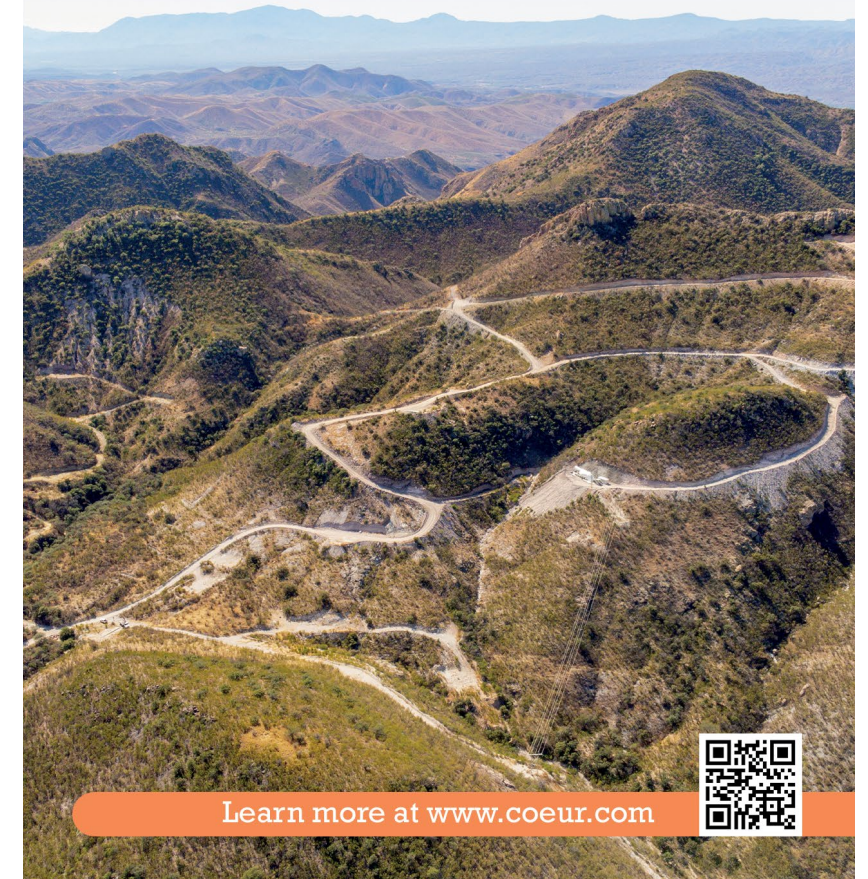


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**A moment in the sun: Why timing is of the essence**

First of all, let's rewind to why investors should make a stop and take a look at this region. One reason is that they just have to. According to Discovery Alert, 50% of the world's global gold production comes from mines over 20 years old, with ore grades naturally declining since most producers usually bring the highest grade portions of the deposits early into the mine plan. The reserve replacement crisis is true for other precious and base metals.

This is pushing copper prospectors to follow the Andean copper belt that extends from Chile and Peru into Ecuador; gold prospectors to go beyond the well-known belts like Abitibi spanning Ontario and Québec, to the little explored Colombian Cauca gold belt or the Guiana Shield; silver explorers within Mexico are also looking again both within and outside the famous Faja de Plata Belt, into emerging ones like the Sierra Madre Occidental. In other words, the Latam North and Caribbean region has the right commodities, with gold, copper and silver at the forefront, even if its politics are sometimes strongly left.

The exploration potential in key commodities like gold and silver have made the region more detectable to new and bigger players in recent years. Having a major on your company register is a big boon for a developer, said Canadian explorer G2 Goldfields, after AngloGold Ashanti became a 15% shareholder.

Below is a rundown of other recent entrants to the region:

- In Jamaica, Barrick Mining and Freeport-McMoRan entered earn-in JVs with Geophyx and C3 Metals, respectively.
- In Colombia, Agnico Eagle invested over CAD52 million in Collective Mining, and Freeport also announced an earn-in on Max Resources' Cesar project. Copper Giant Resources (formerly Libero Copper) also attracted the sponsorship of the Fiore Group, with Fiore's CEO, Frank Giustra, becoming a key shareholder.
- In Guyana, Luxembourg-based La Mancha acquired over 16% of G Mining Ventures, supporting the acquisition of Reunion Gold by G Mining. AngloGold Ashanti increased its stake in explorer G2 Goldfields from 11.7% to 15%.
- In Ecuador, streaming and royalty companies, including Wheaton Precious Metals, Franco Nevada and Osisko Gold Royalties, have offered financing backing for large development projects like Cangrejos and Cascabel. Hancock Prospecting's subsidiary, Hanrine, also signed an earn-in of up to 80% for Titan Minerals' flagship copper project, Linderos.

Top shareholders like Franklin Templeton and Spratt sit on the registers of Mexican players like Silver Tiger Metals, and mining billionaire Pierre Lassondo and his merchant bank Trinity Capital Partners own 40% of Mexico-Chile explorer Fuerte Metals (formerly Atacama Copper). Newmont, BHP and Jiangxi Copper feature on SolGold's registry, backing its Cascabel copper-gold project in Ecuador.

Acquisitions have also been flying high. Some prominent transactions include Equinox Gold's acquisition of Calibre Mining for CAD2.6 billion currently pending approval by the Courts in British Columbia; Coeur Mining's acquisition of SilverCrest for US\$1.7 billion completed this year. At around the same time, First Majestic completed the acquisition of Gatos Silver for US\$970 million.

While these large acquisitions of existing, producing mines centered around Mexico, acquisitions of advanced development assets focused on new gold belts in the region. Ecuador has been of noteworthy attention. CMOC just announced the acquisition of Lumina Gold and its Cangrejos gold project in Ecuador, for CAD581 million. Last year, Silvercorp Metals completed the acquisition of Adventus Mining, which is developing the El Domo project together with Salazar Resources. Guyana also sparked interest, with G Mining Ventures acquiring Reunion Gold and its Oko West gold project last year.

A convergence of high-commodity prices and low valuations, on the back of a structural deficit in exploration and discoveries, set the perfect scene for increased M&A. Given the momentum in the global M&A cycle, heightened transactional activity in the region recently, and buzzing commodity prices, we believe the timing is ideal for the Latam North and Caribbean to start getting noticed. Celebrating 30 years since joining Coeur Mining, CEO Mitchell Krebs, reflected on the current momentum: "Mining is finally getting its moment in the sun, something that we are not used to as an industry, but I think this is a once-in-a-lifetime opportunity for the industry to step forward, showcase what we do and how we do it, especially here in the US and Mexico."

Coeur is the fourth-largest silver producer and sixth-largest gold producer in Mexico. ■



**Investment**

**What's the deal with the current M&A environment?**

The forecasts for the next M&A season are in: Conditions are optimal for a highly transactional period, with copper and gold prices at near-record levels. As of April 2025, the global M&A value in the mining sector had reached US\$25 billion, surpassing previous years, according to Bloomberg. Higher margins for existing producers result in strong cash flows, reduced debt, and overall "bulletproofed" balance sheets, as Charles Funk, the CEO of Heliostar Metals, a gold producer, put it: "As shareholders push companies to get bigger, and the companies have the cash to do it, they will launch into M&A."

Behavioral psychology distinguishes between reaction (an automatic behavior or emotion) and response (a deliberate, rational behavior). These notions lend themselves well to current M&A sentiment. While the first reaction may be that of greater confidence, cash-rich optimism and higher propensity to spend, that instinct is tempered by memories of the last gold cycle, with many transactions made between 2010 and 2012 ending up losing value for shareholders. Previously burnt, a cool-headed rather than hot-blooded market expects more from transactions.

Shareholders are also putting more pressure on mining companies: According to Bloomberg, shareholders expect minimum premiums of 25-30% to recommend a transaction, but acquiring companies have often underperformed gold prices. Mega-mergers are no longer hyped and are getting harder to approve. "Getting bigger just for the sake of getting bigger won't cut it," said Mitchell Krebs, the CEO of Coeur Mining, a gold and silver producer, adding: "Acquisitions need to be strategic, with a sound underlying industrial logic, and result in win-wins."

This subdued, more rational deal-making approach is perfectly suited for – and indeed supported by – the low company valuations we currently see in the market, as most stocks have not caught up with the spot prices. Undervalued, or at least not overvalued assets, make for ideal targets in a prudent market. The leverage is particularly high for acquisitions in Latam North and Caribbean, where stocks do not command the high premiums of tier-one jurisdictions. According to the Fraser Institute 2024 Survey, assets in Can-

ada, Australia and the US come with a 20-30% valuation premium compared to those in higher-risk regions.

M&A has become the pill to solve low levels of exploration. According to S&P Global, exploration (and discovery rates) have been falling globally, the worst hit being the early-stage junior sector. S&P notes that fundraising for early-stage exploration plummeted to US\$10.3 billion in 2024, the lowest in five years and a 12% decline compared to 2023. In Ecuador and Mexico, grassroots exploration spending contracted by more than US\$20 million in each, while the share of grassroots spending out of total global budgets is at a record low of 22%, informs the same source. "The capital markets for exploration and single-asset development companies have almost swung too far to a point where there is almost no equity available for them," said David Awram, co-founder and senior executive VP of Sandstorm Gold Royalties.

Instead of investing in exploration, mining companies have shifted to M&A to replace declining reserves and fast-track value. High discrepancies in valuation between cash-generating, increasingly larger producers and single-asset juniors with a small balance sheet have further accelerated the M&A trend, generating ideal acquirers and acquirees.

**Preference for producing assets...**

The most in-demand assets have been producing assets (Equinox-Calibre, First Majestic-Gatos Silver, Coeur-Silver-Crest, or more recently, Pan American-MAG Silver, among others). This is a classic feature of a mature market, as companies with the clout to acquire cash-positive operations can achieve operational synergies, a shortcut to top-line expansion, as well as more generous shareholder returns, and even potential graduations on the stock exchange after crossing a certain threshold.

Rising operational costs that make it difficult to generate high returns from single assets have increased the need for diversification. For example, MAG Silver, which has a 44% interest in the Juanicipio mine in Zacatecas, Mexico (the remaining 56% being held by Fresnillo), is looking at a second cash-flow generating silver and/or gold mine to "ad-

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**David Awram**  
Co-Founder and Senior Executive VP  
SANDSTORM GOLD ROYALTIES



While Sandstorm’s primary focus is deleveraging, we continue to establish relationships with exquisite smaller projects that have effectively been orphaned from the capital markets, as we know that at some point the markets will heat up again.



dress the single-asset risk.” “Our preference would be for an already-producing asset rather than a development asset. Our shareholders have been very good to us, and they would probably not want to see cash going into another development project unless it is a truly outstanding asset, like Juanicipio,” said George Paspalas, MAG Silver’s CEO.

**...Or near-production opportunities**

While leading producers seek clean balance sheets and a high-quality asset that will stay resilient in any market conditions, junior companies have focused on near-production opportunities, particularly assets that have formerly been on care and maintenance and divested from by larger players. This has been a popular scenario in Mexico’s silver space, in particular, where permitting uncertainty and devalued assets created opportunities for small-cap companies to enter production.

For example, in 2023, Heliostar Metals acquired its now flagship Ana Paula project from Argonaut Gold for US\$10 million and US\$20 million in milestone payments, later cancelled out in exchange for US\$5 million after acquiring the remainder of Argonaut’s portfolio, including formerly producing mines La Colorada and San Agustín. Heliostar is now on a path to restart mining from these two assets by the end of 2025, summing a guidance of up to 40,000 oz/y. With Ana Paula in production in the next couple of years, Heliostar would come closer to its goal to become a mid-tier producer with up to 200,000 oz in annual guidance. “We acquired Argonaut’s assets at a time when nobody was interested in advanced projects in Mexico due both to moribund gold prices and strong anti-mining rhetoric from the former Mexican government, which made financing in the country very challenging. This gave us the opportunity to acquire high-quality assets at low prices. With gold prices continuing to move upwards and the change in political sentiment in Mexico, the wheels have started to really turn for us since last year,” said Charles Funk, Heliostar’s CEO.

**District scale and consolidation**

Grade and size of course always matter in a project’s attractiveness, but in the Latam North and Caribbean, great attention is paid to the district potential. In Colombia, Quimbaya Gold has consolidated its presence in the Segovia province, where it is neighboring producer Aris Mining. Quimbaya’s license area stretches over 17,000 ha, and its concessions are contiguous with Aris.

The region provides another key impetus for consolidation, and that is the lack of a dominant player. With the exception perhaps of Zijin Mining, which has assets in Guyana, Colombia and Suriname, and the upcoming Equinox-Calibre merger creating a regional Mexican-Nicaraguan platform, we cannot speak of a company with a clear leading platform in the region, not like we see in North America or Africa.

This gap provides an opportunity for investors like La Mancha Resource Capital. “It is costly to enter a new country, so we are always looking for the opportunity to build a portfolio within that country you’ve taken a risk on. Even if majors like Newmont or Barrick hold large assets in the region, no player has consolidated a leading gold platform across the continent,” said Vincent Benoit, CEO and managing partner at La Mancha Resource Capital.

**The weight of jurisdictional risk**

There is a long tradition of North American companies investing in Central and South America, enjoying the same timezone and a more “controlled” risk compared to other emerging countries further away in Africa and Asia. However, we also note a trend whereby companies with assets in Latam are diversifying into North America. Orla Mining, a Mexican gold producer, acquired the Musselwhite gold mine in Ontario from Newmont this year. Minera Alamos also acquired Sabre Gold, adding the Copperstone project in Arizona to its Mexican portfolio, while Mexican developer Minaurum Gold acquired the Lone Mountain zinc project in Nevada. Breaking away with this trend, Mexican mid-tier silver producer Endeavour Silver has also just agreed to acquire Minera Kolpa in Peru, deepening a purely Latam focus.

Competition with premier jurisdictions is rising, especially for M&A, with Canada, the US and Australia accounting for 70% of deals in 2024, while divestments from higher-risk jurisdictions are accelerating, according to a report by Baker McKenzie, cited in Discovery Alert.

Famously risk-tolerant, China has been increasing its footprint in the mining sector in Latam, particularly in frontier jurisdictions. Zijin Mining is probably the only miner with assets in three countries in this region (Suriname, Guyana and Colombia), two acquired in 2020, in the middle of the pandemic, and the third one in 2022, which demonstrates the affinity for risks. This year, Chinese companies made further inroads, with CMOC acquiring Lumina Gold in Ecuador, where another Chinese company, Ecuacorriente SA (ECSA), owns the only copper mine in the country, Mirador. Also, Cordoba Minerals sold its remaining 50% of the Alacran copper project in Colombia, positioned as the country’s largest upcoming copper mine, to Veritas, an indirect wholly-owned subsidiary of JCHX Mining Management Co. JCHX is already a 19.81% shareholder of Cordoba. ■

\*Pan American Silver Corp has announced the acquisition of MAG Silver.



DM



GL

# Dean McPherson and Guillaume Légaré

DM: Head, Business Development – Global Mining

GL: Head, South America

TORONTO STOCK EXCHANGE AND TSX VENTURE EXCHANGE



2025 will be a pivotal year and everything is lining up for the mining sector to outperform.



**Could you update us on recent activities in South America?**

GL: In 2019, the Exchanges established a full-time presence in Latin America to connect mining, energy, and innovation projects with investors. Latin America is the most active mining jurisdiction outside of Canada, with 410 issuers and 1,067 assets and properties on the continent. The main focus in Latin America is on critical minerals, and the clean energy transition. The Sigma Lithium listing and subsequent success on our markets has helped to see an increased interest in the region.

**Can we expect the valuation of juniors to catch up to the high commodity prices we are seeing?**

DM: Fundamentals of supply and demand in the case of critical minerals, and precious metals’ correlation to “safe haven” needs and macroeconomic factors are no doubt influencing commodities pricing positively. Once geopolitical tensions subside, coupled with the continued reduction in interest rates, no doubt the equity market will catch up to commodity prices’ trajectory. Market confidence and increased risk appetite will close the gap.

**What are the main challenges in raising capital for mining companies?**

GL: Raising capital involves three key pillars: asset quality, management quality, and ESG compliance. A National Instrument 43-101 compliant tech-

nical report is essential for assessing a project’s potential. Quality management teams, ideally with a mix of local and international expertise, are vital. ESG considerations are increasingly critical. TSX provides tools to help companies communicate their sustainability efforts effectively. We emphasize that significant value can be created in the pre-operational phase, encouraging early-stage projects to list on TSXV.

**What opportunities do you see for the TSX globally, and where will you be focusing your efforts moving forward?**

DM: TSX has one of the largest portfolios of international clients of any exchange globally. Our strategy has always been global, to the extent that we have hired full-time boots-on-the-ground representatives in several global markets, to engage with existing clients and meet potential new clients. We are seeing significant traction from Australia in particular, as more Australian-based mining companies are diversifying and growing their projects into the Americas. Recent examples have been Westgold Resources following their acquisition of Karora. Paladin Energy has signaled a similar intent following their announced acquisition.

TSX and TSXV are leaders in junior exploration and development, when large global miners are looking to acquire assets to grow their portfolio, they naturally look to our markets. We are encouraged by the interest we are

getting from Australian-based companies looking to join our markets. We also continue to see opportunities for growth in Latin America. Early in the new Milei government, Argentina is a particular area of focus for us.

**Could you comment on the performance of the IPO market?**

DM: There has certainly been a shortage of large IPOs over the past three years. Fortunately, we see more new listings this year. The majority of these new listings are junior companies. The shortage of IPOs is affecting all sectors globally. The high interest rate environment and various geopolitical tensions around the world have a lot to do with that.

**Do you have a final message?**

DM: TSX continues to enjoy leadership in the mining sector, and although it has been a challenging year, especially for our very junior mining companies, we are encouraged by the observed increased financing activities and improving macroeconomic environment. The market is now starting to step out of many of the challenges it was facing, and we are doing as much as we can to help our existing and prospective clients stay in front of investors and prepare themselves for the windows of opportunities we expect in the coming months. 2025 will be a pivotal year and everything is lining up for the mining sector to outperform. ■





## Randy Smallwood

President and CEO  
WHEATON PRECIOUS METALS

“Over the next five years, we expect to grow by around 40%, with production to increase from 635,000 oz/y AuEq this year to about 870,000 oz/y AuEq by 2029.”

### What distinguishes Wheaton's pure streaming portfolio from other investment vehicles, and how has this model contributed to its consistent outperformance against gold and silver?

Investing in a precious metal streaming company offers one of the most compelling ways to gain low-risk exposure to gold and other metals. Wheaton Precious Metals is a stand-out leader among the top streaming companies, boasting an industry-leading growth profile, with production set to rise by ~40% over the next few years. Our streaming agreements allow us to purchase gold at pre-negotiated, discounted rates, ensuring attractive profit margins even in inflationary environments. Over and above exposure to the commodity price, we offer exploration upside from our high-quality asset base, and we pay a dividend to hold our shares, as opposed to the storage and insurance fees that you would pay to hold physical bullion. If you compare Wheaton's share price performance to that of physical gold or silver and the various precious metals ETFs, you'll see that we outperform in every time frame when it comes to consistently returning value to shareholders.

### Could you elaborate on Wheaton's recent growth trajectory and outline your guidance for 2025 and beyond?

2024 set a strong foundation for our estimated sector-leading growth profile, which we believe has the potential to propel Wheaton to a level of precious metals production unprecedented in the streaming industry. 2025 is off to a great start, supported by record gold prices and share performance, as well as strong cash flow. Over the next five years, we expect to grow by around 40%, with production to increase from 635,000 oz/y AuEq this year to about 870,000 oz/y AuEq by 2029.

### Do you expect the current gold rally might encourage more generalist investors back to gold-related assets like gold stocks and ETFs?

Gold has been used as a store of value for thousands of years. During times of geopolitical uncertainty or financial crises, investors often turn to gold as a safe haven for their wealth as it is widely recognized as a hedge against inflation and market instability. With growing concerns over the

stability of fiat currencies, gold remains constant, holding its value when other currencies falter. Since gold tends to move inversely to broader market trends, incorporating it into a diversified portfolio can help reduce risk, lower volatility, and ultimately improve overall returns. In these times of geopolitical uncertainty, currency devaluation, and trade wars, everyone should have some gold—a 'comfort metal'—in their portfolio.

Looking ahead, we expect to see continued volatility in global markets because of rising debt levels, inflationary pressures, and geopolitical tensions. These factors have historically driven demand for precious metals as investors seek stability and asset protection. For Wheaton, these market conditions further underscore the advantage of our business model, which offers lower-risk, diversified exposure to gold, with the potential for strong, consistent returns. Our streaming agreements allow us to purchase gold at pre-negotiated, discounted rates, ensuring attractive profit margins even in inflationary environments.

### Wheaton recently launched the "Future of Mining Challenge" last year. Could you comment on this initiative?

Constant innovation is essential to responsibly meet the growing global demand for minerals and metals. While we don't own or operate mines in our portfolio, we have a unique opportunity to support the industry to continue to deliver essential commodities and materials in a more sustainable manner. Last fall, Wheaton launched our Future of Mining Challenge, inviting companies from around the world to propose industry solutions aimed at improving operational efficiencies and minimizing environmental impacts. The inaugural challenge focused on finding innovative, scalable technologies that have the potential to reduce greenhouse gas emissions across mining operations.

ReThink Milling was the winner of the 2025 Future of Mining Challenge for their innovative milling technology, which demonstrates potential to deliver greater efficiency with significantly lower energy use, leading to reduced greenhouse gas emissions and operating costs.

The theme of Wheaton's 2025/26 Future of Mining Challenge will be water, and Wheaton will begin receiving expressions of interest in June 2025. ■



## Vincent Benoit

CEO and Managing Partner  
LA MANCHA RESOURCE CAPITAL

“Even the best asset can underperform without the right people in place. We pay great attention to whom we partner with and whether they have the experience to build, operate, and explore an asset.”

### Could you introduce La Mancha and the creation of the La Mancha Fund?

La Mancha was formerly owned by French nuclear giant Areva (now Orano), until its acquisition in 2012 by the Sawiris family. In the first few years, La Mancha operated gold mines in Australia, Sudan and Côte d'Ivoire, but in 2015, it shifted strategy, listing these assets under public entities in which La Mancha retained a stake. We did three deals back in 2015: we contributed our Australian assets to Evolution Mining (with La Mancha taking a 30% interest in the company); the Ivorian mine to Endeavour Mining (also with 30% of shares held by La Mancha); and we sold the Hassai gold mine in Sudan to the Sudanese government.

After we sold our interest in Evolution Mining in 2020 (while retaining a 19% shareholding in Endeavour), the family launched the La Mancha Fund, transferring all the assets of the holding company into the fund to help raise additional capital and invest in new opportunities. Today, the Luxembourg-based La Mancha Fund manages about US\$1.7 billion in assets.

### La Mancha's investment in G Mining Ventures marks a move into Latin America. What factors do you consider when assessing the attractiveness and risk profile of a new jurisdiction?

We favour mining-friendly jurisdictions where the industry is actively supported by the host government, embedded in a national strategy, and ideally backed by a clear mining code, transparent permitting processes, and predictable timelines. We also focus on countries where we know the people. Knowing how a country works and having the right networks, goes a long way, especially for long-term investors. Risks are everywhere, and Africa has never deterred La Mancha; after all, the Sawiris family itself is Egyptian. People tend to focus on the geopolitical and security risks in Africa and overlook the advantages – such as the fact that it takes less than a year to obtain a permit in many countries in West Africa.

At the moment we are significantly developing our presence in and exposure to Latin America, particularly in Brazil and Guyana. Guyana, for example, has a similar geology to West Africa, the Guiana Shield and West

African Birimian Greenstone Belt having been once part of the same landmass before the continental drift. The added strategic advantage in Latin America is the absence of dominant regional gold producers. Even if majors like Newmont or Barrick hold large assets in the region, no player has consolidated a leading gold platform across the continent.

### How do you think record gold prices will impact investment patterns in the junior sector?

At La Mancha, we do not invest in gold price predictions. As my shareholder once said: "I don't pay you to guess the gold price, I pay you to find the best-value assets." In other words, we invest in assets and not in price momentum. We model our investments using long-term prices well below current spot prices to ensure that, even if prices drop, our returns remain positive. A good mine will still generate strong returns, at around 20% per year on average, even if gold prices drop.

Lastly, even accounting for inflation and cost increases, valuations haven't caught up with metal prices. Just look at GDX, the ETF for gold miners: it was at US\$60 when gold hit US\$1,800 in 2011. Today, with gold over US\$3,000, GDX is still only at US\$50. So there is clear upside potential in the mining sector.

### La Mancha has also invested in non-gold assets. Can you comment on this diversification?

Gold remains our core business but, when we created the Fund in 2021, we wanted to diversify our exposure to critical minerals. In 2022, therefore, we invested in Falcon Energy Materials, which is developing an anode material plant in Morocco. Falcon had a graphite mine in Guinea, but instead of starting with the lower-value raw material and then vertically integrating it to battery materials, we decided it was smarter to first master the transformation of graphite into a Coated Spherical Purified Graphite (CSPG), to capture the greatest value. 100% of graphite today is being processed in China, which leaves graphite miners completely vulnerable to Chinese uptake. By developing a CSPG plant, we can sell directly to battery makers. La Mancha owns 25% of Falcon Energy. ■





# ESG

## The social license is the ultimate permit

It has been nine years since Canadian company GoldQuest Mining released a PFS on its 2.2 million oz AuEq Romero project in the Dominican Republic. Opposition from a community outside the immediate area of impact stalled the project in 2016. After years of re-engagement, 59% of the people in the province now support Romero's development, allowing GoldQuest to move on to legal and technical matters, starting both the ESIA and BFS processes. "We have a highly prospective deposit in one of the poorest areas of the country where unemployment is rampant. We have the technical and financial resources to develop it, yet we would have nothing without the support of the local community,"



**Matthew Rowlinson**  
President and CEO  
SOLARIS RESOURCES



The success of Latin American projects very much lies in ensuring a responsible, participatory mining model. Key to our success to date has been building broad stakeholder relationships, far broader than simply within the direct area of influence.



reflected Luis Santana, who took over as CEO of GoldQuest Mining in 2022. "Romero is just one of many examples in Latin America of the consequences of incomplete community engagement," Santana completed.

It is true that the case is far from unique. Local opposition can halt mining projects for a few days, months, years, or indefinitely, and at any stage during the project, including already operating mines. Latin America is notorious for the high level of opposition to mining, manifested in anything from locally driven campaigns, blockages and violence, to widespread protests and legal actions, sometimes against the state, other times against the mining company. 45% of reported conflicts related to environmental and human rights abuses at mine sites are in Latin America, according to the Global Atlas of Environmental Justice. A paper by Weiß, Giljum and Luckeneder published in 2020 in the Fine-Print Journal (Brief No. 11) found that two people died on average every week in Latam due to conflicts in the context of mining, more than anywhere else in the world.

Anti-mining sentiment, whether from the local communities, broader population, organized associations and other groups, or all three, often takes a militant form through protests, violent opposition, and legal trials. Examples include the suspension of First Quantum Minerals' flagship Cobre Panama mine in 2023 and the recent suspension of Equinox Gold's operations at Los Filos Mine in Guerrero, Mexico, after one of the three communities did not sign the extension of the land access agreement this year. Ructions sometimes take the form of active violence, which Zijin Mining has been facing since acquiring the Buriticá gold mine in Colombia. In January this year, Zijin had to halt operations following a homemade bomb attack.

Operators in Ecuador have not been spared either. Ecuadorian state company Enami and Chile's Codelco have been ordered by a local court to suspend operations at their Llurimagua copper project on the grounds that it did not comply with environmental parameters. Other assets, like Pan American Silver's 264 million oz AgEq Escobal mine in Guatemala, have been in stalemate with the government since 2017, after a court determined that a consultation

with an indigenous community had to take place before the mining license could be reinstated. Phase 2 of consultations with the Xinka Indigenous Peoples started in 2022.

The reasons behind the heightened risk of local resistance in the region are multifarious. An obvious one is mining's gradual protrusion into biologically and socially sensitive areas in what author Michael Klare called "the race for what's left," as deposits in ideally scarcely populated and sparsely biodiverse areas have most likely been found and the industry has permeated into less tolerant landscapes. Latin America is a hotspot for biodiversity, hosting 34% of the planet's primary forest, and 51% and 41% of amphibians and birds, according to "Natural Resources Outlook in Latin America and the Caribbean," a UN publication. Colombia, Mexico and Ecuador are classified as three of the 17 "megadiverse" countries of the world. At the same time, a fifth of the surface area of Latam and the Caribbean is occupied by indigenous people, and their land is covered by forests in a proportion of 80%. This places indigenous people as indirect stewards of biodiversity.

Mining in such ecologically and culturally delicate places raises legal questions over what takes precedence, posing nature versus mining against one another. In 2016, the Atrato River in Colombia was assigned rights equivalent to those of a human, the first with such legal status in Latin America. The rights of nature have become recognized in various laws across the region. The Supreme Court of Panama found that the "right to life, health, and the environment" takes precedence over the "right to investment," deeming the law granting the concession contract between Panama and Minera Panamá SA (subsidiary of FQM) as unconstitutional, a decision that led to the suspension of operations. Community members in Ecuador's Intag Valley won the case to stop the Llurimagua copper mining project, the court ruling that the mining companies violated the communities' right to consultation and the right of nature.

Social license is gaining more of a legal footing, with previously soft norms hardening into laws. In 2021, a ruling by the Inter-American Court of Human



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**Frederick Davidson**  
CEO  
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Grandfathers, fathers and sons and daughters work with us, and we are completely assimilated locally. Aside from one Canadian, our entire workforce at the site is Mexican, and we have never experienced a work stoppage or community opposition since 2006.



Rights established that every member state of the American Convention on Human Rights (ACHR), which 24 Latin American and Caribbean states ratified, must comply with the UN Guiding Principles, which until then were not legally binding, as explained in an article in the Latin Lawyer. Community consultation prior to a project's development had been mandatory before through the legally-binding ILO 169 (Labour Organization's Convention concerning Indigenous and Tribal Peoples in Independent Countries), but it was further fortified through landmark decisions such as the 2023 Maya Q'eqchi' Agua Caliente vs Guatemala ruling in favor of the community and ordering Guatemala to pass legislation for consultation with indigenous people prior to approving projects impacting their lands and resources.

Even though the social license to operate is a vague concept speaking more to the informal acceptance of a company by local communities, its importance is starting to matter as much as a legal permit; in fact, that it is not

a legal permit per se heightens the risks associated, since there are less clear-cut parameters and guarantees around it. The social license is evolving into a prerequisite to legal licenses, but it can also undo an already permitted project. Mining companies will need to do more than ascertain the political will. The community's will is just as important, and the acceptance at the local level may not coincide with the government's position.

According to Arsel et al (2016), left-leaning governments in Latam have been guided by a "resource imperative," a drive to use proceeds from the extraction of resources to combat inequality and poverty. But this has sometimes been at odds with the priorities of local communities. In places with a long mining history like Mexico, communities are used to mining and mostly supportive, even when their government did not support mining development. Similarly, in Colombia, there is a gap between the support at the provincial and national level, with historic mining provinces like Antioquia being more pro-mining. In some regions, local communities may have never seen a mine, while their governments are pushing for mining investment. In many cases, the people's will has toppled the political will. The largest copper operation in Central America and a US\$10 billion project, Cobre Panama, was brought to a halt due to protests, which were originally born out of a dissatisfaction with the government's handling of the pandemic. This soon escalated. "The mining issue became a rallying point for radical groups, unions, and environmental groups, while politicians used it seeking to attract young voters ahead of upcoming elections," Roderick Gutiérrez Pérez, president of the Cámara Minera de Panamá (CAMIPA), explained.

In this case, the social has spilled into the political, influencing the project's outcome. Even when the state itself is involved in the project, local opposition can still put a stop to it: In Bolivia, a high-profile, US\$2 billion lithium project developed by the country's state-owned company (backed by Russians and Chinese), has been pushed back. The Llurimagua copper project, developed by Ecuadorian

state company Enami and Chile's Codelco, was also revoked due to local opposition. At the same time, many other protests in Ecuador have not led to the closure of mines, but to heavy-handed crackdowns on protests. By comparison, in Peru, protests at the Tia Maria copper project have only delayed the megaproject. We can deduce that in countries with a shorter mining history (such as in Panama), the government may bend more easily in front of protests than in countries where mining is closely embedded in the economy (such as in Peru).

There are exceptions to that argument, however. In the Dominican Republic, mining is very old, with mining at Pueblo Viejo having started in the 1500s. In 2006, Barrick Mining acquired the asset (40% of shares belong to Newmont now), and in 2012, it agreed to the newly seated government's request for more favorable terms. Barrick has since run a massive rehabilitation program to deal with legacy issues at the site left by previous operators. The nearby Margarita River had a dangerously low pH level of 2, making it uninhabitable for aquatic life. "12 years later, and through a state-of-the-art water treatment plant, the water quality has significantly improved, and aquatic life has returned. That, nevertheless, does not stop people from claiming that Barrick is contaminating the water bodies, claims that can create unnecessary concerns for politicians. It is up to us, as an industry, together with the government, to set the record straight," commented Juana Barceló, president and country manager, at the Pueblo Viejo Dominicana Corporation, a Barrick-Newmont JV.

This brings us to the final issue, which is reputation. Mining has a bad image. Some of it stems from disasters, including the spill in the Sonora River of Mexico in 2014, one of the worst environmental disasters in the history of mining. The locals' fight against mining becomes a fight against degradation, pollution, as well as the loss of biodiversity and traditional livelihoods. What the industry is yet to learn is communicating the good things that it is doing, said Alberto Vazquez, founder of Mexican law firm VHGLegal Services: "Investing in that messaging is a preventative measure that could avoid having to go through Amparos or defend yourself against NGOs who get their information from the 1970s - these NGOs are still better at propagating their message and even have their own books on how to stop a mining project."

As such, the industry is paying for the bad deeds of other companies, while the positive impacts of mining get a lot less air time. Returning to the case of Panama, the Cobre Panama operation represented 4.8% of the country's GDP, and the closure of the mine had devastating effects on the economy, including the loss of over 50,000 jobs. According to Roderick Gutiérrez Pérez, the president of the Cámara Minera de Panamá, these impacts have started to sink in: "2024 was a year of transition, economic strain, and education. Today, Panamanians know more about mining than they did two years ago, and they talk more openly about mining. Some are starting to demand the reopening of Cobre."

Luis Santana, GoldQuest's CEO, provided a cautionary conclusion: "The mining industry does not see the need to publicize itself because it counts on secure buyers for its

products and the wider public is not part of its direct value chain. That is a great mistake. At the end of the day, politicians will bend to the will of the people, so it is down to the industry to come together as a sector and better communicate their values (...) What happened to one company will eventually happen to others."

**A guide to community engagement**

Based on conversations with more than 60 mining companies, we extrapolated some common principles and practices that we hope will guide mining players in this region to better engage with the communities around them. There will be many guides out there written by ESG professionals, but this speaks primarily to the universe of mining companies operating in Latam North and Caribbean and is based purely on their experiences as case studies.

**1) Know your stakeholders**

How many communities are in your direct and indirect area of influence, are there artisanal miners in the region and what is their role, and, very importantly, are you competing with any other stakeholders, such as local "lords" or even the government?

**Direct and indirect areas of influence:** Some projects, like Prime Mining's Los Reyes project in the Sierra Madre Occidental mountains in Mexico, are fully encapsulated within one Ejido (area of communal land), in this case the Ejido Tasajera. The company signed a 30-year community agree-

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ment with this Ejido. In other places, the area of impact is more complex and sometimes haphazard. In Ecuador, for instance, Solaris Resources has signed community impact and benefit agreements with the two ancestral indigenous communities that own the surface rights to their tenements, namely the Warintz and Yawi communities, but the company also went further out to sign multiple agreements with the Shaur indigenous populations residing in the broader Morona Santiago province. It is worth remembering that for GoldQuest's Romero project in the Dominican Republic, it was a community further away from the project that posed opposition and ended up delaying the project by many years.

**Artisanal mining:** The presence of artisanal mining is a key factor. Small scale or illegal mining can be a serious challenge, but sometimes it can be used to the benefit of the project. Newly formed explorer Greenheart Gold uses artisanal workings as a vector towards hard rock sources of gold at its early-stage projects in Suriname and Guyana.

"In the Segovia province of Colombia, artisanal mining is a way of life," according to Alexandre Boivin, the CEO of explorer Quimbaya Gold. Its

neighbor in Segovia, leading gold producer Aris Mining, has indeed integrated artisanals as Contract Mining Partners, purchasing mill feed from the small scale miners to process at their facilities. An astonishing 50% of the gold at their Segovia mine comes out of this process. "We must recognize that we, as a foreign mining company, are the new kids on the block, whereas the locals and their forebears have been mining in the area for 450 years. My belief is that we can work together to create mutually beneficial and profitable partnerships. The partnership approach has had a huge impact on our reception at the community level, with the local miners becoming our greatest advocates," commented Neil Woodyer, the CEO of Aris Mining.

**Other stakeholders:** In Guatemala, Volcanic Gold was met with opposition from a small but "aggressively anti-mining group," in the words of CEO Simon Ridgway. This group agitated some members of the community to set fire to one of the company's drill rigs. For the past two years, Ridgway and his team have been engaging the local communities who support the project to ensure the restart of exploration is safe and no further boy-

cotts will take place. "Sometimes it is wealthy people within the community who are opposing mining because mining introduces higher wages, which can make it difficult for local employers to attract workers. You have to strike a delicate balance between paying a fair wage without disrupting the local economy," Ridgway said.

**2) Focus on employment**

When done well, mining can have a transformative impact on communities. The provinces hosting large mining operations stand out massively. The Zamora Chinchipe province in Ecuador, which hosts both Ecuacorriente's Mirador copper mine and Lundin Gold's Fruta del Norte, used to be the 23rd poorest out of 24 in the country. It has since climbed up to the top 10 most well-off.

Though investments in infrastructure, health, education, and social development leave long-lasting benefits, the biggest impact tends to come through employment. For every person working at Pueblo Viejo, nine other employment opportunities are generated. The employment ratio is equally high at the Mirador mine in Ecuador, which generates a total of 16,000 jobs, of which 1,324 are direct, 1,905 contractors, and the rest are created through the reinvigoration of the local economy.

Smaller operations can also have considerable impact. In the historic Mexican mining town of Temascaltepec, Sierra Madre Gold and Silver has brought back into production the La Guitarra underground silver mine, which had previously been on care and maintenance under First Majestic. Since the reopening on January 1st of this year, the town has been going through what Alex Langer, Sierra Madre's CEO calls "a honeymoon period." Along with the mine, the entire town came back to life, with restaurants and hotels reopening and many former workers regaining their jobs: "The multiplying benefit is immense, with every 1 new direct job generating 11 other indirect or ancillary jobs. 20,000 people live within our project boundary."

In Temascaltepec, La Guitarra is refilling a mining void, but mining activities can fill up other vacuums too.

Ian Graham, the president of Oroco Resource, which is developing the Santo Tomas project in Sinaloa, Mexico, explained: "The legalization of cannabis in Canada/US has collapsed the illicit cartel businesses. As a result, the people who made a living out of cannabis cultivation have switched to farming tomatoes, sesame, corn and other legal crops, and cartel interest in the area withered. Small local mining companies, and principally Oroco, have since organically filled the social vacuum resulting from the changed economic landscape. Now we are the main agent for social support, whether by reopening a gummed-up water well, painting a school, bringing basic medications to the town clinic, or maintaining local access roads."

Similar accounts have been expressed by companies across the region. In Jamaica, the main question asked by the community is around job creation, said Dan Symons, the CEO of explorer C3 Metals. For companies like Avino Gold and Silver with a 100% local workforce, employment has been the

surest way to local assimilation and acceptance.

Simon Ridgway brings in another argument for employment in the region: "Countries in the region need employment above anything else. The typical narrative we hear is that people flee Central America due to violence, but for the most part, they are leaving because they want a better life. Before the Escobal mine was shut down, it was employing around 1,200 people, people who never regained their jobs. The economic argument for mining in the region has never been so strong."

**3) Livelihoods beyond mining**

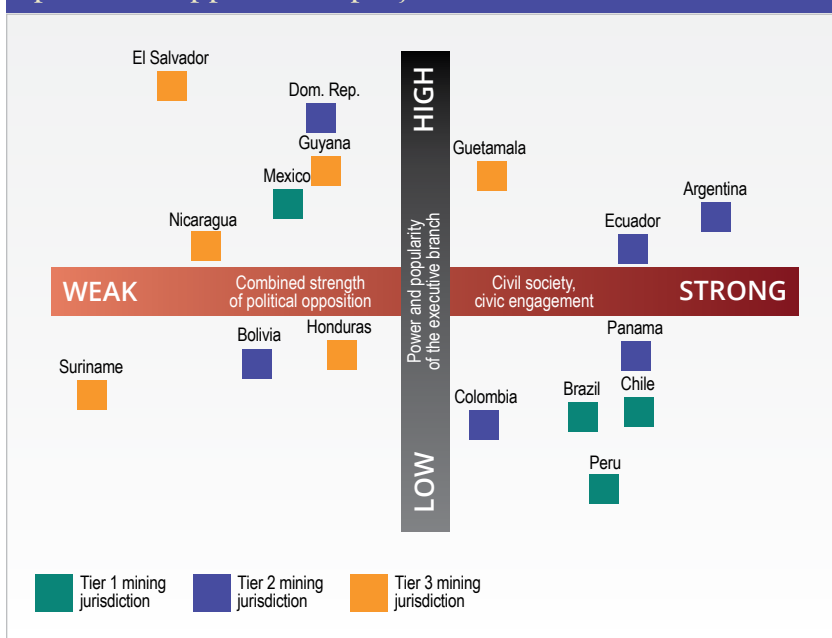
While the employment opportunity may be exciting, sometimes mining activities clash with the local ways of life, disrupting traditional livelihoods like agriculture. Resettlements represent the most extreme change. In the major resettlement carried out by Barrick Mining at Pueblo Viejo, 3,000 meetings with local communities have been held, ensuring the resettlement is not just a relocation of housing but also an

improvement in livelihoods. "The locals involved got to choose the size and nature of their lot depending on their family size (...). Each family concerned will also have a livelihood project tailored to their needs," said Juana Barceló, president and country manager at the Pueblo Viejo Dominicana Corporation, a Barrick-Newmont JV.

Though most projects do not entail such major changes as a resettlement, mining companies do need to map out the social, cultural and economic contexts to help preserve a continuity in traditional livelihoods while also introducing new alternatives. And the industry has not failed to come up with exciting projects: GoldQuest, for instance, has developed a roadmap to help the ecotourism sector in the region take off and created a local cooperative to launch a fish farming operation in the reservoir sitting downstream of its concessions, among other initiatives.

With the social license becoming a quasi-legal permit, mining is becoming a quasi-institution - a proxy for the government and a proxy for change. ■

Effectiveness of public opposition at eroding political support for a project



Source: Americas Market Intelligence

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## Vickram Bharrat

Minister of Natural Resources  
GOVERNMENT OF GUYANA

“The government is committed to fostering a stable, transparent, and investor-friendly environment, supported by modernized regulations, tax incentives, and strong governance mechanisms.”

### How can Guyana best leverage its abundant natural resources to create wealth for the country in the long run?

Guyana can best leverage its abundant natural resources by implementing a long-term development framework that ensures responsible extraction, value addition and equitable distribution of wealth. The long-term framework includes four main pillars: Firstly, the prudent management of oil revenues. That means using tools like the Natural Resource Fund to save and invest strategically, while also protecting the economy from oil price shocks. A big part of this is making sure that oil money is directed toward things like infrastructure, education, healthcare, and helping the economy grow beyond oil. Secondly, economic diversification; it's important to invest in sectors like agriculture, manufacturing, renewable energy, and ICT, and to build up value-added industries (like refining bauxite or agro processing) which will retain more value locally. The third pillar is local content development, including building up local expertise and supply chains to participate in mining and oil-related industries, and strengthening local content policies that require companies to hire and source goods and services from Guyanese businesses. Lastly, environmental stewardship is essential. Guyana needs to enforce solid environmental standards and continue investing in climate resilience. Guyana's Low Carbon Development Strategy ensures that natural resource use is balanced with conservation goals.

### How have Guyana's regulations evolved in regard to both mining and the petroleum sector?

The Guyana Geology and Mines Commission (GGMC) oversees the sector, with updated guidelines on safety, land reclamation, and environmental management. The government is also enhancing monitoring technologies like remote sensing and has introduced reforms to improve transparency and accountability. Furthermore, artisanal and small-scale miners are now being integrated more formally through training, licensing support, and incentives for sustainable practices.

In the oil sector, The Petroleum Activities Act (2023) replaced the outdated Petroleum Exploration and Production Act of 1986. Key reforms include: Clearer fiscal terms and production-sharing agreements (PSAs); Improved licensing transparency and competitive bidding; Stronger envi-

ronmental regulations and oversight mechanisms; A Local Content Act (2021) ensures that Guyanese workers and businesses benefit directly from the oil industry. The Environmental Protection Agency (EPA) also now plays a more assertive role in impact assessments and enforcement.

### What is the minister's strategy for the formalization of the artisanal mining sector?

One key area is land access: the introduction of land lotteries and faster claim verification processes has significantly reduced illegal raiding and opened up over 1,000 new legal mining opportunities. On the financial side, the government has provided tax relief through VAT and excise tax exemptions on mining equipment and fuel, along with new duty-free concessions secured through an agreement with the Guyana Gold and Diamond Miners Association (GGDMA). Environmental responsibility is also a major priority, with a strong push to promote mercury-free technologies and ensure alignment with Guyana's Low Carbon Development Strategy (LCDS). At the same time, investments in mineral mapping and road infrastructure are improving access to mining sites and helping reduce operational costs. Finally, through the Guyana Mining School, the government continues to offer technical training programs aimed at building a more skilled and professional artisanal mining workforce.

These efforts aim to improve productivity, reduce unregulated mining, and ensure sustainable, inclusive growth in the sector.

### What is the government's vision for the mining sector in Guyana?

The Government of Guyana envisions a mining sector that drives sustainable, inclusive and diversified economic growth. Key goals include diversifying the economy with value-added industries like aluminum processing, promoting sustainable mining aligned with the Low Carbon Development Strategy (LCDS) 2030, and investing in infrastructure, especially road access, to remote mining areas. We are also committed to building a skilled workforce through training and industry partnerships, including small-scale miners and Indigenous communities through land access and incentives, and attracting investment to increase gold production to over 1 million ounces by 2030. This vision aims to balance economic gains with environmental responsibility and social inclusion. ■



## Floyd Green

Minister of Agriculture, Fisheries, and Mining  
GOVERNMENT OF JAMAICA

“The government is aligning with the private sector to develop an investment-friendly regulatory framework that attracts interest, especially in commercial-scale gold and copper exploration.”

### What synergies between mining, agriculture and fisheries emerge from the current Ministry's portfolio?

The Ministry promotes synergies between different uses of land, with a focus on optimized production, improved infrastructure, and collaboration within the value chain. Jamaica has a strong history in both agriculture and mining. By placing these two critical sectors together at the table, we can segment land use to maximize the value from our land resources, whether mineral or otherwise. The Ministry promotes high rehabilitation standards and purposeful restoration to prepare the land for agricultural use following mining operations. By supporting mining and agriculture simultaneously, we ensure neither takes place at the expense of the other.

### What is the Ministry's top priority for mining in 2025?

Jamaica is one of the world's leaders in bauxite and alumina production. Our bauxite sector came down from the great highs in the 1960s-1980s, but it remains an important contributor to GDP and a high-value employer. Jamaica has three bauxite mining operators, two of which are also integrated into aluminum production. In the bauxite industry, our focus falls on consolidation and the maximization of the value from current reserves.

For 2025, our main focus is on commodity diversification so that we can fully capitalize on our country's natural capital. The government is aligning with the private sector to develop an investment-friendly regulatory framework that attracts interest, especially in commercial-scale gold and copper exploration. Jamaica also has significant rare earth elements (REE), found primarily in red clay, which is a by-product of bauxite mining. With advancements in technology, we believe we can extract these REEs feasibly, positioning Jamaica as a valuable source of REE.

### What are some of the practical measures undertaken to increase Jamaica's appeal to foreign investors?

A big part of our efforts at the Ministry is communication and raising awareness about Jamaica's potential beyond bauxite. For instance, we are utilizing the data from a former producing old mine, together with other geophysical data gathered by private companies like Geophysx Jamaica, to advocate for our country's geological endowment. With these advancements in exploration made by private actors and with the government's openness to ensuring a welcoming policy framework, we are already seeing major

players like Barrick Mining partnering with Jamaican company Geophysx on a large license area. Also, in collaboration with an Australian company, we have run a REE pilot project demonstrating significant REE resources.

Our next step is to embark on an extensive communication campaign to bring visibility to these results. In May 2025, Jamaica will run the National Minerals Week, and we would like to extend an invitation to anyone who would like to understand the scope of Jamaica's potential.

### How has Jamaica's mining policy evolved to incentivize investment in other sectors beyond bauxite?

Jamaica has a well-established mining regime thanks to its decades-long history in bauxite mining. Regulations are designed to balance financial returns with community development. The Jamaica Bauxite Institute, for instance, manages the community engagement framework that ensures the reinvestment of proceeds into sustainable local development projects. These rules currently extend and provide a foundation for investments in gold, copper and REE. Investors can rely on a transparent policy that guarantees good returns on their investment. The Ministry is working on refining the community engagement frameworks to ensure mining remains a win-win partnership, and we are also recrafting our mining policy and incentive regime by taking an industry-led approach: we engage the Mining Associations and the private sector, as well as guiding ourselves by international best practices to formulate an attractive regulatory regime.

### How does the Ministry address tensions linked to mining operations?

Our role as the Ministry is to manage these challenges responsibly. We work to ensure that mining is carried out with minimal impact on the environment and surrounding communities by strengthening environmental standards and promoting responsible rehabilitation. We also focus heavily on transparency and community involvement. For instance, we've launched a mobile app that allows citizens to report issues with mining operations—these reports can be tracked in real time, helping us hold companies accountable. Ultimately, our goal is to make mining a force for good. We're actively investing in infrastructure, education, water access, and social services to ensure that communities near mining projects see real, lasting benefits. ■





## Rubén del Pozo Mendoza

President

ASSOCIATION OF MINING ENGINEERS, METALLURGISTS AND GEOLOGISTS OF MEXICO (AIMMGM)

“

We are confident that future reforms will promote a regulatory framework that encourages mining, supporting Mexico's development and its role in global progress.

”

### What is the role of the Association in the mining industry?

The Association of Mining Engineers, Metallurgists, and Geologists of Mexico (AIMMGM) is a 74-year-old institution that brings together more than 3,800 professionals and technicians from the mining and metallurgical sector, distributed across 32 mining districts in the country.

### What is the importance of the mining industry in Mexico's economy?

As of December 2023, the mining sector provided direct employment to 416,875 people and generated 1.7 million indirect jobs. Additionally, salaries in the mining industry are 33% higher than the national average. According to the Social Security Institute, mining contributes to the well-being of 690 communities across 26 states in the country. Its impact is crucial for the development of 70 productive sectors in Mexico, making it an essential industry for the nation's economic and social growth.

### How has the mining industry performed in the last year, and what are the expectations for the coming year?

According to our most recent data (2023), mining accounted for 2.75% of Mexico's GDP and 8.63% of the industrial GDP. The mining and metallurgical industry invested US\$4.9 billion and reached a total value of 261.61 billion pesos. However, there was a 17.6% decline compared to 2022, largely due to changes in mining legislation. The states with the highest mining activity in the country are Sonora, Chihuahua, Durango, Zacatecas, and Guerrero. Despite existing challenges, in 2023, the mining industry ranked as the seventh-largest source of foreign exchange, contributing US\$19.64 billion, further solidifying its importance to the national economy. The outlook for the coming year will depend on factors such as regulatory stability and investment in the sector.

### What is Mexico's current political stance on mining and legal certainty in the sector?

Mining is a fundamental pillar for Mexico's economic recovery, but it requires a state policy that provides certainty. In recent years, the sector has faced significant regulatory changes, such as the restriction of lithium for exclusive state use in 2022 and the reform of the Mining Law in May 2023, which limits exploration and the development of new deposits. Additionally, in 2023, a proposal was introduced

to ban open-pit mining. However, President Sheinbaum's administration is currently reviewing it, as its approval in Congress could have serious consequences for production, employment, and tax revenue. We are confident that future reforms will promote a regulatory framework that encourages this essential economic activity, supporting Mexico's development and its role in global progress.

### What are the Association's main goals moving forward?

Our priority is to continue training our affiliated technicians and professionals, promoting the adoption of workplace safety and health practices, as well as respect for and preservation of the environment. We also aim to strengthen the active participation of our members and expand our membership base. Through international conventions and national congresses, we will promote the sharing of advanced technology to optimize every stage of the mining process, from exploration to mineral transformation. We are firmly committed to environmental sustainability as an undeniable duty and to defending mining interests as a fundamental responsibility. Our actions will remain focused on achieving these essential objectives for the development of the sector.

### What should attendees expect from the 36th International Mining Convention in Acapulco?

The Mexican mining industry has shown remarkable adaptability in the face of challenges, thanks to the unity of those who make up this sector. In this spirit, Acapulco, Guerrero, is preparing to become the epicenter of mining innovation and development with the 36th International Mining Convention, taking place from November 19 to 22, 2025. This is Mexico's most important mining event and the second most significant in Latin America. The convention will bring together key players from the global mining industry. We will host a cutting-edge expo where leading companies will showcase their latest technologies and innovative solutions. Additionally, a high-level academic program has been designed, featuring keynote conferences by international experts on crucial topics such as environmental sustainability and digital transformation. This event will also offer an excellent opportunity for networking and business development, with roundtable discussions and collaborative projects that will allow participants to build valuable connections and explore new investment opportunities. ■



## Juan Camilo Nariño Alcocer

President

COLOMBIAN MINING ASSOCIATION (ACM)

“

Over the next two years, discussions on regulations, the Mining Code, and new decrees are expected to be resolved, making this a great time to explore the country and its institutional framework.

”

### Could you introduce us to the Colombian Mining Association (Asociación Colombiana de Minería)?

The association represents and unites the entire mining industry in the country. Its members include companies that produce a wide range of minerals, such as thermal and metallurgical coal, gold, nickel, construction materials, emeralds, among others. It also includes exploration companies searching for new mineral deposits in Colombia, as well as suppliers of essential goods and services for the sector. Currently, the association has 72 members and accounts for about 98% of the country's mining production, making it a key player in the industry's growth and development.

### How has the industry performed in the past year, and what is the current trend?

Mining is a key sector of the Colombian economy, accounting for 2.7% of the national GDP, 30% of total exports, and approximately 15% of foreign direct investment. These numbers are expected to stay strong in the coming years, highlighting the industry's importance for the country's economic and fiscal stability. In terms of production, thermal coal is the most significant mineral, with around 65 million tons produced annually, followed by gold, nickel, emeralds, and construction materials. This sector is essential as it supports other industries and creates large-scale employment across different regions.

### How does global pressure on coal and fossil fuels impact Colombia's future projections?

Although Colombia produces 65 million t/y of coal, this amount is minimal compared to countries like China (3.4 billion t/y), India (1 billion t/y), and Indonesia (nearly 700 million t/y). However, Colombian coal stands out for its high quality and calorific value, making it highly sought after in international markets. While the country has a clear policy for reducing emissions and aims for a more balanced energy mix, its domestic coal consumption for power generation is minimal. As a result, Colombia's coal production is primarily focused on exports, meaning that global pressure on fossil fuels could impact demand, but not immediately or directly.

### What recent regulations have impacted Colombia's attractiveness for foreign investment?

97% of the country's territory remains untitled, meaning there is still a lot of ground to explore. That said, recent years have brought some major regulatory challenges. The

government is in the process of introducing a new Mining Code, currently under consultation with communities in accordance with ILO Convention 167. There is also a proposal to create a state-owned mining company, Ecominerales. Furthermore, new decrees have been issued that impact the mining sector and other areas of the economy. This evolving regulatory framework's impact will depend on how these measures are implemented and the direction the government takes in the coming years. However, there is no set timeline for the new mining code coming into law.

### What impact would the creation of Ecominerales have on the industry?

Ecominerales, as a state-owned company, is part of a broader trend in Latin America. Its creation raises questions about its role, participation in the sector, and the conditions under which it will compete with private players. It is essential for the government to clarify the real implications of this new entity, particularly regarding fair conditions in the allocation of mining titles and project development. Transparency will be key to ensuring fair participation between the public and private sectors in the country's mining industry.

### What are the association's top priorities for this year under your leadership?

Our priority this year is to strengthen understanding of the laws and decrees affecting the sector and work towards regulations that align more closely with the current global reality of mining. One of the biggest challenges is actively engaging in discussions with the government to ensure that the regulations under review are balanced and support the sustainable development of the mining industry in the country.

### What message would you like to convey to international investors about Colombia?

Colombia is a highly promising destination for long-term mining investment. Over the next two years, discussions on regulations, the Mining Code, and new decrees are expected to be resolved, making this a great time to explore the country and its institutional framework. Unlike some other countries in the region, Colombia has a clear separation of powers between the Senate, the Supreme Courts, and the government, ensuring stability and a strong democracy. Additionally, its vast geological potential and the fact that much of its territory remains unexplored present a significant opportunity for international investors. ■





## Roderick Gutiérrez Pérez

President, PANAMA MINING CHAMBER (CAMIPA)  
CEO, CONSULTORES AMBIENTALES Y MULTISERVICIOS (CAMSA)

“The shutdown of Cobre created a major economic void. This single project represented 4.8% of Panama's GDP (surpassing the Panama Canal's 3.5% contribution) and 76% of the country's exports.”

### Could you provide a brief history of mining in Panama?

According to archeological findings, Indigenous groups in the region were extracting minerals as far back as 1,500 years ago. One of the oldest and richest mines during the Colonial era was the Cana mine in Darién Province, which operated until 1942. After Panama gained independence from Colombia in 1903, it passed its first mining regulations, the Mining Code of 1916. This was later reformed in 1963, opening the country to foreign investment and major discoveries like the Donoso deposit (now Petaquilla), the Cerro Colorado or Cerro Quema deposits. By 1999, a global fall in gold prices, as well as Panama's passing of its first Environmental Law, rendered many of these projects on hold. First Quantum Minerals (FQM) entered Panama during this time, acquiring the rights to Cobre – a project which was to become the country's first and only large-scale mine.

### What was the legal context behind the suspension of the Cobre mine in 2023?

The contract signed by FQM in 1997 was challenged primarily on environmental grounds, however, we must remember that Panama did not yet have a general environmental law or an executive decree requiring Environmental Impact Studies (EIS) at the time of that first contract. A new contract (Law 406 of 2023) was renegotiated but later declared unconstitutional by Panama's Supreme Court of Justice; the government at the time misinterpreted the ruling and issued an executive decree to close the mine. The National Assembly, under societal pressure, passed Law 407, imposing a mining moratorium. This moratorium is unconstitutional, violating Panama's Constitution (Articles 257 and 259), which explicitly allows mining. There is also a political undertone to the events and deeper social issues at play. The moratorium and mine suspension took place in 2023, before an election year, therefore there was little political will from the outgoing government to make a decision.

### What fuelled the large-scale protests in Panama?

The protests were not originally about mining, but rather against the handling of the pandemic, as Panama had imposed one of the longest and strictest lockdowns worldwide, causing broad dissatisfaction. The protests were started by the youth, but when the contract between Minera Panamá and the Panamanian government became public, radical groups, unions and environmental activists

joined the protests. The mining issue became a rallying point for all these different groups while politicians used it seeking to attract young voters ahead of the upcoming elections. Discontent built up over time erupted into mass protests, a familiar pattern in Latin America...

### What have been the economic implications since its suspension?

The shutdown created a major economic void. This single project represented 4.8% of Panama's GDP (surpassing the Panama Canal's 3.5% contribution) and 76% of the country's exports. Given that Panama is a small country with a population of only 4.3 million people, the mine's suspension had a profound impact on employment, affecting a total of 54,107 jobs.

### What will be the main theme at the upcoming Expo Minera Panama organized in November this year?

This year's theme focuses on Panama's role as a mining hub for the Americas – and why not, for the world. Panama is just a six-hour flight from Canada and 10 hours from Europe and other further regions. Our strategic location serves as a meeting point for the world and an excellent logistics hub for the entire Latin American region. We are excited to welcome delegates to Panama from November 25th to 27th.

### What is your outlook regarding the future of mining in Panama?

The future looks bright for mining in Panama. 2024 was a year of transition, economic strain, and education – we now have proof of mining's contributions to our country, to our port operations, agriculture, logistics, transportation, infrastructure, and construction, all of which saw significant development as a result of a single mining project, and all of which also experienced the consequences of its demise. Today, Panamanians know more about mining than they did two years ago, and they talk more openly about mining. Some are starting to demand the reopening of Cobre. What happened bears global lessons too: We must step forward to educate the public on mining or we will face misconceptions and opposition. Mining chambers across the Americas must unite to combat misinformation and prevent similar situations from unfolding in other countries. ■



## María Eulalia Silva Ricaurte

Executive President  
ECUADOR MINING CHAMBER (CME)

“Mining is probably the only industry that could substitute petroleum, but rather than switching from one extractive industry to another, we have an opportunity to take on board the lessons learned in our history.”

### Could you introduce the CME to our international audience?

The Ecuadorian Chamber of Mining represents responsible mining in the country. Although Ecuador has had small-scale and artisanal mining for centuries, industrial production only started five years ago, with two mines currently in operation: Fruta del Norte and Mirador. That means Ecuador remains, by and large, an exploration district. And yet, in just five years since starting large-scale mineral production, we have seen astounding results. Fruta del Norte (Lundin Gold) has set a benchmark as a top-tier operation, proving Ecuador's potential for world-class projects and top-level ESG engagement.

### What role does mining currently play in the Ecuadorian economy?

From just these two large-scale operations, mining accounted for over 2% of GDP in 2024. Apart from the direct contribution, there are multiple indirect socioeconomic benefits visible both at the provincial and national levels. Ecuador has historically been an oil-dependent economy, yet mining is now the fourth-largest export sector, even after accounting for challenges such as power outages. As mining continues to expand, we expect the industry could become the backbone of Ecuador's economy. Mining is indeed probably the only industry that could substitute petroleum, but rather than switching from one extractive industry to another, we have an opportunity to take on board and implement the lessons we learned in our history as an oil producer.

### How does Ecuador fare in terms of its attractiveness as a mining investment destination?

If we refer to the Fraser Institute's Annual Survey of Mining Companies, Ecuador ranks as the fourth most attractive country for its geological potential. However, in terms of regulation and the political environment within the same survey, we are no longer on at the top of the rankings. This mismatch is what we need to solve. Thankfully, while nature's gifts are immovable, the political and fiscal frameworks are changeable. Fruta del Norte has demonstrated that responsible mining is possible. We have many challenges ahead of us, but we are starting to see a much broader recognition of the mining sector's importance to the Ecuadorian economy.

### What are the key pillars for the sector's development that the Chamber is advocating for?

The first item is that we need a State mining policy. This should be driven from the highest level, supported by all institutions, and set long-term objectives. As part of this policy, the Chamber advocates for the reinstatement of a separate, standalone Ministry of Mines, as it is currently merged into a broader ministry that also oversees oil and electricity. We also advocate for the inclusion of mining in the school curriculum of elementary and middle school education. This would help foster knowledge about industrial mining from an early age and help reduce prejudices around mining.

The second pillar is the legislative framework. Currently, there are several key laws being drafted, including the law on prior consultation, the environmental consultation law, the water resources law, and the reform of the mining law. It is essential that these regulations promote the development of responsible mining without imposing excessive restrictions that could hinder the industry – a balance not easy to strike by all means. Disproportionate or hyper-regulation does not only limit the growth of the formal sector and may also incentivize illegal mining.

The third key pillar is the reopening of the mining cadastre, which has been closed since 2018. Its closure coincided with a significant increase in illegal mining, highlighting the need for its reopening. Noboa's government has made progress in cleaning up the cadastre with support from the IDB, but the next step is to reopen it. Of course, we do not want Ecuador sold to the highest bidder, but a framework that can ensure only responsible investors can gain access to new concessions.

The fourth pillar is security, which includes various aspects such as legal, physical, and electricity. Illegal mining poses a direct threat to the formal industry, especially to operators. This issue is not exclusive to Ecuador but is part of a regional phenomenon linked to transnational crime, also affecting countries like Colombia, Brazil, Peru and Guyana. Therefore, the solution must be addressed at a regional level with a comprehensive approach.

### Do you have a final message?

The Chamber is working to provide a platform and a strong voice for the industry — one that encourages political will and helps build a long-term national mining policy that can transcend political cycles. ■





# COMMODITIES

“

Large copper-gold deposits are straddling the same geological fault system ripping through the Caribbean, in Cuba, Haiti, the Dominican Republic, and Puerto Rico, with some of these jurisdictions friendlier than others.

”

Dan Symons  
CEO  
**C3 METALS**

GBR Series • LATAM NORTH AND  
CARIBBEAN MINING 2025

Image courtesy of Barrick Mining





# Gold

## Riding the bull market

I must have written this sentence many times in the last few years since gold began its rally, but here I type again: Gold prices broke a new record. The new all-time-high of US\$3,500/oz was hit in April this year. A high gold price is, however, a double-edged sword, in the words of Ron Hochstein, president and CEO of mid-tier producer Lundin Gold: It is positive for the mining industry, but a bad omen for the outside world. If previous gold supercycles were triggered

by events like Russia's invasion of Afghanistan in the 1980s or the financial crisis in the late 2000s, today's bull market is fuelled by geopolitical instability, tensions between major economies, aggressive Trumpian trade policies, a weakened dollar, and recession fears, which the IMF has recently warned about.

Shunning these risks, investors, especially Asian investors, have recently clutched to gold, buying physical gold (bullion), paper gold (like ETFs), or the somewhat in-between gold mining stocks. "For a long time, investors viewed gold as dead money. Today, investors have rediscovered gold's fundamental value as a historic store of wealth and a hedge in times of uncertainty... Gold is, in my view, the mother of all money," said Vincent Benoit, the CEO and managing partner of La Mancha Resource Capital, paying homage to the role of gold.

La Mancha holds interests in a portfolio of (primarily) gold mining companies in Africa and Latin America.

The mining industry cannot influence the forces of demand and where the price goes, but it is the main actor in delivering the physical gold that everyone from central banks to speculators want in whichever form. Unlike other forms of money, gold cannot be printed. As Benoit reminds, gold is finite. He goes as far as to say gold could be considered a "finished" resource. 208,874 tons of gold have been mined throughout history – about the size of a 22-meter-wide cube if it were all melted in that shape, according to the World Gold Council. The mining industry has not been great at replacing reserves, with a replacement rate of only about 15-20% of what is mined each year. Though not yet "finished," gold could run out.

Of course, this is no fault of the mining industry. Mining companies deal at once with the physicality of gold—in grams, ounces, kilograms, and tons - and with the virtual value ascribed to gold by the markets - buyers, traders, investors, financiers, and their volatile sentiments. With sentiments currently upbeat, if not trepidant, can the mining industry accelerate future supply pipelines and curb the reserve depletion crisis, a crisis that could ultimately render gold finished, more than finite? And most importantly, can



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## Juana Barceló

President and Country Manager  
PUEBLO VIEJO DOMINICANA CORPORATION  
(Barrick-Newmont JV)

“ For the communities surrounding our operations, we financed and built more than 600 infrastructure works. 98% of our workforce is Dominican and 57% comes from nearby communities. ”

### Pueblo Viejo is one of the world's largest gold mines. Could you give us a short history of the operation?

Mining at Pueblo Viejo started in the 1500s, but there are few records left to document the activity between 1525 and 1950. In the 1960s, Rosario Resources optioned the property and owned it until 1979, when the Dominican Central Bank purchased the foreign shares held in the operation. Activities ceased altogether in 1999. In 2021, Placer Dome acquired the project, and in 2006, Barrick Mining acquired Placer Dome and simultaneously transferred a 40% stake in the project to Goldcorp, which was subsequently acquired by Newmont.

Operated by Barrick Mining, Pueblo Viejo is located in the center of the Dominican Republic, within the Montenegro Fiscal Reserve (MFR). It is a high-sulfidation epithermal precious and base metals deposit with 20 million oz of gold in proven and probable reserves and 26 million oz in total resources. We are mining from two main pits – Moore and Monte Negro – and, following the completion of an ongoing expansion, the operation can sustain production of more than 800,000 oz/y through 2040 and beyond. Currently, we have an annual guidance between 617,000 and 683,000 oz. Pueblo Viejo accounts for 1% of the Dominican's GDP.

### Could you comment on the progress toward the expansion?

We have successfully completed the plant ramp-up and are now focused on a few remaining improvements. As part of our expansion to achieve 800,000 oz/y, we are constructing a new TSF. After evaluating more than 20 potential sites, the Naranjo Tailings Dam was selected as the optimal location. We recently released an FS for the project and have begun constructing access roads. The development of Naranjo also includes the country's first resettlement program, which we are implementing in line with international best practices and through extensive stakeholder engagement. The dam is expected to be operational by 2030.

### What does the resettlement process involve, and how are you engaging communities through this transition?

We have committed to transparency from the onset, holding over 3,000 meetings with local communities. This will be a world-class resettlement program that involves not only a relocation of housing but also an improvement in

livelihoods. The locals involved got to choose the size and nature of their lot depending on their family size. The housing project is complemented by new facilities such as a primary school, technical high school, a childcare center, sports facilities, two churches, a cemetery, along with paved roads, electricity and potable water. Moreover, each family concerned will have a livelihood project tailored to their needs. Most people see the resettlement as an opportunity. Naturally, there will also be people who disagree with a certain price offered for their crops or another item for negotiation, but we have approached these issues with transparency. 653 families are part of the physical resettlement process.

### As the largest mining operation in the country, how has Pueblo Viejo contributed to the Sánchez Ramírez Province?

When we began exploration in the country, Sánchez Ramírez was among the poorest provinces. By 2019, it had made a remarkable leap, ranking 19th on the UNDP Human Development Index. For the communities surrounding our operations, we financed and built more than 600 infrastructure works. 98% of our workforce is Dominican and 57% comes from nearby communities. We also have a commitment to buy locally.

### Pueblo Viejo was recently awarded the 2025 Premio WIMCA (Women in Mining Central America). What initiatives have driven this progress and how does a more balanced workforce enhance performance?

We have increased female participation from just 3% to 31% today, with more than 1,000 women now working at Pueblo Viejo across all levels and divisions. In fact, 44% of our management positions are held by women. Our end-commitment is to achieve full gender parity. As part of this journey, we have implemented education and training programs, such as an apprentices scheme whereby 50% of apprentices are female; this has certainly helped move the needle. We also provide mentoring, and I myself am mentoring five high-potential female employees.

The increasing presence of women in our organization has visible impacts. Beyond bringing diverse perspectives to the table, we have also observed higher productivity in roles such as female truck drivers. ■



it do it fast enough? For as bullish as the markets look now, with Goldman Sachs forecasting spot prices up to US\$4,000/oz by mid-2026, prices will eventually come down.

These are the questions driving our article, more specifically directed at this region bracketed by the US-Mexico border to the north and the Equator line to the South: Can this region rise up to the challenge? Since a higher gold price environment first benefits the larger producers before it trickles down to the higher-risk, smaller-cap explorers, we will start with the mining companies to assess how the sector is riding this bull market.

Most gold producers in the Latam North and Caribbean region are in Mexico, which, at over 140 t/y of gold production, is the 9th biggest producer globally, trailed by Colombia (65.8), Venezuela (30.6), Suriname (27.7), Ecuador (24.3), Dominican Republic (18.4), and Guyana (13.5). While Mexico benefits from a dozen or so key producers, the rest of the countries count on a few major operations, combined with smaller mines and artisanal production. Leading producers across the region are posting strong returns, which allow them to pay back debt, return money to shareholders through dividends, and start planning on how to utilize their strong cash flows. Acquisitions, as discussed in the previous article, are high on the agenda, and the conditions for M&A are well laid out: With anticipation of upside valuations, producers may want to snap those undervalued acquisition targets while they can. In recent years, the gold sector has been leading mining consolidation activity, according to S&P Global.

Higher earnings will also allow existing producers to splurge more on exploration, which they have neglected in recent years. But there are exceptions. NYSE-listed Coeur Mining is a gold and silver producer known for its keen dedication to exploration, balancing organic growth with inorganic growth. In the past five years, it has spent over US\$300 million on exploration, and it plans to ramp up exploration budgets further in 2025. “Reinvesting in existing operations through exploration is the single best way to generate higher and higher returns,” said Mitchell Krebs, the company’s CEO.

Exploration in the Latam North and Caribbean region has been favored by low costs. Lundin Gold has been adding resources at approximately US\$25/oz, managing to replace the 2.4 million oz mined to date at the 500,000 oz/y Fruta del Norte with 3.1 million oz, with resources and reserves inventories today higher than when the company released its DFS in 2016. While Lundin’s attention will stay on near-mine exploration, the company can finally also look properly at its large package of concessions.

Despite generating higher revenues, gold producers have only just started to see an appreciation in their share prices, the gap between spot prices and equity prices remaining wide. According to Hochstein, generalist investors only started to return to the market in the last six months, and are still “dipping their toes in the water” for now. A couple of quarters of good earnings may be needed before they fully jump in.

In the junior sector, investors are watching even further away from the sidelines. “We used to dream of commodity prices like those of today, and now that we have it, the market is still lackluster,” said Simon Ridgway, chairman of Gold Group Management and CEO of Volcanic Gold Mines, which is developing the Holly property in Guatemala.

Nevertheless, the mood in the junior sector is charged with hopeful energy. Many companies have gone to the markets for fundraising and are planning, running, or interpreting drilling programs. While the bulk of gold production in the region sits in Mexico, the exploration sector is more spread out. While explorers in Mexico are facing permitting issues (something that will be discussed in the article dedicated to Mexico), explorers in Colombia, Ecuador, Guyana, Nicaragua, the Dominican Republic, Suriname and Guatemala are not spared the worries of permitting and jurisdictional risk, but they do capitalize on the opportunity of often untouched gold belts. For instance, Volcanic Gold has seen a positive response in its recent cash-raise for the Holly property, with its share price doubling.

High gold prices typically spur exploration in higher-risk jurisdictions. Beyond that, governments often respond more favorably to mining when the potential rewards are greater. South of Guatemala, El Salvador is going through a major rebrand. In December of last year, the smallest country in Central America lifted a seven-year-old ban on mining. President Nayib Bukele said the country sits on about US\$3 trillion worth of gold (with 50 million oz in the ground), an unfathomable and by all means implausible number. Regardless, the change in position, though vastly opposed by different members of society, shows gold’s far-reaching allure.



**Akiba Leisman**  
CEO  
MAKO MINING



People often misjudge how they underwrite geopolitical risk. There are very few countries where you can put money in and get money out in a fairly quick fashion given long permitting times.

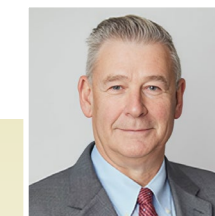


Three of the top five best performing TSX gold stocks this year (by March 24th) were operating in the Latam North and Caribbean region: G2 Goldfields, a circa CAD712 million market-cap gold developer with projects in Guyana and Suriname; Mineros, a CAD657 million gold producer with alluvial and artisanal mining operations in Colombia and Nicaragua; and Orla Mining, a CAD3.9 billion producer with a diversified asset base in North and Central America. These very different top-three performers speak of the diversity of opportunity in this region, regardless of company size or location.

**Different parenting styles for raising a gold project**

“Who wants to buy or develop a 1 million oz deposit?” Dan Noone, the CEO of G2 Goldfields, an explorer in Guyana, asks at some point in our conversation. The answer to his rhetorical question is, impliedly, “no one.” Noone and his team, who was involved in the discovery of the 7 million oz Aurora deposit of Guyana Goldfields, acquired by Zijin Mining, has been growing the Oko-Ghanie project through extensive exploration (59,000 meters in the last campaign), bringing it to over 3.1 million oz at 3 g/t Au grade in the last resource upgrade. The company will continue to add resources, with the mineralization remaining open at depth and along strike.

Up in Mexico, that same question of resource size was posed to Kenneth MacLeod, the CEO of explorer Sonoro Gold: “Some have questioned why we would bring a half a million oz deposit into production,” he said. His answer is different from Noone’s, as MacLeod envisions building a small 33,000 oz/year operation, at a low CapEx. “We see this as just the beginning of a multi-phase program that will allow us to generate cash while expanding the project. In Canada, the conventional mindset is that companies must define a 2 million oz resource before seeking financing for production. But that approach takes years and up to US\$50 million in exploration costs before de-risking. Most explorers in this situation hope to be acquired by a mid-tier pro-



**Ron Hochstein**  
President and CEO  
LUNDIN GOLD



Generalist investors are still dipping their toes in the water for now, still unsure whether this is the right time, but I do expect we will see more interest moving forward.



ducer. We take a different view. We do not want to be acquired by mid-tier mining companies—we want to become a mid-tier mining company.”

In truth, both models can be a segue into mid-tier status, and both have risks. But it is interesting to observe an alternative development model gaining popularity in the gold space, clearly emerging as a manifestation of the rush to production in order to capitalize on a high gold price environment.

In conventional mining project development, which adheres to a “the bigger, the better” logic, exploration companies will add ounces and rely on the markets for funding until the project reaches a scale that will render it attractive to be built and brought into production. Top-tier projects like Fruta del Norte, acquired by Lundin Gold in 2014 and now a half a million oz annual operation, are such an example. Such projects target mid-tiers and majors with a “build and buy” strategy, such as what Lundin has been in Ecuador, Aris Mining is in Colombia, or G Mining Ventures is doing now with the 4 million oz Oko-West deposit in Guyana. The main criterion for development is size, the kind of size that can justify US\$1 billion in CapEx. Ideally, this model values projects over 5 million oz in size.

An alternative “parenting” style that we are observing in recent years is bringing into early production a small portion of a larger project. This is an adaptation to the financing deprivation afflicting the junior markets, allowing juniors to start generating their own funds and lessen dependence on the financial markets by not having to chase millions of dollars in financing. This is precisely what Unigold is considering in the Dominican Republic at Candelones, the most advanced exploration project in the country (with an FS in 2022). Unigold will start with the first 200,000 oz oxide resource before moving to the ten-times larger sulfide resource.

Beyond enabling a profitable small operation, the other advantage of this model is that it simplifies permitting, as well as allowing communities to get used to mining. Can-

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delones sits in a remote area without any history of mining, near the border with Haiti.

But there is another variant to phased scalability, which prioritizes scale not through a single, superstar mega-project, but through multiple, smaller, mineable deposits, with lower-entry barriers. Grade, in such a model, is primordial, and the tier level is determined by margins through a combination of grade and low operating costs. A perfect example is Mako Mining. In CEO Akiba Leisman's own definition, Mako Mining is focused on building scalable mines in the Americas: "Within the Americas time zone (North, Central and South), we target assets with short timelines to production and of geological profiles that support small-scale, low-CapEx startup operations that can be scaled up organically and inorganically."

Fitting that profile is the open-pit San Albino mine in Nicaragua. Something of a geological oddball, as Leisman called it, San Albino is an orogenic deposit, both high-grade and very com-

plex, which is why large-scale mining companies tend to neglect this type of ore body. Though a tough nut to crack, San Albino is the highest-grade open-pit mine on the planet, at 17g/t Au in the main vein, which leads to average head grades of 7.5 g/t. Mako is producing about 40,000 oz/y, with generous EBITDA.

In production since 2021, San Albino became Mako's core cash-generator, propelling the company's diversification through two acquisitions in 2024, namely Goldsource Mines and its Eagle Mountain gold project in Guyana, and the Moss mine in Arizona. From these three assets, Mako will be producing 150,000 oz/y by 2027. "It seems to be almost lost on people what the objective of this industry is," Leisman starts: "The sector is too much set up to doing something along the lines of speculation, but Mako Mining isn't structured to sell out—we want to be the operator and generate substantive returns that reimburses us for the risks we take (...). Mako Mining has a distinctive operational framework where we do not

subscribe to excesses and unhealthy tactics that have plagued the exploration sector, with over-incentivized management and speculative business models. We are in a position to stay away from that incentive system and focus on what we do best, which is to build scalable, low-CapEx, high-return operations."

Mako Mining has a cornerstone investor in Wexford Capital, owning 48% of the company. This provides Mako with a lifeboat during market turbulence.

Last to include in our analysis is a sub-genre of explorers that are purely engaged in project generation, prospecting, buying, de-risking, and ultimately selling the project. We can call these foster parents. To their credit, these explorers will do the job of sorting through the myriad of licenses available and make the best picks, shaping land into projects. They are also the guys most sensitive to market trepidations, dealing more with the intangible investor sentiment than they will ever do with actual physical gold. And yet, they provide the seeds to the supply pipeline.

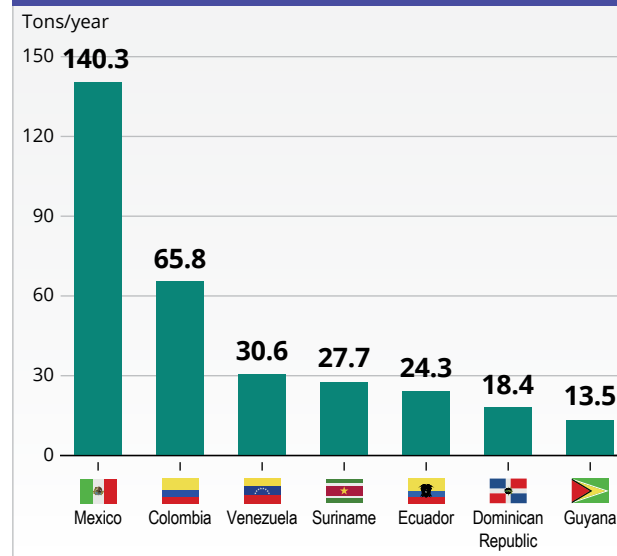
Greenheart Gold, a spin-out born out of the G Mining-Reunion merger in 2024, has built a portfolio of three projects in Guyana and Suriname, all close to large existing operations: Majorodam, located just 12 km from Saramacca, a satellite deposit for Zijin Mining's Rosebel gold mine in Suriname; IGAB, located 30 km from Newmont's Merian operation in Suriname; and the Abuya project in Guyana, which is situated 20 km from Zijin Mining's 6 million oz Aurora gold mine. Greenheart is looking to add two to three more projects to this list: "Our strategy is to turn ground over rapidly. We typically invest about US\$1 million over a 9 to 12-month period to do initial exploration work and determine whether a project has potential or not. If the results are good, the project advances to resource definition. If the results are not promising, we return the ground to the landowner and look to option other promising projects... In exploration, a higher rate of success will result from giving yourself as many opportunities for discovery as possible," said Justin van der Toorn, Greenheart Gold's CEO. ■

**DENARIUS METALS**

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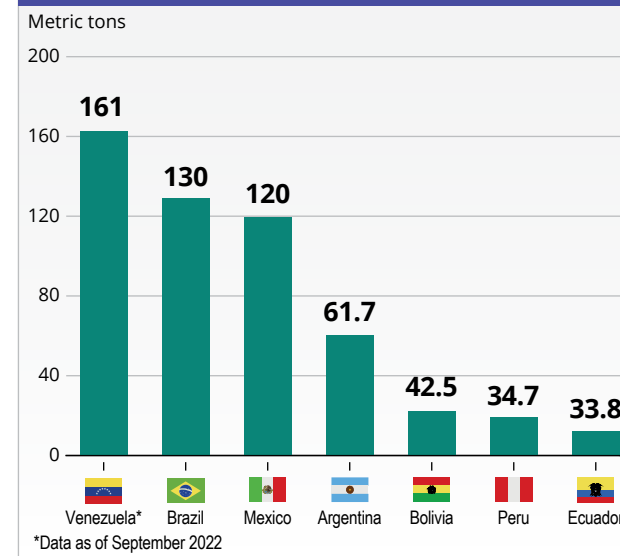
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### Largest gold producers in Latam North and Caribbean



Source: World Gold Council (2024)

### Gold reserves in Latin America



Source: Trading Economics

### Main gold players in Latam North and Caribbean

#### COLOMBIA

**Production:** Aris Mining, Denarius Metals, Mineros, Zijin Mining

**Exploration and Development:** AngloGold Ashanti, Batero Gold, B2Gold, Collective Mining, GoldMining, MMC, Orosur Mining, Outcrop Silver & Gold Corp, Soma Gold, Quimbaya Gold

#### COSTA RICA

**Exploration and Development:** Newlox Gold

#### DOMINICAN REPUBLIC

**Production:** Barrick Mining and Newmont (Pueblo Viejo JV)

**Exploration and Development:** GoldQuest Mining, Precipitate Gold, Unigold

#### ECUADOR

**Production:** Lundin Gold

**Exploration and Development:** Adventus Mining (copper-gold), Atico Mining (copper-gold), Aurania Resources (copper-gold), Dundee Precious Metals, Lumina Gold, SolGold (copper-gold), Titan Minerals, Torata Mining (Challenger Gold)

#### GUATEMALA

**Production (stalled):** Pan American Silver (Escobal)

**Exploration and Development:** Aura Minerals, Volcanic Gold Mines

#### GUYANA

**Production:** Zijin Mining (Aurora Gold Mine)

**Exploration and Development:** Aris Mining, G Mining Ventures, G2 Goldfields, Holder Resources, Omai Gold Mines, Mako Mining

#### HONDURAS

**Exploration and Development:** Aura Minerals, Pan American Silver

#### MEXICO

**Production:** Agnico Eagle, Alamos Gold, Avino Silver & Gold Mines, Bear Creek Mining, Coeur Mining, DynaResource, Equinox Gold, Fresnillo, Gold Resources Corp, Grupo México, Industrias Peñoles, Orla Mining, Luca Mining, Minera Alamos, Newmont, Torex Gold

**Exploration and Development:** Aztec Minerals, Chesapeake Gold, Fuerte Minerals, Heliostar Metals, Mexican Gold Mining, Minaurum Gold, Prime Mining, Sonoro Gold

#### NICARAGUA

**Production:** Calibre Mining, Mako Mining

**Exploration and Development:** Condor Gold, Metals Exploration, Mineros

#### PANAMA

**Exploration and Development:** Orla Mining

#### SURINAME

**Production:** Newmont, Zijin Mining (Rosebel Gold Mine)

**Exploration and Development:** Founders Metals, Greenheart Gold

\*Torex Gold has announced the acquisition of Prime Mining.  
\*CMOC has announced the acquisition of Lumina Gold.

Source: Global Business Reports

Image courtesy of Quimbaya Gold







## Robert Stewart

Founder and Managing Director  
GEOPHYSX JAMAICA

“ Geophysx amassed just over 4,000 km<sup>2</sup> of licensed ground, covering nearly every parish on the island in what is the largest and most technologically comprehensive campaign in the country’s history. ”

### Geophysx is the largest license holder in Jamaica and has completed an extensive exploration campaign across the island. What motivated this country-wide campaign?

Jamaica remains largely underexplored, with modern geological interest limited despite its rich potential. The island experienced its last significant exploration surge in the 1800s, but attention quickly shifted as geologists departed for California during the gold rush. It was only a century later that bauxite was discovered in Jamaica in the 1950s, but since then, there has not been a holistic, comprehensive metals exploration program. My experience taught me there are significant prospects in Jamaica so in 2017, I decided to start Geophysx Jamaica and invest US\$20 million to complete a large-scale mineral exploration campaign.

### Could you elaborate on the data collected and what you found?

We started the program in 2018 and, over the next five years, we did over 40,000 geochemical assays and built a profile of multiple anomalous zones. Geophysx amassed just over 4,000 km<sup>2</sup> of licensed ground, we explored almost every parish in the island. The campaign is the largest and most technologically comprehensive in the country’s history, including 62-element geochemical sampling, geological mapping, and industry-leading airborne geophysical surveys (drone surveys and a helicopter geophysical campaign). From this integrated program, we delineated dozens of highly prospective zones not only for gold and copper but also—unexpectedly—for rare earth elements (REEs).

### Could you comment on the recent earn-in agreement with Barrick Mining for over 4,000 km<sup>2</sup> of license area?

This partnership grants Barrick the option to earn up to an 80% joint venture interest in select properties by meeting specific investment and technical milestones. Barrick will act as operator, with Geophysx providing local expertise, data, equipment and facilities. Barrick brings deep technical expertise and is the most experienced player in the Caribbean through its successful operation of the Pueblo Viejo mine in the Dominican Republic. Jamaica and the Dominican Republic share similar geological foundations, both featuring Cretaceous volcanic arc terranes and a tectonic setting linked to subduction-related magmatism. These conditions are ideal for hosting gold and copper mineralization.

### What license you are advancing together with C3 Metals?

Geophysx has a JV partnership with C3 Metals on a 10,000-ha property in the center of the island. The license covers the old Pennants gold mine, which was operated in the early 2000s. We believe Pennants is part of a bigger system, so the partnership combines some of C3’s ground with ours to be able to better explore and unlock the potential of the area in a more cohesive way. Drilling has already commenced. Incidentally, C3 Metals have also announced at the beginning of 2025 an earn-in with Freeport-McMORan, on a separate land package, which means that we now have two majors in Jamaica – and this clearly signals a turning point in Jamaica’s exploration fortunes.

### How can Jamaica raise its profile on the global map for mining exploration?

The government has been very supportive and encouraging throughout our work. In fact, I think even they were surprised by just how much mineral potential exists in Jamaica. That said, unlike in some countries where governments often fund initial geophysical surveys or starter datasets, in our case, we had to build everything from the ground up.

Historically, Jamaica’s mining sector has revolved around bauxite, which is quite different from gold or copper. Copper and gold, by contrast, require far more intensive exploration and significant capital outlay. You’re looking at bringing in specialized equipment—much of which isn’t readily available in Jamaica—and paying duties on that. Just the cost to resource a potential gold or copper mine can run upwards of US\$200 million, long before you make the decision to build a mine.

To attract serious investment in hard rock metallic mining, Jamaica will need to establish a fiscal and regulatory framework that supports this kind of activity. That includes rethinking tax and royalty structures to ensure a fair and balanced outcome, one where both the investor and the country benefit. It’s about creating a structure that enables companies to make a return while ensuring Jamaica sees lasting economic value. It’s achievable, but it will take thoughtful work and collaboration. I’m very optimistic about the progress being made in this regard and look forward to a bright future for Jamaica. ■



## Simon Ridgway

Chairman, GOLD GROUP MANAGEMENT  
CEO, VOLCANIC GOLD MINES and RACKLA METALS

“ The economic argument for mining in the region has never been so strong. Geologically, Central America is mostly untapped and has great geology so the odds of making a discovery are still very high. ”

### Could you share how Gold Group Management began and the companies you helped kick-start?

As a mining prospector and financier, I was often approached by geologists with promising project ideas. When a concept stood out, I would help bring it to life by establishing a public company and advance the opportunity together with the team that brought it to me. Gold Group Management was therefore born as a platform to incubate and launch high-potential exploration ventures while reducing overheads.

We have had quite a bit of success in the Central American region. Our team has built a reputation in the discovery and sale of prolific deposits, such as Cerro Blanco in Guatemala (presently owned now by Aura Minerals), Natividad in Nicaragua (Calibre Mining, now in a merger of equals with Equinox), the San Martin deposit (sold to Glamis Gold which was later acquired by Goldcorp, which later merged with Newmont), or the San Jose Silver deposit, currently owned by Fortuna Silver Mines.

We now have three publicly listed companies under our umbrella: Rackla Metals (TSX-V: RAK), focused on exploration of the Tombstone Gold Belt in Yukon and NWT, Canada; Radius Gold (TSX-V: RDU), with a portfolio of projects in Peru, Mexico and Guatemala; and Volcanic Gold (TSX-V: VG), with assets in Guatemala.

### What is the current focus of Radius Gold?

Radius Gold has built a portfolio of projects in Mexico, Guatemala and Peru, but the recent focus has fallen onto Peru. In Mexico, we made three discoveries at the Amalia project and brought in Pan American Silver as a JV partner that has now earned in 65% of the project. They have recently offered to buy the remaining interest on the project. Due to difficulties operating in Mexico, including pending applications for permits, we switched our focus to Peru and the Tierra Roja copper project in the Arequipa region, southern Peru. We expect to obtain the permit to start drilling in the coming months.

### What is the status of the Holly project in Guatemala?

Holly holds a resource of about 400,000 oz at 9 g/t Au and sits about 40 km north of Cerro Blanco in a very prolific district. The project has great exploration potential but we

ran into some issues with a small aggressively anti-mining group who actually set fire to one of the drill rigs. We have been spending the last two years talking to the local communities who support our returning to work. I just got back from a trip to meet some of the local leaders and they are keen to see us back in the country and generate employment again.

### To what extent does the resumption of activity at Cerro Blanco or Escobal influence the future of exploration in Guatemala?

We were certainly hoping to see either Cerro Blanco or Escobal in production by now, but both of these projects are still inactive. Escobal was once the world’s third-largest silver mine. Pan American has not been able yet to get back the permit to restart work. Meanwhile, Cerro Blanco was a permitted, very attractive underground mine. But the owners, the Lundin Group, decided to change it to an open pit which made the permitting very complicated; they never could get a clear open pit permit, so they sold the project. The saga goes on.

### What could tilt the balance in favor of mining in countries with strong anti-mining opposition?

Countries in the region need employment above anything else. Before Escobal was shut down, it was employing around 1,200 people. Recent anti-immigration politics in the US will create an influx of people returning back to El Salvador, Guatemala and Mexico, which will only exacerbate unemployment in Latin America, while the remittance money flowing from the US will dry up. The economic argument for mining in the region has never been so strong. Geologically, Central America is mostly untapped, great geology so the odds of making a discovery are still very high.

The market responded positively when we announced that Volcanic would be back to work in Guatemala – our share price doubled – which tells me there is trust in our judgment and in the huge returns that the region could potentially offer. Globally, however, the exploration sector suffers from a lack of interest from the general public. We used to dream of commodity prices like those of today, and now that we have it, the market is still lackluster. ■





# Silver

## Crossovers in the metal's double life

Silver's story has always been entangled with other metals. Though it belongs to both precious metals family (alongside gold) and industrial metals (alongside copper and others), the grey metal has found itself in a grey area, underappreciated in its role as a store of value and not fully recognized as a critical mineral.

However, an unusual crossover of sorts, with the fundamentals for both monetary and industrial uses strongly aligned on the upside, places silver in a rare position from which it can finally benefit from its dual identity. Over the past year, silver prices have been holding up firmly at over US\$30/oz, with potential for further gains.

### Silver as a monetary metal

In its role as a monetary metal, silver has always come second to gold, the ultimate safe haven asset. By comparison, silver became called "poor man's gold." The inelegant description does bear some truth, as the profile of the silver investor is different from that of a gold-buyer: "Typically, a Republican investor with a couple million dollars in wealth will buy gold, whereas someone with a wealth of US\$200,000 will buy silver. Besides the demographic differences, silver companies also have a higher retail component on their register, typically at 60-70%, whereas gold stocks are 70-80% institutions and 20% retail," explained Dan Dickson, the CEO of Endeavour Silver, a silver producer out of Mexico.

Nevertheless, silver has more than done its job as a store of value, outperforming gold in times of uncertainty. Analysis from Capitalight Research has found that the average increases in the silver price outpaced those in gold during key historical points of tumult. For instance, between 2008 and 2012, silver rose by 495% against the trendline, whereas gold rose 238%. Today, gold has made record gains, but silver remains far from its record at US\$50/oz. The gold-silver ratio, which measures how much silver can be bought with one ounce of gold, has widened significantly, reaching levels above 85:1, far higher than the historical average of 70:1 that has characterized the gold-silver relationship since the 1980s. This means silver is undervalued and could still rise significantly to reclaim the historical parity with gold.

### Silver as an industrial metal

Warren Buffett famously called gold "lifeless" and a "metal that will never produce anything." Well, by contrast, silver has what we've been referring to in this article as a "double life", and it has over 10,000 applications. Silver was once even believed to have healing properties, which was not pure folklore since silver does have antibacterial properties, making it valuable in medical devices.

Silver's many applications in critical domains like defence and energy have prompted calls for its recognition as a critical mineral on the official lists in North America. Mitchell Krebs, the CEO of Coeur Mining, shared his thoughts on the importance of such labels: "Silver is the unsung hero of the global economy with more end uses than any other metal. Depending on how you define 'critical,' it's hard to see how a metal so integral to both energy and national security isn't considered critical. Beyond solar panels, silver is vital for energy storage, batteries, charging infrastructure, data centers, robotics, and AI. As the most conductive metal, silver is embedded in everything from drones and missiles to submarines, GPS, and radar. I'd argue all metals are critical. They often coexist geologically, so trying to separate 'critical' from 'non-critical' makes little practical sense."

Critical or not, demand for silver has been growing fast, primarily driven by the solar energy sector, which represents about 20% of industrial demand. According to Sprott, the solar energy industry is on a rampant growth path, with a 158% increase in silver demand for solar panels between 2019 and 2023.

Traditionally, silver was primarily viewed as a monetary metal alongside gold, but in recent years, its role as an industrial metal has gained more relevance. In the relationship with gold, silver has often been seen as "secondary" or "lesser than." Interestingly, the higher value ascribed to gold is not purely arbitrary but influenced by the superiority of its material attributes: gold does not oxidize, and that forever lustre has become a symbol of permanence and a forever store of value. By contrast, silver is highly resistant to corrosion, but not immune. If as a soft asset and decorative metal, gold wins by a landslide, as a hard asset of utilitarian value, silver bests gold.



## Developing the Cerro Las Minitas Project into the Next Major Silver Mine in Mexico

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#### June 2024 PEA Highlights:

- Robust Project Economics – Base Case: after-tax NPV 5% of US\$501M (C\$682M) and IRR of 21.2% with a 48-month payback; 17+ year mine life
- Excellent Silver and Zinc Price Leverage
- Gross revenues of US\$4.5B
- Initial CapEx of US\$388M, an NPV 5%-to-CapEx ratio of 1.3X
- Higher margin mineralization targeted in the first eight years of production, leading to improved mine economics

#### NAZAS Project Acquisition:

- Well positioned in an emerging, world class district
- 15km from Pitarilla Deposit (+800Mozs AgEq)
- Five targets identified, drilling anticipated Q3, 2025
- Strongly leverage to Silver/Gold

\* For detailed resource parameters, see June 4th PEA report on SEDAR or company website

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**Fundamental arithmetics**

2025 marks the fifth year of continuous silver deficits, with demand at record heights and supply mostly unchanged in the last 10 years. Despite these undeniable fundamentals, silver prices are yet to explode in the same way gold has. This is explained by the lag between the real/physical silver available and the “paper market:” “In the paper market (financial instruments like ETFs, futures contracts, and other derivatives), there is a lack of strict requirements that silver derivatives are fully-backed by physical metal, so the holder or issuer does not need to actually possess physical silver. Therefore, a lot more silver is traded on paper than physically exists, the system relying on the assumption that not everyone will demand delivery at once. If, for some reason, traders were suddenly required to deliver the silver instead of settling it in cash, the supply of silver would fall dramatically. Prices could be expected to reach up to US\$200/oz. Expanding premiums, with a growing gap between the spot price and the price paid to buy physical silver, are pointing to the imbalance in the market,” explained Greg McKenzie, president and CEO of Silver Storm Mining, a Mexican junior which owns the La Parrilla historic mine.

Some analysts project silver could climb to US\$40/oz this year, while some bulls believe US\$100/oz is attainable. A few even place silver at US\$300/oz by 2030. However, industrial demand alone is unlikely to drive prices toward the higher end of these estimates. It would take a major catalyst, impacting the monetary side of silver, to push silver sentiment to extreme highs.

As a small market, valued at around US\$30 billion globally, silver is highly volatile, which means small changes in the supply-demand balance trigger more dramatic fluctuations. This is why silver is sometimes referred to by traders as “gold on steroids” or “the high beta version of gold.” The last silver rally, when silver reached a record of US\$50/oz, took place in the aftermath of the financial crisis. During those years, the monetary side of silver accounted for the majority of demand, at 550 million oz out of 800 million oz. Today, 55% of silver demand comes from industrial applications, leaving a smaller and therefore more volatile and reactionary monetary market.

**Mexico’s bonanza silver engine powers up**

Mexico is the world’s largest silver producer, accounting for about 200 million oz of the total 850 million oz global annual production. Out of the 743 active silver mines globally, about 20% are in Mexico, the highest in the world, according to Global Data. Canadian companies own 74% of mining concessions in Mexico, with leading players like Newmont, Pan American Silver, Hecla Mining and First Majestic Silver, but Mexico’s biggest player is a domestic one, namely Industrias Peñoles, which dominates with over a third of the supply. Peñoles is the parent company of Fresnillo, the world’s biggest silver producer.

Mexico is home to the largest silver mine in the world by reserves at Newmont’s Peñasquito mine, which contains 868.52 million oz in measured total reserves. The country also holds some of the biggest undeveloped silver deposits in the world, including Cordero with 226 million oz

contained silver reserves, developed by Discovery Silver in the state of Chihuahua; Vizsla Silver’s Panuco 222.4 million oz AgEq in Sinaloa; and Terronera, at 47 million oz in contained reserves, developed by Endeavour Silver, also in Sinaloa.

Silver production in Mexico has closely followed fluctuations in spot prices, showing the industry’s sensitivity to margins. Between 2013 and 2016, for instance, production slipped from 5,800 t/y to 5,400 t/y; in the last five years since prices started to recover, production has gone up again to 6,300 t/y. China, the second largest producer, has seen a downward trend from 2021 (at 3,500 t/y) to 2024 (3,300 t/y). Peru and Chile have been quite constant.

Due to growing inflation and low spot prices at under US\$20/oz over the past decade, Mexico’s silver industry has been little incentivized to invest in expansions or exploration. However, after two consecutive years of double-digit gains in both 2024 (21.5% price appreciation) and 2025 (so far, at 12% higher prices), a shift is taking place.

**The belts that keep giving**

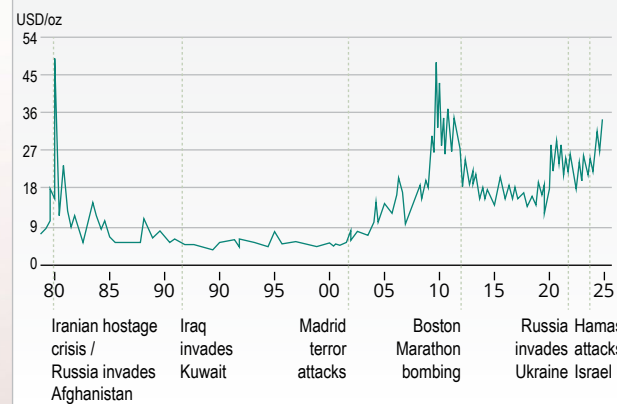
Silver has been a part of Mexico’s history for over 500 years, going back to the days of the Spanish Conquistadors. In fact, many of the mines that supply silver today to markets as modern as AI applications have been active for centuries. These are primarily found on the famous Faja de Plata (Mexico’s Silver Belt), a geologically rich region of extensive epithermal silver-gold veins that has delivered over 10 billion oz of silver and 70 million oz of gold since its discovery in the 16th century. Deposits like Newmont’s Peñasquito and First Majestic’s Los Gatos are found here, along with undeveloped discoveries like Endeavour Silver’s Pitarilla project or Discovery Silver’s Cordero project. Accounting for almost half of the silver produced in Mexico, the state of Zacatecas is silver’s zone zero in the world. Durango and Guanajuato are two other main states crossed by this belt.

In this silver epicenter, mining companies are once again animated to find additional ounces. For instance, Canadian company MAG Silver, which owns the tier-one Juanicipio silver mine together with Fresnillo, is focused not only on expanding the life of mine of its flagship mine from 13 years to up to 30 years, but has also started looking at greenfield exploration, with only 10% of the JV ground currently explored.

Unlike Juanicipio, which only entered production in 2023, many of the mines in the region have hundreds of years of history. Yet they still have more to give. In the historic mining town of Temascaltepec, once known as the jewel of the Spanish colony, past producing La Guitarra mine has been brought back into production by Sierra Madre Gold and Silver, who acquired the project in 2023. La Guitarra is part of a larger complex of eight historic mines and three underground mining centers. CEO Alex Langer said the main point of attraction of La Guitarra was not only its near-term production potential, but its district-scale exploration potential, in which it plans to reinvest, with a large-scale drilling campaign in sight for 2026.

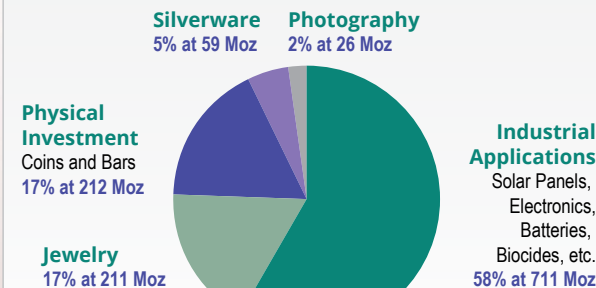
Also in the State of Mexico, the Zacualpan mine was mined by Cortés 500 years ago. Canadian company IM-

**Silver price with select geopolitical events (1979–2024)**



Source: LSEG, Capitalight Research

**Silver applications**



Source: Metal Focus, Silver Institute

**Main silver players in Latam North and Caribbean**

**MEXICO**

**Production:**

Americas Gold and Silver, Avino Silver & Gold Mines, Bear Creek Mining, Coeur Mining, Endeavour Silver, First Majestic Silver, Fresnillo, Grupo México, Heliostar Metals, Luca Mining, MAG Silver\*, Minera Frisco, Newmont, Pan American Silver, Santacruz Silver Mining, Sierra Madre Gold and Silver, Silver Storm Mining

**Exploration and Development:**

Canasil Resources, Capitan Silver, Defiance Silver, Discovery Silver, Guanajuato Silver, GR Silver Mining, Hecla Mining, Impact Silver, Kootenay Silver, Orex Minerals, Prime Mining, Reyna Silver, Silver Storm Mining, Silver Viper Minerals, Silver Tiger Metals, Southern Silver Exploration, Vizsla Silver



\*Pan American Silver has announced the acquisition of MAG Silver. Source: Global Business Reports

Image courtesy of Southern Silver Exploration



PACT Silver has been mining at Zacualpan since 2006, from a small operation, but the district is believed to hold additional exploration potential. In Durango, the Avino silver mine was also discovered by Captain Hernán Cortés' expedition back in 1558. Today, Avino Silver & Gold is mining the asset; the Canadian company is looking to re-process the tailings of the old Avino open-pit mine, mined between the 1970s and 1980s. The tailings hold 6.7 million oz of proven and probable reserves. In Guanajuato, another historic mining district, Guanajuato Silver has consolidated 40% of mining claims, with another 40% being owned by Fresnillo. "We want to make sure that mines like Valenciana, which has been in production for the best part of the last 450 years, continue to exist and be a part of the fabric of Guanajuato for hundreds of years more," said James Anderson, CEO of Guanajuato Silver.

In Northern Mexico, in the state of Chihuahua, another 500-year-old mine is Batopilas, once Mexico's highest-grade mine at an average of 1.5 kg/t AgEq. Reyna Silver took over the abandoned mine and still hit a bonanza grade of 1 g/tk AgEq.

As part of their plan to breathe new life into old districts, these silver producers have embarked on modernizations and standardizations that will prove to the markets the remaining potential of their properties. For instance, Guanajuato Silver has recently published NI 43-101 compliant resources for El Cubo, and is looking to rework all resource estimates for its mining operations. This is a popular ef-

fort, but not always possible. IMPACT Silver, for instance, cannot maintain an NI 43-101 resource estimate across all of its properties due to the nature of the epithermal veins. "These veins can vary significantly in width, they can pinch and swell from 0.5 m to 22 m; you would have to drill it like Swiss cheese to establish a formal NI 43-101-compliant resource. Instead, we drill on 50-meter centers and maintain a rolling resource plan, ensuring three to five years of available resources at any given time," explained Frederick Davidson, IMPACT Silver's CEO.

In another example of somewhat breaking with convention, Sierra Madre Gold and Silver went into production at La Guitarra without a feasibility study, relying on historical production records.

**Greenfield discoveries in brownfield districts**

The old Faja de Plata belt is also beginning to see increased greenfield activity. For instance, this year Southern Silver Exploration acquired the Nazas property, only 15 km away from Endeavour's Pitarilla deposit. Southern Silver also owns the Cerro Las Minitas, with a mineral resource of 36.7 million tons that can support a 17-year LOM underground mining operation of 14.3 million ozs AgEq.

However, exploration activity has started to expand beyond the well-known Faja de Plata belt, especially in the Sierra Madre Occidental, which extends from the US-Mexico border to the east-trending Trans-Mexican Volcanic Belt (intersecting with Faja de Plata). This hosts First Majestic Silver's San Dimas mine, as well as large deposits like Vizsla's Panuco, Endeavour Silver's Terronera, and Luca Mining's Tahuehueto, all at advanced stages towards production.

While Mexico's silver mining history goes back centuries, modern exploration is new. Modern exploration technologies, like advanced geochemical analysis or sophisticated geophysical surveys, had not reached Mexico until 1994, when the country entered NAFTA (the North American Free Trade Agreement) and liberalized the foreign ownership of mining properties. Between 1961 and 1993, foreign investors were limited to 49% ownership of a mining company or concession. As such, miners in the past would simply follow visible vein structures, and if these appeared to "pinch out," they would perform cross-cuts to try to relocate them. When unsuccessful, they would often abandon the target and move on to the next. This method created many blindspots.

For the past three decades, Mexico has seen a resurgence in mining as modern exploration and mining techniques percolated into the country. This is why much of the exploration today in essentially brownfield, previously mined areas can still count as greenfield exploration. A good example is Vizsla Silver, a company founded in 2017, which took over a project dating back to the Spanish conquistadors. Vizsla was the first to conduct modern, large-scale exploration, making its flagship Panuco project, "a greenfield discovery in a brownfield district," as founder and CEO Michael Konnert described it.

Vizsla recently graduated from the TSX to the TSXV, becoming one of a dozen or so companies with "silver" in its name on the main board, epitomizing a newfound maturity in Mexico's silver industry. ■



**Mitchell Krebs**  
CEO  
COEUR MINING



From our three mines in the US and two in Mexico, our balance sheet is now rapidly improving, after several years of heavy investment to position the company for long-term success.



**Could you comment on the company's performance over the last year and outlook fo 2025?**

2024 was one of the most important years in Coeur's nearly century-long history. In the first half of '24, we wrapped up the Rochester expansion and in the second half we announced the SilverCrest transaction. Combined with the tailwinds in gold and silver prices that started to blow since mid-2024, we became cash flow-positive, generating about US\$85 million in free cash flow, which allowed us to begin paying down debt. This year's results will reflect significant expected production growth on the back of a full year of (expanded) production at Rochester and 10.5 months of production from the Las Chispas operation, with the SilverCrest transaction having closed on February 14th. Our silver output is expected to expand by over 60% compared to last year, while our gold production is expected to increase by approximately 20%. Our 12-month trailing adjusted EBITDA is expected to rise from US\$101 million just 20 months ago to over US\$700 million in 2025. Similarly, in 2023 we had negative free cash flow of almost US\$300 million, while this year is expected to be over US\$300 million of positive free cash flow. From our three mines in the US and two in Mexico, our balance sheet is now rapidly improving, after several years of heavy investment to position the company for long-term success.

**What attracted Coeur Mining to the Las Chispas asset?**

Mostly, it was the quality of the deposit. Las Chispas is one of the highest-grade silver-gold deposits in the world. With high grade comes high margins, low costs, and strong free cash flow. Las Chispas adds nearly 6 million oz/y of silver and nearly 60,000 oz/y of gold to our annual production platform.

**Coeur Mining has deployed over US\$300 million in exploration over the past five years. What's the focus for 2025?**

Coeur Mining has been sustaining a high level of investment in exploration, and this year will be no exception, with about US\$85 million allocated in total. Las Chispas, along with Palmarejo, and Rochester will be our top exploration investments this year. Reinvesting in existing operations through explora-

tion is the single best way to generate higher and higher returns.

**How do you think the high gold prices will influence the M&A cycle?**

With higher prices comes more confidence and confidence is key to M&A. Mining stocks are yet to catch up with the spot gold and silver prices, which creates a potential window of opportunity for well-priced acquisitions. On the flip side, many investors remain cautious, recalling the value-destructive M&A boom of 2010-2012. This may offset some of the enthusiasm of higher prices. Acquisitions need to be strategic, with a sound underlying industrial logic. Getting bigger just for the sake of getting bigger won't cut it. What I'm hearing most from investors now is a desire for capital returns. There's real pressure to stay disciplined and start returning cash, whether through buybacks or dividends.

**There have been many calls for silver to be recognized as a critical mineral. How do you view this?**

Beyond solar panels, silver is vital for energy storage, batteries, charging infrastructure, data centers, robotics, and AI. As the most conductive metal, silver is embedded in everything from drones and missiles to submarines, GPS, and radar. I'd argue all metals are critical. They often coexist geologically, so trying to separate "critical" from "non-critical," makes little practical sense. The US is heavily dependent on imported silver, mostly from Mexico. That's why projects like Rochester, which is the largest source of produced and refined silver in the US, are so important.

**Do you have a final message for our readers today?**

This year marks my 30th year since first joining Coeur Mining. And in all that time, I have never seen a moment like this. Mining is finally getting its moment in the sun, something that we are not used to as an industry, but I think this is a once-in-a-lifetime opportunity for the industry to step forward, showcase what we do, and how we do it, especially here in the US and Mexico. After years of heavy investment, we have fundamentally transformed the company and everything is aligning in a way that is incredibly exciting. ■

**MAG SILVER**

**A Leading-Edge, Tier 1 North American Silver Producer**

The Juanicipio Mine ("Juanicipio") is a high-grade silver-gold-zinc-lead epithermal vein system on the Fresnillo Silver Trend in Mexico, the world's premier silver mining belt.

www.magsilver.com  
MAG: tsx/nyse mkt





## George Paspalas

CEO  
MAG SILVER

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Juanicipio has an initial 13-year LOM, however, the property remains vastly underexplored with significant potential for further discoveries.

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### Can you give us a brief overview of MAG Silver's origins and how the Juanicipio project came about?

The project was discovered under the leadership of our then-chief geologist, Dr. Peter Megaw, who recognized the potential of the 17 km by 7 km property located on the Fresno Silver Trend—in the heart of the Fresno District, which has produced roughly one out of every 10 ounces of silver ever mined globally. Our first drill hole after going public was a discovery—something quite rare. In 2005, our neighbor Fresno, the world's largest silver producer, approached us for an earn-in agreement. Since then, Fresno has become the operator with a 56% interest, while MAG Silver retains a 44% stake in the joint venture.

### Juanicipio entered commercial production in 2023. How has the mine performed in its first two years of operation?

Juanicipio is a Tier 1 primary silver mine with 85% of revenues derived from precious metals (75% silver and 10% gold). The plant has been operating at nameplate capacity of 4,000 t/d since Q3 2023 and, following some optimizations completed over the course of 2024, we are achieving silver recoveries of up to 95%. In 2024, we produced 18.6 million oz AgEq. This year, we are turning our attention to increasing the mining rate as we believe the mill can accommodate more ore. Moreover, we have the opportunity to process additional material at Fresno's Saucito plant, which allows us to incrementally ramp up production at a low-cost, highly value-accretive manner. Based on our recent Q3 reports, Juanicipio is producing at an AISC of US\$2.38/oz sold, leaving us with considerable margins at a silver price of over US\$34/oz.

### Could you comment on the exploration upside?

In March 2024 we released a technical report declaring inaugural reserves of 15.4 million t proven and probable mineral reserves with an average grade of 628 g/t AgEq (248 g/t Ag, 1.58 g/t Au, 2.64% Pb, and 4.8% Zn). Based on this reserve estimate, Juanicipio has an initial 13-year LOM, however, the property remains vastly underexplored with significant potential for further discoveries. Moreover, the technical report shows that inferred resources mirror the size of the declared reserves, and in this area, inferred material converts to reserves at a rate of over 90%. In other

words, Juanicipio has the potential for a significantly extended mine life, probably closer to at least three decades. On the JV ground with Fresno, only about 10% of the property has been explored.

### Are you considering acquiring additional producing assets, on top of the two exploration projects in Canada and the US, respectively?

MAG Silver had US\$162 million in cash at the end of 2024, and we expect robust margins to continue in the coming quarters. Drilling the Deer Trail project in Utah or the Larder project in Ontario will not absorb more than US\$8 to US\$10 million a year each. To address the single-asset risk, we are looking at acquiring another operating silver and/or gold mine that could become a second source of cash flow.

MAG recently announced a capital allocation framework, comprising of a recurring fixed quarterly dividend of US\$0.02 per share, and an additional quarterly dividend, paid in arrears, of 30% of the Juanicipio cash flow for the previous quarter as long as the silver price is above US\$20/oz. This is a very enticing dividend in the silver space, and underlies the long-term value proposition that Juanicipio provides.

### Is Mexico still part of your inorganic strategy?

If you had asked me this question in October last year, my answer may have been different, but today, yes, we remain open to investing in Mexico. Mexico has a wonderful geological endowment and mining companies have become semi-proxies for government in terms of investments in infrastructure, health, schooling, and employment, benefiting primarily rural areas. The relationship between the industry and the government has been strained in the past but we see early signs that this may be changing for the better.

### Do you have a final message?

It is a great time to be a silver producer. We are in the sixth consecutive year of global silver supply deficits, whereby inventories are falling and demand keeps growing. The fundamentals for a bullish silver price are remarkable. MAG Silver, with 75% of revenues from silver, a generational mine with close to 30 years of life potential, and high margins, is not just a strong investment in today's climate, but also well positioned even if silver prices were to pull back. ■



## Arturo Préstamo Elizondo

CEO  
SANTACRUZ SILVER MINING

“

Our Bolivar mine has been in continuous operation for over 200 years, while Porco is actually the oldest mine in the Americas — it has been running for more than 500 years without interruption.

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### Could you provide an overview of your Santacruz Silver's asset base?

In Bolivia, we have three mines (Bolivar, Porco, and the Caballo Blanco complex), as well as one ore trading company (San Lucas). We bought these mines from Glencore in March 2022. In Mexico, we own the Zimapan mine. We produce between 18 and 19 million oz/y of silver equivalent (AgEq). Our largest producers are Bolivar, Zimapan and San Lucas. Santacruz is cash-flow positive, with no debt, no streams or royalties, and therefore very healthily positioned for today's buoyant market.

### What role does the San Lucas Ore Trading company play in consolidating and formalizing local silver supply?

Most of the silver in Bolivia is produced in the states of Oruro and Potosi. By buying the ore from small local miners, we help bring these players into the formal economy. This not only generates meaningful contributions to public finances but also provides clear benefits to the miners themselves. Many of them now recognize the advantages of formalization — including access to credit. Some have already used financing to invest in better equipment and expanded their operations. It's become a virtuous cycle of growth and positive impact.

### What is the ownership structure of your mines?

The Caballo Blanco group of mines, as well as San Lucas, and of course the Zimapan mine are 100% owned by Santacruz Silver, but two of our mines, Bolivar and Porco, operate under a net profit interest structure with the Bolivian government through COMIBOL (state-owned Company). Santacruz is the full operator, independently managing all aspects of the operations, with full discretion over how the mines and the mills are run. At the end of each fiscal year, we calculate the net profit after taxes and capital expenditures, and we share a portion of that profit with the government.

### What are some areas of growth for Santacruz Silver in the coming years?

There are two main paths for growth. The fastest one would be to buy another milling facility in Bolivia. Currently, we process ore from small miners through our San Lucas trading company, which temporarily reduces capacity

at our own mills each month. However, with mine production already running at full milling capacity and showing over 30% growth, we could reserve the existing mills exclusively for our higher-grade, more profitable in-house ore. By acquiring an additional mill, we could offload San Lucas processing to the new site and unlock significant organic growth. This could add around 4 million oz/y, pushing total production to roughly 22 million oz/y.

The other pathway is through exploration; our most advanced exploration asset is Soracaya in Bolivia. This is a pure silver, permitted mine, partially developed by Glencore, that could produce 450 t/d. In fact, according to the PEA produced by the previous operator, it could scale up to 850 t/d, producing 4 million oz/y AgEq. We are evaluating initially processing the ore through San Lucas to generate cash flow that could later fund a dedicated mill, or, alternatively, we could form a partnership with operators like Pan American Silver's San Vicente mine, located just 4 km away.

### Santacruz initiated a debt listing on the local Bolivian stock exchange. What has driven this move?

We issued a one-year promissory note as part of a broader debt program for 140 million Bolivianos. In the first tranche, we raised 70 million Bolivianos (around US\$10 million), which was oversubscribed and placed just 15 minutes after opening. The funds will be used to finance our working capital needs and increase our US dollar-denominated treasury. The note carries a 6.5% interest rate in Bolivianos, which is a very attractive return in the local market.

### What are the operating differences and similarities between Mexico and Bolivia?

Mexico and Bolivia share many similarities, not only culturally, with the same television shows or similar cultural notes, but also from a mining perspective, both countries having a long mining legacy. Our Bolivar mine, for example, has been in continuous operation for over 200 years, while Porco is actually the oldest mine in the Americas — it has been running for more than 500 years without interruption. Mexico's mining industry also goes back five centuries, but it has experienced pauses during periods like the revolution. ■





**Michael A. Konnert**  
Founder and CEO  
VIZSLA SILVER

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Panuco has become the largest undeveloped high-grade silver primary resource in the world. With the DFS planned for H2 2025, we aim to be in production in two years.

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**Could you briefly introduce Vizsla Silver Corp to our international readers?**

In 2017, I founded Vizsla Silver following the sale of Cobalt One Energy Corp. That same year, alongside Craig Parry, we co-founded Inventa Capital, a private mining incubator that now manages a portfolio of seven companies, including Vizsla Silver (formerly Vizsla Resources). We took Vizsla public with a small IPO on the TSX-V in 2018, and in 2019, we were introduced to the Panuco silver-gold project in the Western Mexico Silver Belt, Sinaloa. While the project's history dates back to the Spanish conquistadors, Vizsla is the first to conduct modern, large-scale exploration, making Panuco a true greenfield discovery in a brownfield district. Our closest neighbor is First Majestic's San Dimas mine, located about 40 km away from our northern land package.

In the five years since announcing a major discovery, Panuco has become the largest undeveloped high-grade silver primary resource in the world. With the DFS planned for H2 2025, we aim to be in production in two years.

**Panuco's MRE was increased by 43% in the most recent update. Could you comment on the next steps in the project's development?**

This being our fourth resource update since the project's inception, our primary goal was to convert ounces into measured and indicated resources. Our target was to define 20 million oz AgEq in measured resources, but we ended up adding 46 million oz in the measured category and 176 million oz AgEq in new indicated resources, beating all expectations. In total, we increased our resource base by 43%, from 155.8 to 222.4 million oz AgEq (measured and indicated).

The upcoming FS as final (definitive/bankable) is a last piece of study work before we reach a final investment decision. At US\$26/oz silver prices, the PEA outlined an NPV of US\$1.1 billion and 86% IRR, with a CapEx of US\$224 million –representing less than half our market cap right now. The payback period would also be very short, at nine months. If we correlate to current prices, however, the NPV jumps closer to US\$2 billion.

**Vizsla has also started a test mining program at Panuco. Why is this important?**

One of the major reasons why new underground mines fail is the compounded risk of starting both the mine and the mill at the same time. By doing a test mine before the mill is built, we can access and de-risk the underground separately from the mill start-up in a few years' time. The test mine also gives us the opportunity to complete more geo-technical and metallurgical testing and to run geospatial reconciliation with our drill model. Most importantly, we can start mining during the construction period and stockpile the material above surface – our plan is to have a one-year stockpile on the surface by the time the mill begins operations.

**What are your expectations regarding permitting in Mexico?**

Based on recent discussions with representatives from the Secretariat of Environment and Natural Resources (SEMARNAT) and other government

institutions, we are hopeful. The new government seems willing to grant more permits in the country. The discovery-to-production timeline we are achieving at Panuco is quite rare for most jurisdictions and proof that projects can be successfully developed in Mexico.

**Vizsla has recently tripled its land package to 17,000 ha with acquisitions along the Sinaloa Silver Belt. Could you provide an overview of the district and local community programs you're running?**

Sinaloa lives in the public's imagination as a state associated with Narcos and “El Chapo,” but the reality is quite different. It is actually an easy place to work in. We have been able to triple our land package through high-quality acquisitions and we certainly see Vizsla as a dominant silver producer within this district. Our areas of operation, including the test mine site, the plant, and the tailings are all located on previously disturbed land that had either been mined or farmed, which contributed to us obtaining the permit for the test mine in a matter of months. Moreover, we are the first people to have germinated local plants in the areas disturbed by exploration. The nursery includes about 5,000 plants.

In terms of community relations, we go by a golden rule: treat people the way you want to be treated. From day one, we recruited as many people as we could from the communities, with 70% of our current workforce being local. Vizsla has multiple social programs. For instance, we sponsored the local baseball team, Venados, which was also a way to get more engagement on our health fairs initiative – we wanted to provide the people living in the Sierra Madre Mountains with access to health checks since hospitals are quite far. At our last health fairs, we had about 1,000 people attending, up from the 200-300 that would show up at the first fairs.

**Lastly, could you comment on Vizsla's recent uplisting from the TSX-V to the TSX?**

The TSXV hosts hundreds of companies with “silver” in their name, while the TSX only has a dozen or so. Being listed on two premier exchanges, the TSX and NYSE, fits Vizsla's unique positioning: We stand alone as a silver developer of very high quality, with the PEA economics of a tier-one company. ■



LP



RM

**Lawrence Page and Robert Macdonald**

LP: President  
RM: VP Exploration  
SOUTHERN SILVER  
EXPLORATION

**As the founder of Manex Resource Group, the parent company of Southern Silver, could you provide a background into Manex's history, achievements, and strategy?**

LP: Manex – a portmanteau for Manage + Exploration – has two sides to the business: A services side, under Malaspina Consultants, and the Manex Resource Group, which comprises four exploration companies with assets in North America. The four companies are Southern Silver Exploration (TSX-V: SSV), Niclex Resource Corporation (TSX-V: NICK), Bravada Gold Corporation (TSX-V: BVA), and Equity Metals Corporation (TSX-V: EQTY).

We have raised half a billion CAD for companies under Manex's umbrella since our creation. We are not producers ourselves, but we advance early-stage mineral properties through development and marry them to producing mining companies. For example, 12 years ago, we took control of a junior company called Western Silver and developed what is now known as the Peñasquito mine, one of the largest silver mines in the world, operated by Newmont.

Southern Silver is another great case study of our successful model and what we can achieve.

**Southern Silver has just announced a letter of agreement to acquire the Nazas exploration project from La Cuesta International. Do you see Nazas as a company-making asset and how does it fit in your vision?**

LP: Earlier this year, we were contacted by well-known prospectors, Perry Durning and Frank (Bud) Hillemeier, about the Nazas property in the Faja de Plata, just 15 km away from Endeavour Silver's Pitarilla deposit. We shook hands shortly after and announced the agreement for the option to earn in 100% interest in the Nazas project for a total of US\$130,000 paid over 36 months. Nazas is an Au-Pb-Zn property containing five claims over 2,189 ha, with a high potential to host epithermal vein, porphyry, and replacement-styled mineral deposits. We see Nazas becoming the nucleus of a new company, a spin-out from Southern Silver with clear dividend and warrant benefits.

**Have you started looking for a buyer for Southern Silver?**

LP: It has taken us about 12 years to develop Cerro Las Minitas to a saleable and mineable stage, so we have now begun the process to find a buyer so we can focus on the new exploration properties. We are confident we can replicate the success we had with Western Silver, which we also developed for over a decade before selling it at a significant profit.

**What makes Southern Silver's Cerro Las Minitas project in Mexico particularly attractive?**

RM: Cerro Las Minitas (CLM) is a 100% owned silver-lead-zinc property located just 70 km northeast of the city of Durango, Mexico. We are in a prime geological district. CLM is a classic Carbonate Replacement Deposit (CRD) system in the heart of the Faja de Plata (“Belt of Silver”) structure, which hosts deposits like Newmont's Peñasquito, First Majestic's Los Gatos or San Martin, or Endeavour Silver's Pitarilla project. Second, we are blessed with excellent infrastructure, including a four-lane highway running through just 300 m away from the underground resource. Sitting on the edge of the Altiplano in north-central Mexico, we are far out from the Sierra Madre and the way of the Narcos. In other words, we are in the middle of the bean fields, not the marijuana fields...Moreover, we enjoy close relationships with the host community. Endeavour Silver has been hiring the same geologists and support team for over a decade and they all live nearby. We take great care of our neighbors, and this shows in many ways, from small gestures like buying Christmas gifts to the local kids, to providing Ejidos (communal land grants).

**Could you elaborate on the geology of Cerro Las Minitas, the drilling completed to date, and the key PEA metrics?**

LP: Since we started exploring the project in 2011, we identified significant ore grade mineralization to over 1 km in depth. Southern Silver completed over 92,000 m of drilling, upgrading the mineral resource to 36.7 million t. As highlighted in our 2024 updated PEA, we are looking at a large-scale underground mining operation with a 17-year LOM for a plant feed capacity of 14.3 million oz AgEq. Under conservative silver and zinc price assumptions, our base case scenario estimates a 5% after-tax NPV of US\$501 million and an IRR of 21.2% with a 48-month payback. Revenues would amount to US\$4.5 billion.

**As someone with decades of experience operating in Mexico, what advice can you offer to investors and prospectors interested in the country?**

LP: When you go into somebody else's backyard, you better be represented by competent people who know the political and legal system. With the right people who know the law, a great geological team, and the right principles to operate as a good neighbor, Mexico is the place to be, especially for precious metals exploration. ■





# Copper

## New area plays in the Ring of Fire

The Pacific Ring of Fire, also known as the Circum-Pacific region, is believed to hold more than half of the world's copper endowment, according to Minex Consulting. This tectonic belt reaches from South America through Argentina, Chile, Peru, Ecuador and Colombia, to Central America, traversing Panama, Costa Rica, Nicaragua, Honduras, Belize and El Salvador, and North America (Mexico), and the Caribbean Islands. So far, 302 copper deposits have been found in this region, according to Minex.

At the heart of it is the Andean Copper Belt, home to the largest known copper deposits in the world, hosting Escondida mine in the Atacama Desert in Chile or Las Bambas in the Apurimac region of Peru. But this same belt arcs into less-explored, forest-covered Ecuador, Panama and Colom-

bia. "On this major subduction zone that is the Andean belt, the near-surface copper deposits in dry areas have been the easiest and first to discover," said Ian Harris, the president and CEO of Giant Copper Resources (formerly Libero Copper), an explorer in Colombia, explaining that exploration has been gradually expanding from Chile to Peru, and from Peru to Ecuador and Panama, as demand for copper has risen.

With copper demand now projected to increase by 70% and reach 50 million t/y according to BHP, the humid region is also starting to attract more exploration. "Most of the historical growth in copper output has come from brownfield projects. However, we have now crossed a point when it is cheaper to build greenfield projects than to expand brown-

field ones. The problem is that the number of new copper discoveries has been drastically falling and the discoveries tend to be much deeper underground. Between 1990 and 2023, there have been 239 copper discoveries. However, only four of these discoveries were made in the last five years," said Harris, quoting a recent report by BHP.

The Latam North and Caribbean region could provide a fix for this shortage of discoveries. Juniors like C3 Metals are building their copper exploration portfolios in countries as different as Peru and Jamaica: one as the third largest copper producer in the world, while the other a completely nascent copper player: "Large copper-gold deposits are straddling the same geological fault system ripping through the Caribbean, in Cuba, Haiti, the Dominican Republic, and Puerto Rico, with some of these jurisdictions friendlier than others. We were privileged to cherry-pick what we felt was the most prospective ground in Jamaica," said Dan Symons, CEO, C3 Metals.

Chief among the new hotspots for copper exploration is Ecuador, already a copper producer since the Mirador open-pit mine entered production in 2019. Mirador, operated by the Chinese company Ecuacorriente, is the only large-scale copper mine in the country. The discovery of Mirador by Corriente Resources turned Ecuador's southeastern province of Zamora Chinchipe, and the Jurassic arc of the belt, into an area play for other companies to stake land around it, looking for fresh porphyry copper-gold systems.

Beyond the Fruta del Norte epithermal gold-silver deposit mined today by Lundin Gold, multiple top-tier deposits have been discovered in this prime region. One is Warintza, holding 4 billion t of near-surface copper resources just 40 km away from the Mirador copper mine and 80 km away from Fruta del Norte. Besides Warintza, Solaris Resources owns mineral rights over 268 km<sup>2</sup> of additional properties, with blue sky potential for copper-porphyry targets. The company is currently preparing a PFS. "Warintza is one of the largest projects in Ecuador today and it has the potential to become the largest mine in the country, so everyone has their eyes on its development," said

Matthew Rowlinson, president and CEO of Solaris Resources.

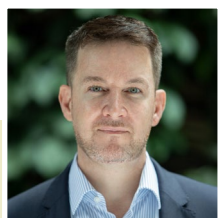
Further north is SolGold's Cascabel copper project, which, according to its 2024 PFS, contains 18.2 million tons CuEq and 31.3 Moz Au. In the center of Ecuador, Salazar Resources discovered the El Domo deposit back in 2008. El Domo is currently being developed as a JV with Silvercorp Metals (which owns 75%) and is gearing up to enter production by the end of 2026. El Domo is a VMS deposit, of higher grades but smaller size, with defined reserves of 6.5 million t (5% CuEq). "Although its metallurgy is more complex than that of a porphyry or an epithermal gold deposit, El Domo contains a valuable mix of metals: 50% copper, along with gold, lead, zinc and silver. El Domo is a highly profitable deposit, generating an estimated free cash flow of around US\$500 million," said Fredy E. Salazar, the CEO and president of Salazar Resources.

Beyond El Domo, Salazar has five projects at exploration phase, including Macara Mina, which sits on the border with Peru, and shares the same

geological basin as Tambo Grande, the largest VMS deposit discovered on the planet. Its main focus, however, is Santiago, a copper-gold porphyry. Though Ecuador is proving to offer a range of mineralization styles, large-scale, long-life porphyries hold the most appeal, since 80% of the world's copper comes from this type of rock. According to Salazar, Santiago has the potential to become a new Warintza, exhibiting the characteristics of an expansive porphyry system.

Ecuador's success has reinforced confidence in the continuation of the volcanic belt in less-explored parts of the region. "The Jurassic belt that hosts deposits like Ecuacorriente's Mirador or Solaris' Warintza in Ecuador continues into Colombia at our Mocoa project," said Ian Harris, president and CEO of Giant Copper Resources (formerly Libero Copper).

The Mocoa copper project in Putumayo, Colombia, was discovered in the 1970s and acquired by Libero Copper in 2018. After securing sponsorship from Frank Giustra of Fiore Group



**Ian Harris**  
President and CEO  
COPPER GIANT RESOURCES



The copper price always seems to be in a tug of war between short-term global issues and long-term fundamentals. The long-term reality is that we are going to need more copper than ever before.



**Melanie Leighton**  
CEO  
TITAN MINERALS



The Andean Copper Belt spanning Chile, Peru, and Colombia is well explored and mature in a mining sense, with Ecuador representing a screaming gap in terms of geological knowledge and investment.





OPTIMIZATION  
EXPLORATION  
EXPANSION

**PRODUCTION  
GOLD/ZINC/COPPER/SILVER/LEAD  
CASH FLOW  
DISTRICT SCALE EXPLORATION**

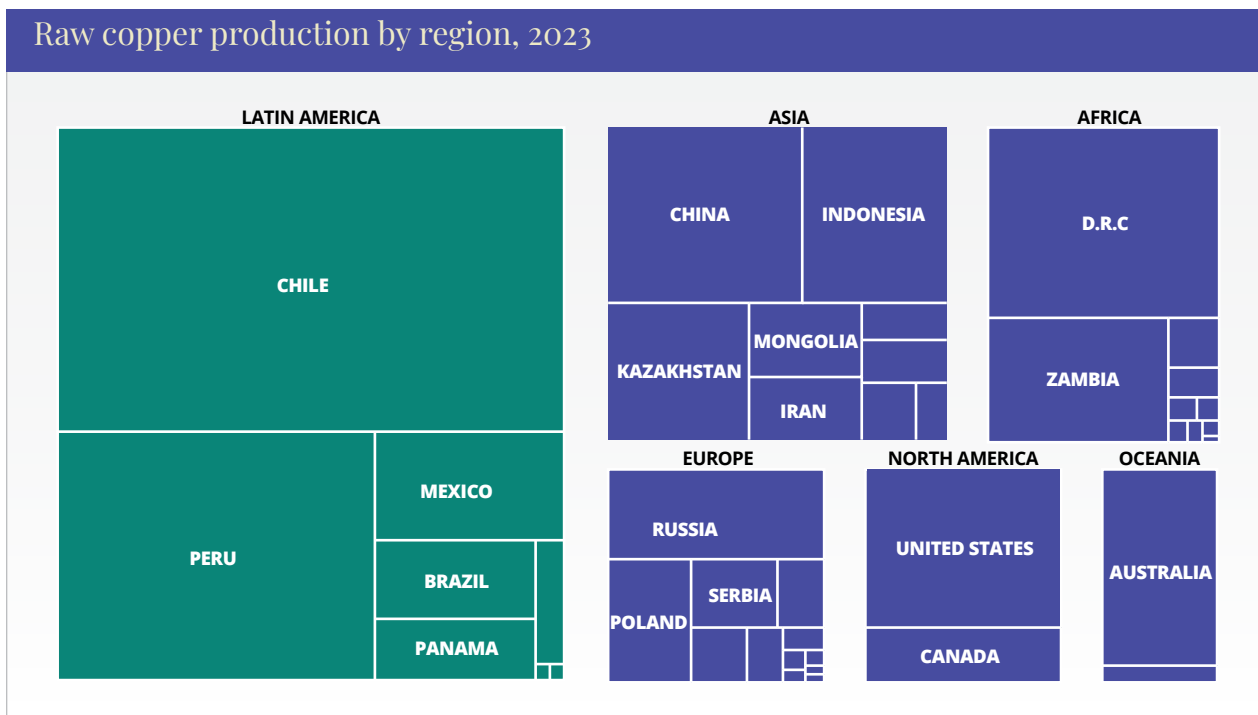


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OTCQX: LUCMF  
FRANKFURT: Z68

Contact: Sophia Shane  
Investor Relations  
Email: ssshane@lucamining.com  
Phone: 1-604-306-6867



### Raw copper production by region, 2023



Source: S&P Global

### Main copper players in Latam North and Caribbean

#### COLOMBIA

**Production:** Atico Mining

**Exploration and Development:**

AngloGold Ashanti (Quebradona copper-gold project, currently stalled), Cordoba Minerals (controlled by JCHX Mining Management), Copper Giant Resources

#### ECUADOR

**Production:** EcuaCorriente

**Exploration and Development:**

Atico Mining (La Plata), Adventus Mining & Salazar Resources (El Domo JV project), Aurania Resources, SolGold, Solaris Resources, Titan Minerals

#### JAMAICA

**Exploration and Development:** C3 Metals, Geophysx Jamaica

#### MEXICO

**Production:**

Capstone Copper, Cobre del Mayo, Grupo México, Industrias Peñoles, Luca Mining, Minera Frisco, Sierra Metals

**Exploration and Development:**

Agnico Eagle and Teck Resources (Minas de San Nicolás), Electrum Copper, Fuerte Metals, Infinitem Copper, Oroco Resource Corp.

#### PANAMA

**Production:**

First Quantum Minerals (Cobre Panamá – copper-gold mine, suspended in late 2023)

\*Cordoba Minerals has announced the sale of its interest in Alacran to JCHX.

\*Alpayana acquired Sierra Metals.

Source: Global Business Reports

(now owning 13.12%), Libero Copper, now called Copper Giant Resources, launched a 14,000-meter drill program in November 2024 and hopes to bring the 600 million t reserve at 0.33% Cu grade to over 1 billion t.

In Colombia, there is currently only one operating copper mine; the El Roble mine of Atico Mining. But the largest mine-to-be is the Alacran copper project, a mix of porphyry copper-gold, carbonate replacement mineralization, and gold veins. According to the December 2023 PFS, Alacran would produce 797 million lb Cu and 550,000 oz Au over a 14-year LOM. The project has been developed by Cordoba Minerals, an Ivanhoe Electric subsidiary, which owned 50% of the project; JCHX Mining Management has recently bought the full interest in the project.

Copper developments—especially large-scale porphyry projects—demand substantial investment and typically require the involvement of a major partner. It is therefore an encouraging sign to see that most developers in this region are attracting such support. Titan Minerals, for instance, has signed a JV with Hancock Prospecting’s subsidiary company Hanrine, which can earn 80% of Linderos by spending up to US\$120 million through drilling, feasibility studies, and by reaching a decision to mine. “Attracting a pedigree partner like Hancock is a feather in our cap and a great endorsement of the technical capability of our team and the merits of the Linderos project, which we believe could host a tier 1 copper porphyry,” commented Melanie Leighton, the CEO of Titan Minerals.

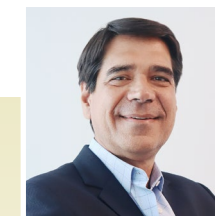
C3 Metals also signed an earn-in agreement on 13,020 hectares of its ground with Freeport-McMoRan for US\$75 million. On its side, SolGold announced a US\$750 million financing package for the construction of Cascabel from Franco Nevada and Osisko Gold Royalties, as well as the backing of shareholders like Jiangxi Copper (12%), BHP (10%), and Newmont (10%). Meanwhile, Solaris Resources has reached PFS stage without being tied to a major, as its president and



**Peter De Leo**  
Managing Director and CEO  
LYCOPODIUM



Demand for critical minerals is forecast to grow rapidly through to 2040, driven predominantly by the clean energy sector, and planned project development is being led by Latin America to meet this demand.



**Ernesto Balarezo**  
CEO  
SIERRA METALS



At our Bolivar mine in Mexico, we are finding new material everywhere we drill. We have been able to replace everything we mined in the last two years.



CEO, Matthew Rowlinson, highlighted: “A key differentiator for Solaris is that we have no attachments to a major that holds equity in our stock, which is unique in the world of development projects.”

#### The dormant spots

Copper discoveries in Ecuador have fired up the region, much like an erupting volcano. By that analogy, Ecuador is a very active region, having joined the ranks of copper-producing nations, with Colombia slowly heating up, while Jamaica is yet to prove its magmatism. But while exploration has been expanded on the Andean belt, and the ring of copper production has also been expanding since Mirador started operations, the two main suspects for copper production in the Latam North region are eerily dormant.

One is Mexico, the world’s 10th largest copper producer and the home of 45 copper mines, according to GlobalData. Mexico’s main copper producer is Grupo Mexico, the operator of the open-pit Buenavista del Cobre mine and La Caridad mine in Sonora, the two biggest operations in the country. In the third and fourth places are the Tayahua underground mine in Zacatecas, owned by Minera Frisco, and the Cozamin mine of Capstone Copper, also in Zacatecas. Invecture Group owns the fifth largest mine; the Piedras Verdes surface mine in Sonora. Both Cozamin and Piedras Verdes are approaching their end of life. Despite its longer history in copper production compared to neighbors like Ecuador, Mexico has seen decreased enthusiasm in its copper prospects due primarily to the former government’s hardline on open-pit mining.

One of the few copper development stories in Mexico is the 8.5 billion lb CuEq Santo Tomas project in Sinaloa, developed by the Toronto-listed Oroco Resource. The company secured the title in 2020 and has since released an initial resource, as well as two PEAs, one in 2023 and an updated one in 2024. Santo Tomas would require a CapEx of US\$1.1

billion at a base metal price of US\$4/lb. The project offers straightforward mineralogy, allowing strong recoveries and a low strip ratio (1.38:1 over LOM), but the political uncertainties have been less encouraging. “In H2 2024 we slowed our progress because we felt that the risk of investing in the prevailing election year headwind environment justified reducing activity while we stabilized federal and state political support for the project, but the recent clear expressions of that support are resulting in a ramp-up of our environmental work,” said Ian Graham, president of Oroco Resource.

The other dormant is Panama. First Quantum Minerals’ Cobre Panama is one of the largest copper mines in the world, holding 3 billion t of proven and probable reserves and producing over 300,000 t/y before it was suspended. The closure of the mine had a chilling effect not just on copper exploration in the country, but across the rest of the less-tested region. While geological successes in one part of the belt have created new play areas, major suspensions such as this have also created no-play areas.

Things may change in Panama. First Quantum remains positive and patient, as declared in a recent statement, with a potential JV between FQM and the government of Panama as one of the options considered to permit a restart. The Canadian miner has also dropped the arbitration case against Panama, but authorities remain undecided on the way forward. Thankfully, the mining industry, especially the copper sector, is used to taking a long-term view.

Copper reached a new record high in July this year, at US\$5.73/lb. Though copper’s long-term projections could not be more bullish considering the undeniable supply deficit the world is heading toward, short-term economic predictions should normally weigh prices down. However, copper has so far defied the economic pessimism, maintaining its gains. The price remains, as Harris of Giant Copper Resources put it, in a “tug of war” between short-term global issues and long-term fundamentals. ■





## Dan Barnholden

CEO  
LUCA MINING



We are actively assessing options for returning capital to shareholders, which may include a dividend distribution or a share buyback program.



### Could you introduce the Campo Morado mine and the optimization program underway?

Campo Morado is an underground VMS-style, polymetallic mine, producing gold, copper, silver, zinc and lead. The mine has been in production for 15 years. In the last six months, we increased mill throughput from 1,500-1,600 t/d to 2,000 t/d, and we expect to reach nameplate capacity at 2,400 t/d throughout 2025. With the mill at full capacity, we would be producing AuEq of 80,000 oz/y. As part of the optimization program, we will improve mill recoveries and the payabilities of the concentrates; Campo Morado produces concentrates which we sell to Trafigura.

### Luca Mining has launched the first drilling program in over a decade at Campo Morado. What is the focus of this campaign?

Luca Mining acquired Campo Morado in 2021. Now that we are fully financed and in a position to devote capital to expansion, we kickstarted the first drill campaign since 2011. This will be an evergreen, ongoing drill campaign with three main goals: The first scope, absorbing about 40% of our exploration budget, is to identify near-mine, high-grade material, with direct implications on our cash flow generation; The second priority, accounting for another 40% of our budget, is to extend the life of mine by finding additional higher-grade and larger ore bodies in the proximity of the mine; and the third goal is to conduct truly greenfield exploration on underexplored parts of the properties, for which we allocated 20% of the budget. The first set of drilling results will be out in the next six to eight weeks, but exploration will be continuous, in parallel with our mining operations.

### What opportunities do you identify at your second asset, the Tahuehueto underground mine?

Tahuehueto is a smaller mine, an epithermal gold-silver underground deposit located on the Sierra Madre Belt, in Durango, Mexico. The project was rushed into production by the previous management, but we are re-focusing on drilling to understand better what we actually have at the property in terms of potential resources. We are currently mining from a small inventory with an annual production of 25-30,000 oz AuEq/year, at best. However, given the potential of the area, with nearby mines like Majestic Silver Corp's San Dimas mine, we believe we can find a bigger ore body to support a much larger operation.

### Could you provide insights into your current financial position and the potential for shareholder returns, including dividends, in the future?

Luca Mining successfully raised US\$11.5 million in September, issuing shares at CAD\$0.45 with warrants at CAD\$0.60 per common share. Our investors were satisfied to see the share price doubling since, shooting to CAD\$1.15 today, which is both a reflection of diligently executing our business plan, as well as the tailwinds of a good market, with investment sentiment in Mexico improving. The proceeds from our cash flow operations along with warrant exercises will be used to pay residual debt, invest in capital upgrades at the mine, as well as advance the exploration programs I outlined earlier. Additionally, we are actively assessing options for returning capital to shareholders, which may include a dividend distribution or a share buyback program.

### How do you observe the current operational and business environment in Mexico?

On any given day, investor sentiment may tilt more toward the base or precious metals, and we are strategically positioned with a well-balanced exposure: 35% gold, 22% copper, 16% silver, and 25% zinc. Of course, this leads to some confusion about our classification - is Luca Mining a precious metal or a base metals company? But as industry trends show, these distinctions are becoming increasingly fluid. Companies like Agnico Eagle and Barrick Mining are entering the copper space, further blurring the lines between the two sectors.

### Finally, is Luca Mining assessing M&A opportunities in Mexico?

Our strategy is straightforward: acquire underperforming assets, inject capital, bring in the right expertise, and turn these assets around, making them more investable. The long-term vision is to repeat this strategy on a broader portfolio of assets. Following our success in the year, we are starting to be presented with new opportunities from market players, investment banks, and industry partners like Trafigura, Mexico's largest concentrate buyer. They see what we managed to do and they start to think "Maybe this mine would be better operated by the Luca team." Companies like First Majestic or Endeavour Silver have proven how lucrative such a strategy can be, and I believe we are in a very interesting niche where we can turn a US\$100 million acquisition into a billion-dollar business. ■



## Dan Vujcic

CEO  
SOLGOLD



Cascabel ranks among the world's top five undeveloped copper projects, with a resource of 18.2 million t CuEq and 31.3 million oz Au.



### Could you introduce SolGold and your tier-one copper-gold Cascabel project?

Cascabel ranks among the world's top five undeveloped copper projects, with a resource of 18.2 million t CuEq and 31.3 million oz Au. According to the 2024 PFS, it will produce an average of 277,000 oz/y of gold and 123,000 t/y of copper over an initial 28-year mine life. Our story is supported by high-profile investors, including Jiangxi Copper (12%), BHP (10%), and Newmont (10%), with approximately 55% of our shares held by major investors.

The company is now at the financing stage to turn Cascabel into reality. Most junior developers get acquired before they have the chance to get into construction, which of course can be a good outcome for their shareholders, but at SolGold, we are not here to sit around waiting for that eventuality: We want to progress Cascabel to the point where Ecuador can have the confidence that this mine will come to fruition.

The country has placed a lot of hope in this asset due to its size and its potential to unlock economic growth in the north.

### It has been announced that SolGold is evaluating an open-pit, early-production plan, as a way to de-risk the operation. What is motivating this direction?

While still in the early days, we are confident that there is an open-pit operation at Cascabel, especially at the Tandayama deposit, which would allow us to pivot into production a few years before starting full production from our main (underground) Alpala deposit. The board has approved a 5,400-meter (15 holes) drill program to test the mineralization and define the near-surface resource at Tandayama. Similar to what Oyu Tolgoi (Rio Tinto) has done in Mongolia at the open-pit operation that preceded block caving, we see an opportunity to stage development in a similar way. Our vision is to initiate early works and potentially bring Tandayama into production in the next three to four years, rather than in the next seven to eight years. Early production offers several de-risking advantages, offering us an alternative ore supply from the open pit, as well as improving the financeability of the project since we'd be building our capabilities and credibility as operators. We have recently brought in G Mining Services as our study managers. They will be acting as our external engineers and consultants both on the upcoming FS on the full project, as well as on early works for an open-pit operation, in parallel.

### SolGold secured a gold stream agreement with Franco Nevada and Osisko Gold Royalties last year. Could you comment on the significance of this support?

Both Osisko Gold Royalties and Franco-Nevada have a great track record in financing top-tier projects. Their support alone is a vote of confidence in Cascabel. The first US\$100 million of the stream is designated for pre-development funding, while the larger chunk of US\$650 million will actually finance a large proportion (approximately 42%) of our CapEx requirement. I believe the markets have yet to fully appreciate the significance of having this huge head-start.

### How do you find the business environment in Ecuador, and how have local communities received your presence?

We are situated in the Imbabura province in northern Ecuador and there are no indigenous communities within our area. However, that does not mean we can be complacent, and we have a very strong community relations team in place. The government itself has also been proactive and constructive - a refreshing contrast to some other jurisdictions where governments can be combative over natural resources. The re-election of President Daniel Noboa adds an element of political stability, which is positive for long-term investment.

### What has driven the spinout of your exploration licenses outside of Cascabel into ExploreCo?

We are in the process of separating our most prospective exploration tenements in the southern region—a package of licenses covering over 1,000 km<sup>2</sup>—into a new and separate entity. This includes copper-gold exploration targets that we consider high priority, including Porvenir, which currently hosts a resource of 493.7 million tonnes at 0.43% CuEq. Numerous mining companies have expressed interest in these assets. SolGold will retain Cascabel and the northern exploration concessions, including Blanca, which sits about 8 km north of the project.

We don't want to sit on these licenses, paying land fees without progress. As SolGold, we are channeling our expertise into Cascabel, so partners are key to unlocking the value of these discoveries and greenfield exploration plays. This is a huge portfolio and a compelling entry point into Ecuador.

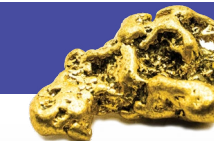
### Do you have a final message for prospective investors or partners?

Cascabel is not only a globally significant resource—it's a project of national importance to Ecuador, and we're committed to delivering it responsibly, with the intent and pace that a world-class asset deserves.

ExploreCo will create new avenues to advance our regional portfolio; and once formally announced, SolGold will also undergo a rebrand—reflecting our shift from explorer to developer, from SolGold's foundation to its future. ■



## Highlighted Projects – Gold

**The Cangrejo gold project in Ecuador**

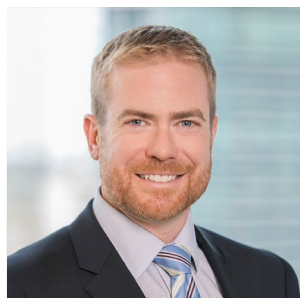
“Cangrejos is the world’s 26th largest gold deposit at any stage—exploration, development, or production. It contains 20 million ounces (Moz) of gold across all resource categories, along with 2.6 billion pounds (lb) of copper and a 1:1 silver-to-gold ratio.”

Marshall Koval, President and CEO, **LUMINA GOLD**

**The Romero gold project in the Dominican Republic**

“We defined an underground resource of 2.2 Moz AuEq, including copper and silver, with 1.1 Moz in reserves at an average grade of 5 g/t AuEq. We have a 50-km mineralization strike under exploration license that we are excited to return to.”

Luis Santana, CEO, **GOLDQUEST MINING**

**The Los Reyes gold-silver project in Mexico**

“Since acquiring the Los Reyes project in 2019, we increased the 1.1 Moz AuEq resource to 3 Moz, also defining an underground portion. We believe Los Reyes can be a low-CapEx, low-OpEx, high-return project with a growing resource base.”

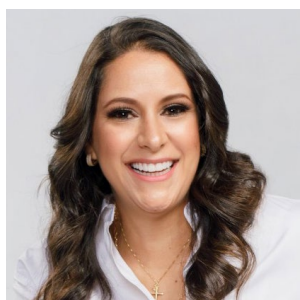
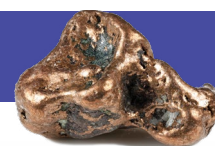
Scott Hicks, CEO, **PRIME MINING**

**The Anzá gold project in Colombia**

“Our most advanced project is the Anzá project, covering a large landholding of 400 km<sup>2</sup> in Colombia’s Antioquia province, near Medellín. We’re currently focused on Pepas, located in the northern part of the property. The results so far have been very encouraging, including 107 meters at 6.2g/t and 77 meters at 7.6g/t, both from surface.”

Louis Castro, Chairman, **OROSUR MINING**

## Highlighted Projects – Copper

**The El Guayabo copper-gold project in Ecuador**

“Torata Mining is the Ecuadorian subsidiary of ASX-listed Challenger Gold. We are developing the 9.1 Moz Au El Guayabo project in Ecuador, with ongoing resource expansion drilling in preparation for an updated MRE in 2026.”

Carolina Orozco, Country Manager, **TORATA MINING (CHALLENGER GOLD)**

**The Batopilas historic silver mine in the state of Chihuahua, Mexico**

“Batopilas produced 300 Moz AgEq at an average grade of 1.5 kg/t – the highest-grade silver mine in Mexico. Reyna Silver uncovered over 3 km of mineralized extensions to the historic veins; we drilled underneath these, hitting 1 kg/t AgEq. As a native silver project, Batopilas is a truly unique project in Mexico.”

Jorge Ramiro Monroy, CEO, **REYNA SILVER**

**The Alacran copper-gold project in Colombia**

“Alacran would produce 797 million lb Cu and 550 Koz Au over a 14-year LOM. Additionally, given the nuggety high grade gold intercepts that we could trace along strike or down dip, and were therefore unable to include in the Resource, we believe that this will be one of the rare projects that produces more gold than what is in the Resource.”

Sarah Armstrong-Montoya, CEO, **CORDOBA MINERALS**

**The Plomosas historic silver mine in the state of Sinaloa, Mexico**

“The project consists of 85 Moz AgEq indicated resources, at 179 g/t AgEq, and 49 Moz AgEq inferred resources, at 171 g/t AgEq. Plomosas is fully developed, with 7.4 km of underground development with all permits and ejido agreements in place. We are in the process of looking for a partner to move Plomosas back into production.”

Eric Zaunscherb, CEO, **GR SILVER**

**The Santo Tomas copper project in Mexico**

“Based on our 2024 PEA and at a base metal price of Cu US\$4/lb, Santo Tomas would need an initial CapEx of US\$1.1 bn and would yield US\$1.48 bn post-tax NPV and a 22.2% post-tax IRR, with sharp sensitivity to copper prices.”

Ian Graham, President, **OROCO RESOURCE**

**The La Guitarra gold and silver historic mine in the state of Mexico, Mexico**

“On January 1st, 2025 – seven months ahead of schedule – we declared commercial production at La Guitarra, a project we acquired from First Majestic in March 2023. In 2023, we released a maiden resource estimate of 27.2 Moz AgEq, marking a 373% increase in measured and indicated resources compared to earlier estimates.”

Alex Langer, CEO, **SIERRA MADRE GOLD AND SILVER**





# COUNTRIES

“

Mining has gained a bad name in Mexico, but the industry contributed to the country's growth for centuries. Of course, we must always improve our processes and raise the bar on the best environmental and social practices.

”

Marco Aníbal Cantú  
Director  
**COMPAÑÍA MINERA SANTA LUCÍA**

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CARIBBEAN MINING 2025

Image courtesy of Barrick Mining





# Mexico

## Location, location, location

Asked what makes the Cerro Las Minitas silver-lead-zinc property attractive, Robert Macdonald, VP exploration for Southern Silver Exploration, said: "We like it because of location, location, location." Cerro Las Minitas is in Mexico's prime geological district at the heart of the Faja de Plata, the world's most famous silver belt. The project also benefits from excellent infrastructure. In many ways, the appeal of the project mirrors the broader appeal of Mexico itself.

Mexico is considered a leading mining location by most criteria. Whether we speak of precious metals, base metals, or battery metals like lithium, Mexico comes top in Latin North and Caribbean. The country is also consistently praised for its level of infrastructure and mining talent that can compete with top-tier jurisdictions. Mitchell Krebs, the CEO of Coeur Mining, said that it is easier to access talent in Mexico than in the US, not just because the talent pool is larger but also because Mexico's economy and education have been geared towards mining for a longer time. Mexico also compares favorably on a cost basis with jurisdictions both north and south of its borders: Drilling costs on a cost-per-meter basis are about 20% lower in Mexico compared to Chile, according to Tim Warman, the CEO of developer Fuerte Metals, which holds projects in both Mexico and Chile. "The cost of production in Mexico is only a fraction of that in Nevada," said Jorge Ramiro Monroy, the CEO of silver developer Reyna Silver, with projects in Mexico and Nevada.

When realtors triple-emphasize the importance of "location," it is usually to say that the location outweighs other less favorable factors. In the world of mining real estate, Mexico's value has dropped considerably in recent years, despite its premium location as a mining jurisdiction. Mexico fell 37 places in the Fraser Institute's mining survey in just one year, plunging from the 37th position in 2022 to the 74th position in 2023. The drop was caused by a series of regulatory changes passed during the six-year administration of former president Andrés Manuel López Obrador, known by his initials as AMLO.

Soon after taking office, AMLO decided the country had already granted too many mining concessions and banned the issuance of new ones. In 2023, the government passed a series of legal amendments to the Mining Law, the National Waters Law, the Ecological Balance and Environmental Protection Law, and the General Law for the Prevention and Integral Management of Waste. Among the main legal changes, we note: shortening the duration of mining concessions from 50 years to 15 years; changing the process for obtaining concessions from claims staking to public tendering, though state-owned companies can still be awarded a concession direct-

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Website: vizslasilvercorp.com

## Mexico at a Glance



**SURFACE AREA**  
1,964,375 km<sup>2</sup>

**CAPITAL**  
Mexico City

**POPULATION**  
133 million

**MEDIAN AGE**  
29.6 years

**LITERACY RATE**  
95%



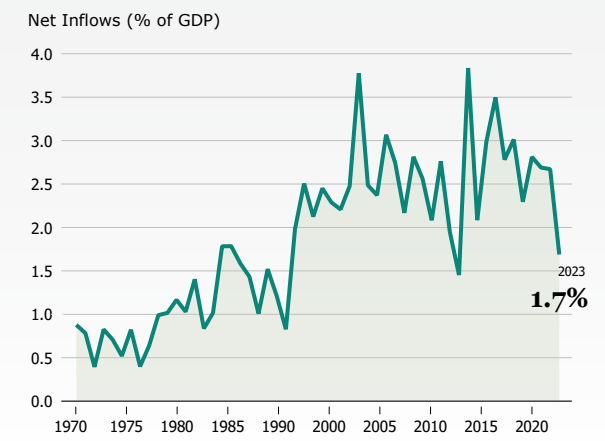
**GDP**  
1.79 trillion USD

**GDP PER CAPITA**  
14,157 USD

**MAIN EXPORTS**  
Motor Vehicles and parts, Computers, Crude Petroleum

**MAIN MINING RESOURCES**  
Silver, gold, copper, zinc

## FDI Evolution



"Mexico's new administration is starting to realize the importance of mining, especially on the local economy of rural and remote areas that lack critical infrastructure or stable revenue streams. I expect deep change within the next months, with the country opening its arms to mining once again."

**Craig Gibson**  
Co-Founder  
**PROSPECCIÓN Y DESARROLLO MINERO DEL NORTE (PRODEMÍN)**

Sources: IMF, World Bank, Worldometer, OEC

## Key players

- Agnico Eagle
- Americas Gold and Silver
- Aura Minerals
- Avino Silver & Gold Mines
- Aztec Minerals
- Bacanora Lithium
- Bear Creek Mining
- Capitan Silver
- Chesapeake Gold
- Cobre del Mayo
- Coeur Mining
- Compañía Minera Santa Lucía
- Defiance Silver
- Discovery Silver
- DynaResource
- Electrum Copper
- Endeavour Silver
- Equinox Gold
- Excellon Resources
- First Majestic
- Frontera Copper
- Fuerte Metals
- Gold Resource Corp
- GR Silver
- Grupo México
- Grupo Minero Bacis
- Guanajuato Silver
- Heliostar Metals
- IMPACT Silver
- Industrias Peñoles
- Kootenay Silver
- Luca Mining
- MAG Silver
- McEwen Mining
- Minaurum Gold
- Minas del Balsas
- Minera Alamos
- Minera Frisco
- Newmont
- Orex Minerals
- Orla Mining
- Oroco Resource
- Pan American Silver
- Peña Colorada
- Prime Mining
- Radius Gold
- Reyna Silver
- Riverside Resources
- Santacruz Silver Mining
- Sierra Madre Gold and Silver
- Sierra Metals
- Silver Bull Resources
- Silver Storm Mining
- Silver Viper Minerals
- Sonoro Gold
- Southern Silver Exploration
- Starcore International Mines
- Teck Resources
- Torex Gold
- Vizsla Silver

## Did you know?

Over 70% of Mexico's silver mines are held by Canadian companies.





**Hernando Rueda**  
President  
**SINALOA MINING CLUSTER (CLUMISIN)**



Sinaloa has great geological potential simply because it remains mostly underexplored. While the other states are mining from already mature operations, Sinaloa delivers the resources that will be needed to replace those depleting reserves at the national level.



ly, exempted from this new rule; new requirements for consultation with indigenous communities; restrictions for granting concessions in water-stressed areas and other protected areas; new requirements for authorization before the transfer of concessions between private parties in order to prevent speculative transfers; the introduction of multiple new grounds for the cancellation of mining concessions.

Other reforms passed by the former president include the nationalization of the lithium sector by granting exclusive rights in lithium to newly created state-owned LitoMx. Mexico is not a lithium producer but holds considerable reserves estimated at 1.7 million t.

Most notably, AMLO proposed a bill to prohibit open-pit mining, but the ban has not been enshrined in the law. This nevertheless froze decisions within the Secretariat of Environment and Natural Resources (SEMARNAT), while the bill is still under review. The lack of a final legalization, whether for or against open pit mining, further exacerbated confusion and instability.

In truth, what has mostly eroded the market's confidence in Mexico is not only these various reforms, but the uncertainty over their validity and application. A new mining law to formalize those mentioned above is still pending. The 2023 reforms sparked Amparo (injunctions) lawsuits from almost every mining titleholder on the basis that their constitutional rights had been violated. In theory, no new law can be applied retroactively without infringing constitutional rights, and therefore mining companies in Mexico continued on the basis that they are (legally) grandfathered.

"The 2023 amendments to the mining law almost killed the industry, with everyone investing or looking to invest in Mexico forced to file an Amparo to protect themselves and the concessions granted to them under previous legislation," explained Alberto Vazquez, the founder of VHG Legal Services, a law firm that has filed over 40 such injunctions on behalf of its clients, with 95% of them granted a favorable resolution.

However, a favorable resolution is not definitive. Today, the industry awaits a final resolution to determine if the amendments apply or not. Typically, the decision would have fallen on the Circuit courts, but the Supreme Court intervened in an almost unprecedented move, as described by Vazquez: "The Supreme Court decided to take over the review of all Amparo cases to ensure consistency and prevent different Circuit Courts from issuing conflicting rulings. However, the move was faced with an amendment to the judiciary power which impacted how ministers and magistrates are appointed. This led the Supreme Court to send the Amparos back to the lower Circuit Courts, meaning that each case will be addressed individually and potentially inconsistently. This is a major setback and it affects investors in Mexico. The legal battles are taking longer than usual."

As Vazquez hinted, there are concerns over the independence of these decisions. Rubén Cano, the founding partner of CR Legal Partners Mexico, a law firm located in Chihuahua, explained in further detail the judiciary reform and its impact on independent rulings: "During AMLO's presidency,

the entire judiciary was restructured, introducing a direct voting process to select Supreme Court ministers, federal judges and magistrates. Additionally, the requirements for becoming a judge have been lowered, which could potentially affect the independence of the judiciary. This situation raises two concerns: First, judges and magistrates might have political affiliations, rather than being entirely impartial, and second, the new Supreme Court responsible for adjudicating the challenges to the federal mining law may include members with insufficient experience. There are growing concerns about the future of the rule of law in Mexico not only regarding mining law but also with respect to amendments to water and environmental laws."

While the Amparos are being evaluated, exploration in Mexico continues, even though exploration is essentially banned under the new rules. Lawyers in the country warn of the risks of continuing exploration work without a final resolution on the Amparo cases and a definitive ruling from the courts.

Under this thick smoke of uncertainty, the Mexican mining chamber, CAMI-MEX, projects investment in mining will drop to its lowest in almost a decade. The mining industry is now waiting: waiting on a final resolution from the courts; waiting on various permits; waiting to understand if open-pit mining will continue to exist; and, decisive for all of the above, whether recently elected president Claudia Sheinbaum Pardo will continue her predecessor's anti-mining agenda or carve a path of her own.

**Come rain or shine**

Mexico has two fairly clearly defined seasons, a dry and a rainy one. For the mining industry, it's been patchy skies for years now. As a result of the recent instability, some companies have left the country. Companies like Almaden Minerals and Silver Bull Resources filed claims together worth close to US\$1.5 billion against Mexico, alleging that Mexico expropriated their investments. For those that stayed, Rubén Cano advises to prepare to be compliant in a



**Oscar González Rocha**  
Executive President  
**GRUPO MEXICO**



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hyper-regulated environment that is likely to become even more regulated: "It will be more challenging to obtain environmental permits or to keep current water permits. Keeping your mining concessions valid will be crucial. Understanding the legal framework is a basic prerequisite, but I believe investors should be ready to go beyond compliance and exceed expectations, especially in terms of ESG requirements."

The industry is already adapting. The lack of clarity over the ban on open-pit mines has led current explorers and developers to prioritize underground operations over open-pit ones. Endeavour Silver at Pitarilla, Heliostar at Ana Paula, and Fuerte Metals at Cristina are considering underground developments at previously envisioned open-pit projects, each for different reasons. Prime Mining, which is developing the Los Reyes 3 million oz gold-silver project in Sinaloa, has for the first time defined an underground portion. "About two-thirds of the resource is open-pit and the rest is underground, which leaves us with the option to develop a higher-grade underground operation instead of an open-pit. Given the previous regulatory uncertainty, it was important for us to show that Los Reyes could also be mined from underground. There is still a lot of work we have to do, but we could prove a strictly underground mining operation with excellent returns if needed. However, I believe that open-pit mining is still very much on the cards for Mexico," said Scott Hicks, the CEO of Prime Mining.

Like most executives in Mexico, Hicks places hope in Claudia Sheinbaum. Her government has announced the review

of the controversial bill to ban open-pit mining, drawing attention to the fact that sand mines used in the cement industry, as well as any future lithium mines that the government is hoping to build, are by default open-pit. Though not uttered directly, she intimated that a ban on open-pit mining is not practical. Her pragmatism was also evident when she chose mostly moderate cabinet members and by not including the ban on open-pit mining in her list of 100 pledges – an encouraging omission. Even though Sheinbaum was seated next to AMLO as he passed the 2023 changes and she indicated she would continue his policies, investment sentiment has clearly shifted since she has taken office, which suggests that investors do not see Sheinbaum as a continuation of AMLO.

This shift in the mood can be seen in the acquisitions announced since elections, in better asset valuations, and, clearer than anything else, in the trickle of permits coming through, sending some strong rays of sunshine over the frost: Alamos Gold received the environmental permit at its Mulatos project in Sonora, Avino Silver & Gold Mines received the permit for its La Preciosa, while Industrias Peñoles, Grupo Mexico, Agnico Eagle, and Teck Resources are also said to have obtained permits.

Those who choose to stay and invest in Mexico understand that mining is older than the republic itself. Until the new legal framework is made available in the second part of this year, we can only report on the industry's anticipations. Coming next is a sample of how the industry views Mexico's new leader. ■



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# Industry Views on Mexico's New President



"Early impressions are that President Sheinbaum is principled, capable and willing to listen and enter into dialogue."

Jody Kuzenko, President and CEO, **TOREX GOLD RESOURCES**



"Fears that Claudia Sheinbaum's government will simply continue AMLO's agenda have not materialized. Rather, the political discourse around resource extraction appears to be guided by common sense and an understanding of the importance of mining to Mexico's economy."

Dan Barnholden, CEO, **LUCA MINING**



"I believe the country's new president, Claudia Sheinbaum, will start separating herself from the past and make her own name once she is better settled."

David Wolfin, CEO, **AVINO SILVER & GOLD MINES**



"Former President AMLO's talks of banning open pit mining are no longer a part of the rhetoric under President Sheinbaum's administration, who has made it clear that it would like to see Mexico participate in the decarbonization of energy systems. Silver is key to that goal."

Eric Zaunserb, CEO, **GR SILVER**



"A key part of her Mexico 2030 Vision is elevating the country into the world's top 10 economies, a goal that requires foreign investment; this marks a stark contrast to her predecessor's more nationalistic policies."

Glenn Jessome, President and CEO, **SILVER TIGER METALS**



"President Claudia Sheinbaum has been under pressure from both the US and Canadian governments... We are optimistic about the opening up of Mexico's mining sector, but we must be patient, as the new government has bigger fish to fry now with the tariff situation."

Ramiro Monroy, CEO, **REYNA SILVER**





**Hugo Solís**  
CEO  
PEÑA COLORADA

“

Peña Colorada plays a key role in Mexico's industry, contributing to 30% of the country's pellet production – the largest iron ore pellet producer in the country.

”

**Can you introduce Peña Colorada to our international readers?**

Peña Colorada is a 50:50 JV between Arcelor Mittal and Ternium. We are a fully integrated mining operation, so we handle every single step from extracting the ore from the ground, to processing it (upgrading to higher ore content), producing a final iron concentrate and pellets, and shipping the product out. Installed production capacity is about 4.5 million t/y of iron ore concentrate and 4 million t/y of iron pellets, taking the ore from the mine with a grade of 20% magnetic iron content to 66% total iron content in pellet. Next year, we will move over 85 million t/y of earth movement to achieve the 4 million t/y of final pellet product. Peña Colorada plays a key role in Mexico's industry, contributing to 30% of the country's pellet production – the largest iron ore pellet producer in the country. All of Peña Col-

orada's production stays in Mexico, with the final product supplied to local customers, most likely to steel plants owned by Mittal and Ternium.

**With 50 years in the market, could you elaborate on the operational modernizations undertaken?**

We have been working continuously to modernize the original beneficiation plant; in 2018, as the quality of the raw ore started dropping and we needed more advanced processing to produce a high-quality final product, we added a second plant. We optimized our processes, installed better equipment, and made improvements across the board, from better ventilation to upgrading the electrical systems and ensuring more efficient sintering.

As the mine gets older and the ore grades are naturally declining, most of our efforts and investments today go into ensuring a more efficient mining operation, including better extraction equipment and waste handling, always with safety and sustainability at the top of our minds. Peña Colorada has invested significantly in upgrading our tailings facilities to meet higher safety and environmental standards, especially regarding water use. On the beneficiation plant, we installed new filtration systems to remove water more efficiently and replaced the flotation system to separate the iron-rich material from waste rock more effectively, enabling a higher percentage of iron from lower-grade ore. Additionally, we boosted our lab capabilities to analyze the ore and concentrate, which helps fine-tune processing and improve recoveries. On the palletization plant, we are using modern imaging systems to monitor pellet size, shape, and consistency in real time.

In total, we have over US\$200 million in current active projects as part of our modernization strategy.

**Have Mexico's environmental regulations moved in tandem with international rules?**

Mexico's regulations have been very much focused on greater environmental controls. As a company with two large international shareholders, we have already been operating at the highest global standards, hence stricter national laws do not impact us. Sometimes, the iron ore industry is misunderstood. For instance, few people know that aluminum is a much

more carbon-intensive process than producing steel. This is something we need more awareness around and that we've been strongly advocating in front of the technical committees within the government authorities, highlighting the low environmental impact of steel production from iron ore extraction to final product.

**Can you walk us through Peña Colorado's ESG mandate and strategy?**

On the environmental side, we have taken a huge step in replacing traditional tailings with dry storage. Moreover, we can now recover over 90% of our water using our advanced water treatment plant. We always expand our infrastructure to meet not only today's requirements but be ready for the future. Peña Colorada is also very mindful of the natural environment around us and we run a major reforestation program with over 150,000 trees planted annually – a 5 to 1 reforestation program, or 5 new trees for every 1 tree impacted.

Equally important is our social commitment close to our host communities in Colima and Jalisco. Working collaboratively with both government and local communities, we have been building roads, schools, churches, and clinics, making sure we have a direct positive impact across different dimensions. Education has been a core focus of ours, supporting local schools by offering scholarships as well as school equipment to promote children's progress to higher education; at the University of Colima, we have an excellence award for top students. As one of the largest employers in the region, with 1,400 direct employees and up to 3,000 total indirect jobs, Peña Colorada has a deep impact on the local economy and beyond.

**How are you observing the threat of tariffs between the US and Mexico?**

This is certainly one of the big threats on the horizon. Tariffs can dramatically shift cost structure, especially in areas like equipment procurement, but we are well insulated from this risk thanks to our diverse pool of suppliers (both US-based as well as European or Brazilian). Tariff wars are outside our control, so we must focus on what is within our control, namely operations and looking for continuous improvements to protect the competitiveness of our product. ■



**Dan Dickson**  
CEO  
ENDEAVOUR SILVER

**Could you provide an overview of Endeavour's two producing silver mines, Guanaceví and Bolañitos?**

We are a mid-tier silver producer with a guidance between 7 to 7.9 million oz AgEq from our two underground epithermal vein system mines in Mexico: Guanaceví and Bolañitos. Guanaceví is our largest asset, contributing 5–6 million oz AgEq annually, with 80% of revenue from silver and 20% from gold. Bolañitos, a smaller operation, produces approximately 2.5 million oz AgEq, but with a reverse revenue split—80% gold, 20% silver. Our 2024 production guidance reflects a temporary setback at Guanaceví, where a trunnion failure in the ball mill reduced throughput for four months. In 2022 and 2023, we produced over 9 million oz AgEq. Nevertheless, our production profile is set to transform once we bring the Terronera project online, which will become Endeavour Silver's largest mine. Endeavour's goal is to become a senior silver producer.

**When will Terronera enter production and what impact will this new mine have on Endeavour's growth?**

We expect to commission the mine in Q2 of this year and ramp up commercial production by mid-year. Terronera will produce 7 million oz AgEq annually, comprising 4–4.5 million oz silver and 35–40,000 oz gold. Not only will it effectively double our production, but it will also impact our positioning in terms of mine life and production costs. Another standout feature at Terronera is its low-cost profile.

**Could you also tell us about the Pitarilla development project in Durango?**

We acquired Pitarilla from SSR Mining in 2022 and are currently advancing it through a feasibility study expected in early 2026. As Terronera enters production, we plan to move our development team from Terronera to Pitarilla and replicate our success. We believe Pitarilla can produce anywhere between 6 to 8 million oz AgEq, along with zinc and lead byproducts. ■



**David Wolfin**  
CEO  
AVINO SILVER & GOLD MINES

**Could you introduce Avino Silver & Gold and provide an overview of your flagship Avino mine in Durango?**

Avino Silver & Gold is a silver exploration and production company. Our primary asset is the Avino silver mine, originally discovered in 1558 by Captain Hernán Cortés' expedition. In addition to Avino, we have two key development projects in close proximity: the La Preciosa project, located 19 km from the Avino mill, and the Oxide Tailings project, which has a 2024 pre-feasibility study (PFS). Our strategic goal is to transition from a single-asset producer to a three-mine operation within five years, establishing Avino as an intermediate silver producer with an annual production target of 8–10 million oz/y. In 2024, we produced 2.65 million oz AgEq. Financially, we reported a significant increase in cash flow, rising from US\$7.8 million in Q3 to US\$26 million in Q4, supported by US\$5 million in financing and the remainder generated from operations. For fiscal year 2025, we have allocated US\$13–\$18 million in growth capital expenditures.

**Avino has recently obtained all permits to start the development of the La Preciosa Property. Could you comment on the next steps?**

The project is considered one of the largest undeveloped primary silver resources in Mexico, containing over 100 million oz AgEq in the indicated category. Getting the permits is a game-changer. We are advancing underground development to access the two primary ore zones. All going well, we should enter production by the end of 2025.

**Can you also briefly explain the value of the Oxide Tailings project?**

We identified 6.7 million tons in proven and probable reserves that we plan to re-process using leaching. Based on the 2024 PFS at current metal prices, we are looking at about 43% after-tax IRR. We want to take it step by step, starting with bringing La Preciosa online, and then do a DFS on the tailings project and cost it out. ■





# Exploration Projects in Mexico



**The Ana Paula gold project in the state of Guerrero**

“Ana Paula contains approximately 700,000 oz Au in M&I and 450,000 oz in inferred in a high-grade underground resource, which we believe could increase to 1.5 million oz with further drilling. What sets Ana Paula apart is a 60-meter-wide, high-grade panel averaging 5 to 5.5 g/t Au. We aim to complete the feasibility study by mid-2026 and make a final investment decision on underground construction at the same time.”

Charles Funk, CEO, **HELIOSTAR METALS**



**La Parrilla historic silver mine in the state of Durango, Mexico**

“La Parrilla was in production between 2005 and 2019. We acquired the asset in August 2023 from First Majestic. As per our recent MRE estimate, La Parrilla contains 10.8 million oz AgEq in indicated and 16.3 million oz AgEq in inferred resources. We plan to restart the mine within 7-9 months of being financed, aiming for end of 2025 or Q1 2026.”

Greg McKenzie, President and CEO, **SILVER STORM MINING**



**The Cristina polymetallic project in the state of Chihuahua**

“Cristina has a resource of 750 Koz AuEq in indicated resources and about the same in inferred. We are wrapping up the first phase of the 21,000-meter program, moving toward geological modeling and a resource update. The original resource was modeled as an open-pit estimate, but given the nature of the orebody, we believe it is more amenable to underground mining.”

Tim Warman, CEO, **FUERTE METALS (FORMERLY ATACAMA COPPER)**



**The Cerro Caliche gold project in the state of Sonora**

“Our resources at Cerro Caliche support a 10-year, 12,000 t/d operation, yielding an average of 33,000 oz/y Au based on the PEA. At the initial US\$1,800/oz gold, we would look at an NPV (before tax) of US\$71 million, and IRR of 59% pre-tax (45% after-tax), with payback in 2.9 years. The upfront cost to bring the project into production came at US\$15.5 million.”

Kenneth MacLeod, CEO, **SONORO GOLD**



**The Metates gold project in the state of Durango**

“Chesapeake has been advancing Metates since 2007, but the precious metals are trapped in pyrite. Last year, we acquired the underlying license and patent portfolio for a breakthrough alternative oxidative leach technology. By applying our proprietary technology, we believe the capital requirement could be reduced from US\$3.5 billion (using a conventional method) down to US\$360 million.”

Jean-Paul Tsotsos, Interim CEO, **CHESAPEAKE GOLD**



**The Alamos silver project in the state of Sonora, Mexico**

“We made the first discovery hole at Alamos in 2017, intersecting 8.2 m @ 1.7 kg/t Ag at Europa-Guadalupe; this was a blind discovery. We have since grown the mineral footprint from 2.2 km2 to 66 km2, and from three veins (in 2017) to 26 veins (in 2025).”

Sunny Pannu, Investor Relations and Corporate Development Manager, **MINAURUM GOLD**





# Colombia

## Can the country pull off another transformation?

Colombia has undergone an extraordinary transformation since the 2016 landmark peace deal with the Revolutionary Armed Forces of Colombia (FARC). The accord with the largest guerrilla group brought an end to five decades of armed conflict and ushered in a period of economic revival, Colombia outpacing many of its Latin American peers in GDP growth. Medellín, Colombia's second-largest city after Bogotá, stands testimony to that transformation. Once the world's most violent city, Medellín is now one of the greenest. From a hideout for the most powerful drug cartel in the world, Medellín has reborn into a tech-friendly hideaway for digital nomads. Starting in 2016, the plantation of millions of trees and plants has helped reduce temperatures within the city by 2 degrees Celsius.

Medellín is at the heart of another green transformation in Colombia, one powered by a new generation of mining. Medellín is the capital of Antioquia, the main department crossed by the Middle Cauca Belt hosting all copper and gold deposits in the country. While traditional mining, namely coal and emeralds, primarily takes place in the departments of La Guajira, Santander and Norte de Santander (for coal) and Boyacá (for emeralds), Antioquia and the smaller neighboring department of Cordoba are hotspots for copper-gold mining – the kind of resources that the government is currently pushing for.

Colombia's mining industry is currently in flux. President Gustavo Petro wants to wean the country off coal and focus on critical minerals required for the energy transition. In 2023, the government updated the list of strategic minerals to include copper, nickel, gold, metallurgical coal, emeralds, phosphate, platinum and rhodium. However, before mining moves from the valleys of Santander to the mountains of Antioquia, Colombia must first reconcile its green agenda with mining more generally.

The election of Petro as Colombia's first left-leaning president back in 2022 underscored a strong will for change in Colombia, following discontent with the former government of Ivan Duque, as well as heightened poverty rates exacerbated by the pandemic. Voters were also frustrated by the inconsistent implementation of the peace deal with FARC, as

violence hiked up in 2021. Gustavo Petro represented a dramatic political shift. A younger Petro used to be a member of the now-disbanded M-19, a guerrilla group that later turned into a political party. His running mate, Vice-President Francia Marquez embodies a progressive, green ideology, as an environmental activist and Colombia's first Afro-Colombian VP.

Colombia has a highly ambitious target to reduce greenhouse gas emissions by 51% by 2030 and has therefore taken a hard line on fossil fuels. After deciding to stop granting new oil and gas exploration licenses, Colombia has also proposed a ban on coal licenses. At the beginning of this year, the country introduced a 1% tax on the production of fossil fuels to fund security efforts in the conflict-prone Catatumbo region, in the Norte de Santander, where rebels from the National Liberation Party (ELN), the last remaining armed group active in the country, have been accused of targeting former members of FARC. The new levy is only meant to last until the end of the year, but there have also been proposals to make it permanent, which raises questions about double taxation. In 2022, Colombia passed a substantial tax reform that raised the burdens for businesses, including surtaxes on the coal sector.

While the government has made its disincentivizing position on coal clear, it has done little to incentivize the exploration and production of critical minerals. On the contrary, in 2024, Colombia adopted a decree that grants environmental authorities the power to halt mining procedures and suspend ongoing projects. The government has also promised to block open-pit mines in areas where local communities oppose them. Put differently, a future in green minerals, as purported by the government, not only lacks support, but is facing increased obstacles.

More changes are brewing, according to Juan Camilo Nariño Alcocer, the president of Asociación Colombiana de Minería (ACM): "The government is in the process of introducing a new Mining Code, currently under consultation with communities in accordance with ILO Convention 167. There is also a proposal to create a state-owned mining company, Ecominerales. (..) There is no set timeline for the new mining code coming into law."

## Colombia at a Glance



**SURFACE AREA**  
140,619 km<sup>2</sup>

**CAPITAL**  
Bogotá

**POPULATION**  
52 million

**MEDIAN AGE**  
32.5 years

**LITERACY RATE**  
96%



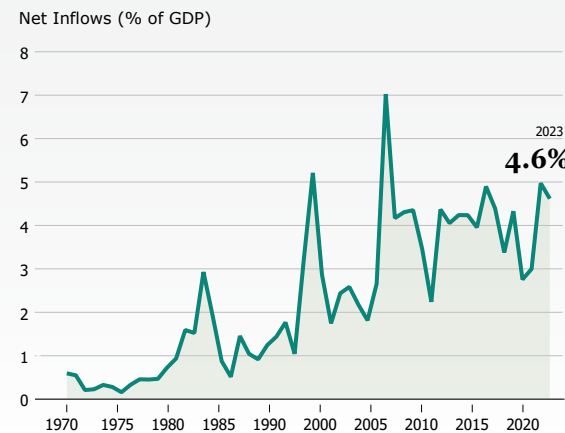
**GDP**  
363.49 billion USD

**GDP PER CAPITA**  
6,947 USD

**MAIN EXPORTS**  
Crude Petroleum, Coal  
Briquettes, Gold, Coffee,  
Refined Petroleum

**MAIN MINING RESOURCES**  
Coal, Gold, Emeralds, Nickel,  
Copper

## FDI Evolution



"Regardless of the political situation on the ground, spaces like gold and copper are driving investment interest to Colombia. The government has done very little to incentivize mining, but it has also done relatively little to deter it."

**Carlos Felipe Barrera**  
Managing Director South America  
**JOHN T. BOYD COMPANY**

Sources: World Bank, Worldometer, OEC

## Key players

- Agnico Eagle
- Antioquia Gold
- AngloGold Ashanti
- Aris Mining
- Atico Mining
- B2 Gold
- Carbomax
- Collective Mining
- Colombian Natural Resources
- Compañías Muzo Colombia
- Cordoba Minerals
- Denarius Metals (Zancudo Metals)
- Drummond
- Fura Gems
- Glencore (Cerrejón)
- GoldMining Inc.
- Grupo Coquecol
- LCL Resources (Miraflores Compañía Minera)
- Copper Giant Resources (formerly Libero Copper)
- Mineros
- Orosur Mining
- Outcrop Silver
- Paz del Río
- Quimbaya Gold
- Sator
- South32
- Zijin Mining (Continental Gold)

## Did you know?

Colombia is one of the 17 mega-diverse countries in the world.



**Good mining, bad mining: Colombia's largest mining sector faces demotion**

**Coal:** Mining accounts for 2.7% of Colombia's GDP, 30% of total exports, and 15% of FDI, according to ACM. By these figures, all mining is good mining for Colombia's economy, and coal mining, in particular, is the biggest generator of revenues in the country. The broader coal value chain supports 650,000 jobs and underpins 70 municipalities, according to the National Federation of Coal Producers (Fenalcarbón). Yet Colombia's policies in coal have been divorced from the economic realities of the country, as explained by Carlos Cante, the executive president of Fenalcarbón. According to Fenalcarbón, Colombia has an annual capacity of 80 million t of coal per year, of which about 90% is thermal and the rest is metallurgical coal. Out of the 1,000+ mining titles, 95% are held by small and medium-scale producers located primarily in the center of the country, but the large-volume production and coal exports are driven from the large mining houses like Cerrejón (Glencore), Drummond, or Sator, located in the north of the country. Last year, the country exported 64 million t of coal and coke, but this year producers are expected to cut back. While coal prices have corrected back to 2019-2020 levels, production costs have increased, leaving producers with very tight or even negative margins. These margins are further impacted by logistics costs, as consumption has shifted from Europe to Asia, a long way from Latam. The 2025 tax on production further squeezes margins.

Under these conditions, the coal industry has concentrated on staying resilient, according to Homero Gómez, founder and CEO of Carbomax, a diversified coal producer in the country: "Colombia will see up to a 30% decrease in volumes of thermal, coking coal, and coke (this year). We are also looking to reduce output, even though we still make a margin. Most importantly, we want to honor our commitments to our clients. While exports will be lower in 2025, we hope to compensate in 2026 by increasing capacity."

Another way to reclaim margins is by looking at closer export markets like Brazil, Mexico, the Dominican Republic, Honduras and Guatemala. According to Carlos Cante, the executive president of Fenalcarbón, African countries also hold promise, developing nations within the continent increasingly seeking coal as a source of reliable and affordable energy. Colombia can also lean into another advantage, namely the high quality of its coal. "We believe Colombia can increase its relevance as a supplier to nearby regions and even to new, distant markets where quality outweighs proximity. Our coal has high calorific value, low ash and sulfur content, and excellent metallurgical properties, making it ideal for blending with lower-quality coal from other sources," said Cante.

**Colombia's traditional outputs**

**Emeralds:** Emerald mining is a staple of Colombia's traditional mining sector, and formalization through the involvement of large-scale industrial producers is increasingly encouraged. Colombia ranks among the world's largest emerald producers, but globally the gemstone is still largely sourced informally, a practice that has fuelled "green wars." The few industrial emerald producers go to great lengths to ensure transparent and sustainable value chains.

In Boyacá, Fura Gems has invested approximately US\$130 million since acquiring the historic Coscuez emerald mine in 2017. The mine offers indirect benefits to 7,000 people, according to Rupak Sen, Fura's chief marketing officer: "For the first time in the mine's history, everyone has formal employment, full benefits, and access to social security. That alone is a game-changer. As the sector continues to formalize and professionalize, companies like Fura are helping the country reclaim its status as a world leader in premium emeralds."

**Nickel:** Colombia is the largest producer of nickel in South America and 11th in the world. Like coal, nickel also faces pricing headwinds. Colombia's largest nickel mine, and indeed one of the largest globally, holding the 10th biggest nickel reserves in the world, is Cerro Matoso, operated by Australian miner South 32. South 32 is pondering the sale of the mine, which has been the subject of legal disputes with the government.

**Metallurgical coal:** While the government decided the future does not lie in thermal coal, Colombia's metallurgical coal remains a sought-after material, both from a government and market perspective. Colombia is the fourth-largest coke exporter in the world, and volumes have been increasing. If in thermal coal, Carbomax is "neither expanding nor downsizing," the diversified producer is looking to double capacity to 500,000 t/y at its underground metallurgical coal operations in the Norte de Santander. The low-phosphorous, high-quality coking coal is of value in the ferroalloy markets, particularly in the ferrochrome markets in Brazil,

Finland and India that the company serves. Carbomax is also preparing to launch a new production line for ferro-silicon and silicon metal.

As part of a diversification strategy started five years ago, Carbomax is also investing in gold and copper exploration in La Guajira, Bosconia and Cordoba. La Guajira and Bosconia are both coal-focused districts, hosting the largest coal mine in Latam, Cerrejón. This shows the northern regions consecrated to coal mining are now being opened up for other metals. Aris Mining, one of the largest gold miners in the country, is also stepping outside its home turf in Antioquia, where it operates two other mines, through the development of the Soto Norte gold-copper project in Santander. This signals the hybridization of Colombia's coal-mining region through the addition of critical minerals such as copper and gold. Soto Norte hosts 8.5 million oz of gold (measured and indicated) at a 5.5 g/t Au grade.

**The future lies elsewhere: Copper and gold on the Cauca belt**

When it comes to copper and gold, two critical metals that the government, at least verbally, wants to see more of, Colombia remains vastly underexplored. According to the ACM, only 3% of the country is currently covered by a mineral license, while the rest is untitled. It is believed almost 80% of the 70 t of gold Colombia exports annually comes from informal mining, according to Colombia 1, an independent local publisher. According to a study by UPME, Colombia has up to 9.7 million t of copper reserves, still 10 times less than its bigger brothers in South America like Chile and Peru, but nevertheless a significant amount for a country with only one copper mine of modest size (El Roble, operated by Atico Mining).

The host of all of the main gold and copper deposits within the country is the Middle Cauca belt, located in west-central Colombia, and considered one of the most underexplored regions in the world.

**Gold:** The Cauca belt hosts Colombia's three largest gold mines: Buriticá, operated by Zijin Mining, Segovia, of Aris Mining, and Cisneros, belonging to Antioquia Gold. Mineros is also producing gold from the Nechí Alluvial prop-

erty, about 190 km north of Medellin, with over 10 years of reserves based on the current LOM plan. Denarius joined the list of producers after bringing into production Zancudo, a small operation based on a 1 million oz resource, with high grades at 7 g/t Au and over 100 g/t Ag, and plenty of upside.

The project pipeline is also fully concentrated in that same district and it includes projects like AngloGold Ashanti's greenfield copper-gold La Colosa and Quebradona projects, together holding reserves of 2.6 million oz Au and 3,250 million lb Cu. La Colosa is currently under force majeure, pending the issuance of an environmental permit.

Junior explorers like Collective Mining, Quimbaya Gold and Orosur Mining are also focused on the same prolific Middle Cauca belt in the Antioquia district. According to Louis Castro, the chairman of Orosur Mining, provincial attitudes in Antioquia differ from those of the national government and are more pro-mining, given the region's long mining tradition.



**Diego Cobos**  
President and Practice Leader in Geotechnical and Tailings Engineering  
**SRK CONSULTING COLOMBIA**



We've had mining in Colombia for over 400 years, but other than coal and gemstones, large-scale gold and copper mining projects are relatively new to the country.



**ARIS MINING**

**Building a Leading Gold Mining Company in Latin America**

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Founded in 2022, Aris Mining operates two underground gold mines in Colombia: the Segovia Operations and the Marmato Upper Mine. With expansions underway, we are on track to double production to more than **500,000 ounces of gold per year.**

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**Alastair Still**  
CEO  
GOLDMINING INC.

“ Colombia has a long history of mining which supersedes the ebbs and flows of political slants. As an already important part of the country’s economy, I believe that mining will be a key component for future economic growth. ”

**Copper:** Besides the El Roble copper mine, Colombia’s copper mining industry is at an exploration and pre-production stage. Some of the main projects include AngloGold Ashanti’s Quebradona deposit in Antioquia, holding 1.3 million t of copper and 2.6 million oz of gold, about 60 km outside of Medellín, and the Alacran deposit of Cordoba Minerals, recently sold to JCHX, and located about 160 km away from Medellín in the Cordoba department. While Cordoba Minerals filed for the Environmental Impact Assessment Study (EIA) at the end of 2023, AngloGold’s permit for the Quebradona copper-gold project has been shelved due to insufficient information on the project’s environmental impact by the National Environmental Licensing Agency (ANLA). The company appealed the decision but this was dismissed, so now the project can only move forward if a new ESIA is conducted.

Copper Giant Resources (formerly Libero Copper) has also acquired a project formerly held by AngloGold Ashanti, Antofagasta, and B2Gold. The Mocoa project could be one of the largest undeveloped copper-molybdenum deposits in the world, according to its developer. Copper Giant started testing this hypothesis through its largest drilling campaign to date.

**Security: Lessons from the storied “Comuna 13”**

As explored throughout this article, Colombia’s mining policies are marked by contradictions. On one hand, the country wants to become a leading player in the energy transition, on the other, the current regulatory framework for mineral development is far from encouraging such development. Simultaneously, while efforts to phase out coal mining align with global decarbonization goals, the move risks undercutting a major backbone of Colombia’s economy. Paradoxically, it could also hurt energy-intensive industries such as mineral processing, since the current hydropower-based grid still depends on coal-fired plants to stay resilient during



**Rupak Sen**  
Chief Marketing Officer  
FURA GEMS

“ The allure of Colombian emeralds lies in their deep color saturation, clarity and brilliance—particularly those from the Muzo Formation. The term ‘Coscuez Green’ is used by gem experts to describe the vivid, luminous hue associated with the site. ”

periods of low water availability, like El Niño years. A weakened power grid could hinder the development of downstream value chains in critical minerals.

Since this article began with themes of transformation, it is fitting to conclude with a closer look at Comuna 13, a Medellín neighborhood that has become a symbol of dramatic change through investment and peacebuilding. Once an isolated mountainside refuge for those fleeing violence in the 1980s, Comuna 13 became a stronghold for the FARC in the 1990s. Paramilitaries took control in 2002, and were replaced by gangs two years later. Change began in earnest in 2008, when a cable car was introduced, becoming the first gondola system built exclusively for public transport. In 2011, outdoor escalators were added. Today, Comuna 13 is a major tourist destination and a vibrant hub for street art.

Colombia’s government has resumed peace talks with the ELN, the country’s last active armed group, which operates largely in mineral-rich areas such as Norte de Santander and along the Venezuelan border. Diplomatic relations with Venezuela have also been restored, after years of estrangement during the previous Colombian administration. The overall security situation continues to improve, but Colombia is still missing out on critical investments. In 2024, FDI in mining and quarrying fell by 60%, according to the Central Bank. Nonetheless, mining and petroleum remain among the top sectors attracting FDI in Colombia.

Ian Harris, president and CEO of Copper Giant Resources and a Medellín resident, offers his experience of the country’s investment climate: “The old image of Colombia only exists today in the stigma associated with the country, whereas the reality is very different. I have worked across Latin America, and I can say that Colombia is probably the easiest place to do business, thanks to its robust institutions, healthy financial sector, buoyant construction industry, and, most importantly, the vivid entrepreneurial spirit of Colombians.” ■



**Neil Woodyer**  
CEO  
ARIS MINING

“ Our portfolio includes 7 million oz of proven and probable reserves and 20 million oz of measured and indicated resources, and an incremental 10 million oz in the inferred category. ”

**Could you introduce Aris Mining?**

In September 2022, Aris Gold and Gran Colombia Mining (GCM) merged to create Aris Mining with the vision to build a leading gold mining company in Latin America with headquarters in Vancouver and Bogotá. We operate two gold mines in Colombia—Segovia and Marmato—which together produced 211,000 oz of gold in 2024. In addition to these producing assets, we own 51% of the 8.5 million oz Soto Norte development project in Santander, Colombia, as well as Toroparu, a copper-gold development project in Guyana. Across all of our assets, our portfolio includes 7 million oz of proven and probable reserves and 20 million oz of measured and indicated resources, and an incremental 10 million oz in the inferred category. Along with our extensive gold reserves, we have the necessary capital to execute our growth strategy and a strong track record of building mining companies, having previously founded Endeavour Mining and Leagold. We are applying the same “buy-and-build” strategy to grow Aris Mining.

**Aris is on track to become a half-million-ounce gold producer in the next two years through expansions at Segovia and Marmato. Could you walk us through these expansion plans?**

Segovia is one of the highest-grade mines in the world, with an average reserve grade of 10.8 g/t Au. We are increasing its throughput capacity from 2,000 to 3,000 t/d by de-bottlenecking the processing plant’s milling capacity, which will take us from ~200,000 oz/y to ~300,000 oz/y gold production. Once we commission the second ball mill in Q2 2025, we will start ramping up and expect to achieve full production in H2 2025. As a result of that ramp-up profile we expect to achieve gold production of about 210,000 – 250,000 oz this year and 300,000 oz next year. Meanwhile, at the Marmato underground mine in Caldas, we are constructing a new mine beneath the existing Marmato Upper mine, which currently processes ~1,000 t/d. The Lower mine will have a new dedicated 4,000 t/d mill, which is expected to ramp up production in H2 2026. Once the Lower Mine reaches full production we expect the Lower and Upper Mines together to produce more than 160,000 oz/y over a mine life of 20 years. Combined, these two mines will enable Aris Mining to produce between 450,000 and 500,000 oz/y of gold annually, starting in 2027. We are in a strong financial position, with over US\$250 million in cash at the end of FY24 and on-

going cash flow generation at Segovia, allowing us to fund our future growth. Additionally, Wheaton Precious Metals has committed to providing an additional US\$82 million to support the Marmato Lower Mine development.

**What drove Aris to increase its ownership of the Soto Norte Gold-Copper Project?**

Soto Norte is probably the best undeveloped gold project in Latin America, with 8.5 million oz of gold (measured and indicated) at a 5.5 g/t Au grade. When we first acquired a 20% stake in the project, along with the management rights, we realized that our JV partners, Mubadala, had designed a very large, excessively expensive and inherently risky project. In 2023, we started a technical and economic assessment looking at the possibility of a scaled-down project that would be both easier to build and finance, as well as more socially acceptable from a community perspective. We initiated pre-feasibility studies for smaller-scale, simplified, and more efficient mining operations with smaller processing facilities.

**Could you tell us about the partnership between Aris Mining and small-scale mining groups?**

Segovia, Marmato and Soto Norte are all located in historic mining areas and we have built strong relationships with our local stakeholders primarily through our collaboration with local small-scale mining groups, known as Contract Mining Partners (CMPs), to purchase mill feed from them and process it at our facilities. Through the program, we also empower local miners to build their own mining businesses by sharing geological, technical, and mine planning knowledge, offering training on HSE procedures, and sometimes providing working capital financing. Approximately 50% of our gold production at Segovia comes from CMP sourced mill feed and generates an attractive AISC sales margin of 35% to 40%.

The partnership approach has had a huge impact on our reception at the community level, with the local miners becoming our greatest advocates.

**Could you comment on Aris’ latest financial performance?**

We delivered a strong finish to the year, with Q4 marking our highest gold production of 2024 at 57,364 oz. We generated \$22 million of net income and \$67 million in EBITDA in the fourth quarter, supported by improved operating margins. ■





## Alexandre Boivin

CEO  
QUIMBAYA GOLD

### Quimbaya Gold has consolidated its license at its flagship Tahami project in Segovia, Colombia. Could you comment?

Over the past few years, during a time when the junior sector hasn't received much attention from investors, we have methodically consolidated our area of interest at Tahami. This project lies near a significant gold producer (Aris Mining) and includes historical and artisanal mining zones. Essentially, we have been tracing a large geological system in areas where gold is already known to occur. We believe Quimbaya has an excellent chance of making the next high-grade gold discovery in Colombia.

Our Tahami project now spans over 17,000 hectares across a district of kilometer-long orogenic veins. Our concessions are contiguous with Aris Mining's Segovia operation. In addition to Tahami, Quimbaya also holds the Maitamac project in the prolific Cauca Belt, as well as the Berrío project in the Antioquia province.

With the shift in market sentiment, we have attracted a strong partner in Independence Drilling, Colombia's largest national drilling company.

### What are the details of the share-based drilling partnership with Independence Drilling, and what benefits does the deal bring?

Having been active in Colombia for over 15 years, one of the first things I learned is that to work in Colombia,

“ We are operating in one of the world's most geologically prospective gold regions, directly adjacent to one of the richest gold mines globally. ”

you must work with Colombians. The structure of our partnership is based on a five-year contract for 100,000 meters of drilling. With each campaign we complete, Independence Drilling has the option to be paid partly or entirely in shares. For our first 4,000-meter drilling program, they were paid 100% in shares.

From our perspective, this structure allows us to preserve cash for other essential activities that help us move forward without having to raise money in the market.

### When do you start drilling?

We are currently working through the permitting process and are very close to mobilizing our first drill rig, with drilling expected to commence by the end of Q2 this year.

### Quimbaya recently raised just over CAD\$2.7 million. How do you observe the change in investor sentiment?

Our recent raise allowed us to clean up our balance sheet and pay down debt from our acquisitions while leaving us with enough working capital to ramp up our exploration activities. Alongside this exploding gold bull market, we are also seeing growing momentum within Colombia and Quimbaya is poised to take advantage because the upside of making a high-grade gold discovery is enormous for our shareholders. The real challenge is not finding gold — it's

finding the right people, in the right country and Quimbaya offers that.

### Segovia has a culture of artisanal mining. What kind of relationship does Quimbaya have with local artisanal miners?

Because artisanal mining is very much a way of life in Segovia, we are committed to supporting the formalization of the artisanal mining sector on our claims. This way mining can be carried out responsibly and with the right tools at every level. We are proud to have established a strong working relationship with our local communities. In fact, we view artisanal miners as a very important asset as they are already finding and producing gold in the area. Our neighbor, Aris Mining, collaborates with small-scale mining groups known as Contract Mining Partners (CMPs), with about half of their production coming from these partnerships. This model generates millions of dollars and is something we find very inspiring. We recently announced the signing of a binding Letter of Intent with Denarius Metals Corp to establish a 50:50 joint venture to integrate artisanal mining operations at the Tahami Project into a formalized structure with mutual benefits.

### What makes Quimbaya Gold a compelling investment case?

Our greatest asset is our people — a seasoned team with a track record of success in multi-billion-dollar exploration ventures. We are operating in one of the world's most geologically prospective gold regions, directly adjacent to one of the richest gold mines globally. But what makes us truly special and won't last for long is our current market cap of just CAD\$20 million, right next to a CAD\$1.3 billion market cap neighbor (Aris Mining). This makes us massively undervalued. Yes, we are at an earlier stage, but that's where the real growth opportunity lies for shareholders, as the market always rewards small market cap companies when they make a big discovery. Looking ahead, timing is everything. With drilling almost underway, new claims being added, gold prices climbing, and a clear path toward production, everything is aligning for a transformational period. ■



## Serafino Iacono

Executive Chairman  
DENARIUS METALS

“ By next year, at current prices, we expect to generate around US\$45 million in free cash flow from Zancudo and another US\$5 million from our share of Aguablanca in Spain. ”

### Could you introduce Denarius Metals?

Denarius is the “son” of Gran Colombia Gold (GCG), now Aris Mining, one of Colombia's largest gold producers. While GCG focused on precious metals, we launched Denarius four years ago to diversify into copper and other critical minerals. We acquired a project on the Iberian Pyrite Belt in Spain, one of the least developed belts in the world, with incredible polymetallic opportunities at high grades. Around the same time, we picked up Zancudo, an orphaned asset formerly held in an arrangement between IAMGOLD (70%) and GCG (30%), located on Colombia's Cauca Belt.

Today, Denarius fully owns the Zancudo gold-silver mine and holds a portfolio of assets in Spain with exposure to nickel, copper, cobalt, zinc, lead, platinum, palladium, gold and silver. Both Zancudo in Colombia and Aguablanca in Spain are slated to enter production in 2025. By next year, at current prices, we expect to generate around US\$45 million in free cash flow from Zancudo and another US\$5 million from our share of Aguablanca in Spain.

### Denarius has just started production at Zancudo. Could you familiarize our readers with the asset?

Zancudo is probably the most famous mine in Colombia, since it is the mine that earned Colombia's independence from the Spaniards. At one point, it functioned as a central bank, with paper money backed by physical gold from the mine. According to existing records, Zancudo was in production until the 1940s.

Denarius officially started production in April 2025. While IAMGOLD envisioned a large-scale, low-grade, open-pit facility, we opted for an underground development, redesigning the mining plan for a much leaner, higher-grade output. Our guidance will be between 50,000 and 75,000 oz/y at an AISC at current prices of about US\$1,700/oz.

### What is the upside at Zancudo, both on the mining and processing side?

Based on the 40,000 meters of historic drilling, we defined 1 million oz in resources (AuEq), of which 860,000 oz is gold and the remaining is silver.

Over the past two years, we finalized the environmental and mining permits, and we are adding a 1,000 t/d brand-new plant, incrementing our capacity from the original 500 t/d existing crushing facility. The project is starting at about 100 t/d, and will gradually ramp up to 500 t/d by the end of 2025 and 1,000 t/d by the end of 2026 — that will leave us with spare capacity of 500 t/d, giving us room to increase production in the coming years.

Only 20% of the concession has been drilled and with the current 1 million oz resource in place, the upside potential for a multi-million-ounce operation is unquestionable.

### Could you walk us through your consolidation strategy in Spain, following the recent acquisition of Aguablanca?

Our main project in Spain is Lomero-Poyatos, which has an M&I resource of 11 million tonnes of mostly gold, zinc, lead, silver, and copper. At close to 1 million oz in gold, and with high copper and zinc grades, it can be called a gold mine with copper and polymetallic elements. We bought in to 21% of an existing plant called Aguablanca, with an option to go to 50%. Two strategic reasons drove this acquisition: First, Aguablanca gives us 5 million t of reserves (Ni, Cu, Co, Pt, Pd, Au) underground, and a near-term production opportunity; previously operated by Lundin Mining until 2016, we are looking to restart the mine by the end of 2025 and sell nickel-copper concentrates (with cobalt, platinum, and palladium by-products) to Boliden Commercial. The second aspect that attracted us to Aguablanca is its 5,000 t/d plant, half of which is spare capacity. This gives us a tremendous opportunity to use this 50% capacity to process material from Lomero-Poyatos, which sits just 88 km away from Aguablanca. At Lomero-Poyatos, we can mine about 1 million t/y of material with close to 3% gold, almost 1% copper, and 2% zinc, while Aguablanca gives us seven years of mine life, which we believe we can actually double. The plant has been on care and maintenance for seven years, but it is in near-perfect condition, so we have started dewatering and a US\$5 million refurbishment process. ■





## Carlos Cante

Executive President

FENALCARBÓN (NATIONAL FEDERATION OF COAL PRODUCERS)



The government's position has been quite divorced from the economic benefits that coal resources represent for the country.



### How important is the coal industry for Colombia?

Colombia has almost five decades of coal production history, with high-quality reserves of thermal and metallurgical coal. The country currently has a production capacity of 80 million t/y. There are over a thousand coal mining titles, with 95% held by small and medium-scale producers located primarily in the center of the country. The large mining houses, situated primarily in the north, drive exports. In 2024, Colombia exported 64 million t/y of coal and coke, generating more than US\$7 billion—around 14% of the country's total exports.

Colombia is the fourth-largest coke exporter in the world, and coke is now the country's fifth most important export product. Export volumes grew 8% over the past year, although total value declined due to falling commodity prices.

The coal industry and its value chain supports over 650,000 direct and indirect jobs, contributes about 1% of GDP, and plays a major role in around 70 municipalities.

### How has the industry performed in the last year and how competitive does Colombia remain as a coal producer?

We are facing significant challenges. Europe used to be our traditional market, but today consumption has migrated to Asia, which represents over 30% of our exports. The long shipping distances add significant cost pressures, with freight costs to Asia nearly double that to the Mediterranean. Since 2022, coal prices have dropped, with geopolitical tensions affecting both demand and market values. This has forced the industry to adjust production cycles, including cutting back on production. When coal prices drop below a certain threshold, our domestic coal's competitiveness is severely impacted because the coal is mined from the center of the country and must travel a thousand kilometers just to reach the ports. Government measures, including a recently introduced tax on production, have further added to cost constraints.

### Aside from Asia, what other export outlets is Colombia looking toward?

We are actively deepening our regional presence, particularly in Central and South America. Brazil, Mexico, the Dominican Republic, Honduras, and Guatemala already con-

sume significant volumes of Colombian coal. Additionally, we are evaluating emerging markets in Africa, which is a more marginal consumer, but where developing nations look to coal for reliable and affordable energy.

### What is the government's position regarding coal mining?

The government's position has been quite divorced from the economic benefits that coal resources represent for the country. Since 2022, several policies and public statements have actively discouraged investment in the sector. These are not state-level decisions but rather the stance of the current administration, so we are hopeful that the next government, which will take office in 2026, will adopt a more rational approach.

Despite these setbacks, the world continues to demand coal, with global consumption approaching 9 billion t annually. If Colombia can improve its competitiveness—particularly in reducing internal costs and optimizing logistics—we believe the sector can rebound. Colombia is developing the kind of high-grade coal that markets like India and China increasingly prefer, especially for blending and emissions reduction purposes.

### What is the government's motivation behind the recently introduced taxation on coal production?

Frankly, it is ideological. Since 2022, the government has introduced several measures to disincentivize coal investment. These policies don't contribute to fiscal strength or national development—they simply make our sector less viable. As a national federation, we have challenged many of these through the courts; if we hadn't acted, we might already be out of the market, but fortunately, many of the most harmful proposals have been blocked through the courts. We have had to pause production at times and adapt, but we are still here and ready for a future government that sees the potential coal can continue to offer.

### Do you have any final message for our readers?

Colombia has immense potential as a long-term supplier of thermal, metallurgical, and high-quality anthracite coal. We are ready to serve new global demand, particularly as more markets recognize the role of high-quality coal in reducing emissions and blending efficiency. ■



## Homero Gómez

Founder and CEO

CARBOMAX



Our portfolio includes thermal and metallurgical coal, copper, gold, and soon, ferrosilicon and silicon metal.



### Could you introduce Carbomax to our international audience?

Carbomax celebrated its 10th anniversary earlier this year, but I would say our roots go back further than that—about 17 years ago—when I started my mining career with BHP Billiton at the Cerro Matoso nickel mine in Colombia (now held by South32). In the 10 years since I founded Carbomax, we have grown into a 1,500-person organization with expertise across the value chain: exploration, environmental and social studies, government relations, mine construction, extraction, processing, logistics, and foreign trade. Our portfolio includes thermal and metallurgical coal, copper, gold, and soon, ferrosilicon and silicon metal.

### Could you elaborate on the mining business and your diversification focus?

Within our mining arm, we have three divisions. First, we operate open-pit

thermal coal mines in the Córdoba region of Colombia, with an annual production capacity of 1 to 1.2 million tons. This unit supplies coal primarily to thermoelectric plants, cement factories, and ferro-nickel processors. We serve sugar mills and power stations in Colombia, the Dominican Republic, Guatemala, and Brazil, and we export as far as Northern and Central Europe, including Ireland and Poland.

Our second division focuses on the production of metallurgical coal (coke) in Norte de Santander, in northeast Colombia, with a production capacity of 250,000 tons per year from our underground operations. This low-phosphorus coking coal is highly valued in ferroalloy markets, particularly for ferrochrome production. We plan to double this capacity over the next three years while maintaining a focus on its low-phosphorus content.

Third, we have a polymetallic unit conducting gold and copper exploration in La Guajira, specifically at the La Jagua del Pilar project. We are also exploring copper in Bosconia and in the Córdoba region near our thermal coal mines. In addition, we are developing an alluvial gold project that is set to begin production this year.

### Carbomax is launching a new production line for ferrosilicon. Could you comment on this expansion and the company's participation in the ferroalloys value chain?

Carbomax produces low-phosphorus, high-reactivity coke for ferroalloys; we serve the ferrochrome markets in Brazil, Finland, and India, as well as the ferromanganese markets in Mexico and Malaysia. Among our clients, we count Ferbasa in Brazil, Mineral Autlan in Mexico, Outokumpu in Finland, and Tata in India, with whom we have worked for many years. Whereas coke breeze is a byproduct for other companies, it is a main product for us, with 400,000 tons in annual production.

Carbomax is launching a new production line for ferrosilicon and silicon metal, and we have also set up a coal washing plant in Cúcuta, Norte de Santander, to serve silicon producers—a \$14-million project done in collaboration with Norwegian company CleanCarbon. The plant is completed, and we expect to ship the first industrial samples this year to various global markets. The new line completes our portfolio in the ferroalloy industry.

### Could you also provide an overview of the services side of the business?

Carbomax supports both Colombian and international companies with mineral storage across the country; we manage the reception, stacking, and processing (grinding and screening), as well as logistics to ports or to thermoelectric plants. We also provide consultancy services to both underground and open-pit mining, leveraging our expertise. As a Colombian saying goes, "He who teaches, learns twice." We feel that by growing our support services, we also deepen our own know-how and come to see others not as competition, but as partners. Indeed, we embrace foreign investment and want to position ourselves as a local partner. Right now, we handle nearly 1 million tons in mineral storage every year. We'd like to grow our consultancy business, and we are also evaluating opportunities in contract mining.

As part of our processing unit, we purchase between 600,000–700,000 tons of thermal and metallurgical coal from third-party local providers. For our logistics unit, we primarily deal with our own materials, but we also have capacity to support third-party clients.

### Colombian coal producers are set to make major production cutbacks this year. Could you explain the context?

In a market with a strong supply-demand imbalance, the most important thing is to remain resilient. The supply glut has dramatically impacted prices of both thermal and metallurgical coal, and prices are correcting back to 2019–2020 levels. However, due to the highly inflationary post-pandemic period—with labor, fuel, spare parts, and mining equipment costs rising exponentially—it is impossible for us as an industry to return to pre-pandemic price points. This is why most Colombian producers have significantly cut back on production, facing negative cash flows and major losses. Colombia will see up to a 30% decrease in volumes of thermal coal, coking coal, and coke. Carbomax is also looking to reduce output, even though we are still operating at a margin. Most importantly, we want to honor commitments to our clients. While exports will be lower in 2025, we hope to compensate in 2026 by increasing capacity. ■





# Guyana

## The gilded one

The search for El Dorado, the mythical golden city thought to lie somewhere in present-day Guyana, captivated the imaginations of European adventurers for centuries. Although the fabled “Gilded One” was never found, in 2015 ExxonMobil made an oil discovery so large that it is almost prophetic. Not only is this discovery considered the largest of the 21st century, but its significance is amplified by the stark disproportionality with Guyana itself: ExxonMobil’s annual profits are

almost five times bigger than Guyana’s annual GDP today, and this is after the country’s economy increased four times since striking oil. The nation of just 800,000 people that has long been one of the poorest in the Western Hemisphere is now the world’s fastest-growing, hitting 60% GDP growth in 2022 - a real-life economic El Dorado.

The oil boom, and the country’s relationship with the oil sector, have implications for Guyana’s burgeoning gold mining sector, something that this article will explore.

Sitting in the Guiana Shield craton, Guyana is a hotspot for gold discoveries. According to the Bank of Santa Lucia, Guyana is estimated to hold about 14.3 Moz in gold reserves, but it has only one large-scale gold mine, Aurora, operated by Zijin Mining. Guyana has been historically overlooked, whether due to geopolitical issues, the thick jungles hiding its orebodies, or general misconceptions: “At a recent Mines and Money event, I was asked how we operate in a country that is still figuring out its regulations,” said Lance Mishleau, the CEO of Holder Resources, a diversified mining and timber company. Mishleau replied that Guyana has a well-established regulatory framework anchored in the 1989 Mining Act. Guyana is also the only English-speaking country in South America, is a Commonwealth country, and operates under Canadian Business Law. Dan Noone, the CEO of G2 Goldfields, a gold explorer, recalled similar challenges: “When we built the Aurora mine as part of Guyana Goldfields in 2014, many people did not know where Guyana was on the map. We needed the IFC to lead the debt financing before other investors followed. Today, we no longer need risk underwriting because the likes of Exxon and Chevron are here.”

The oil discovery has certainly catapulted Guyana into the spotlight, putting it on the map of investors not just for energy but also for mining. Several multi-ounce gold deposits are advancing. G Mining Ventures is preparing to bring into production what will be the largest gold mine in the country, Oko-West, which could produce 350,000 oz/y. Production at Oko-West is slated to begin in 2028. At a smaller size, Mako Mining’s recently acquired Eagle Mountain project should be construction-ready by the end of Q1 2026. The project holds 1.8 million oz in indicated and inferred resources. In

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## Guyana at a Glance



**SURFACE AREA**  
214,969 km<sup>2</sup>

**CAPITAL**  
Georgetown

**POPULATION**  
826,353

**MEDIAN AGE**  
26.2 years

**LITERACY RATE**  
90%



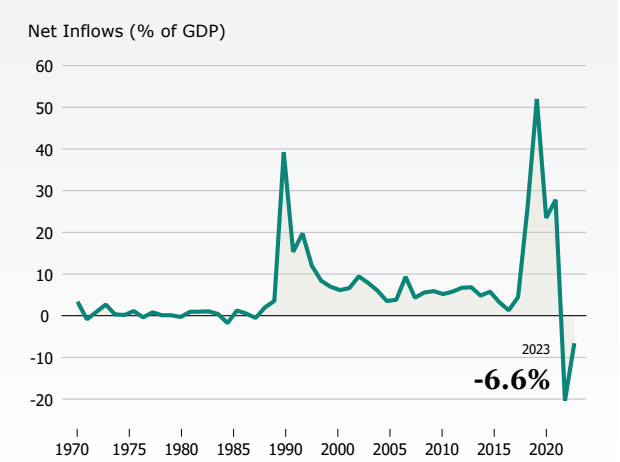
**GDP**  
17.16 billion USD

**GDP PER CAPITA**  
20,765 USD

**MAIN EXPORTS**  
Oil (90% of exports), Sugar, Gold, Bauxite, Shrimp, Timber, Rice

**MAIN MINING RESOURCES**  
Bauxite, Gold

### FDI Evolution



### Key players

- Aris Mining
- G Mining Ventures
- G2 Goldfields
- Golden Shield Resources
- Greenheart Gold
- Guyana Industrial Minerals (GINMIN)
- Holder Resources
- Omai Gold
- Zijin Mining (Aurora Gold)

### Did you know?

Guyana is the only South American country where English is the official language.



“Guyana is the world’s fastest-growing economy, with GDP growth in double-digit figures, driven primarily by the extractives sector.”

**Manuelangel Aldana, General Manager, Colombia and Caribbean, ORICA**

the more distant pipeline sit G2 Goldfields' 3.1 million oz (total) Oko-Ghanie, and Omai Gold Mines' 4.3 million oz (indicated and inferred) deposits. The largest project under development is Aris Mining’s 5.4 million oz (measured and indicated) Toroparu project. Greenheart Gold, born out of the merger between G Mining and Reunion, has multiple early-stage projects close to existing operations across the Guyana Shield, in both Guyana and Suriname.

Though most of these projects are still some years away from pouring gold, the pace of development is accelerated. According to Louis-Pierre Gignac, the CEO of G Mining Ventures, “Guyana is probably one of the best jurisdictions in terms of permitting timelines and

the ability to move projects into production fast. The government is keen to see the mining industry grow in the country and diversify its economy from oil and gas, which has also been thriving in the last few years.” Just as the oil boom highlighted Guyana’s investment potential to the world, it also offered lessons to the country’s leadership about the transformative power of FDI in the extractive industries. Unlike many of its regional peers, Guyana actively promotes a pro-mining agenda, viewing both its oil and mineral wealth as key economic pillars. Guyana’s President Irfaan Ali said in 2022: “We never had the capital or resources to build the Guyana we always spoke of.”



Guyana's relationship with both oil and gold evokes memories of a painful legacy with sugar, which was the main export commodity in British Guiana, and Guyana is wary of repeating the historical pattern of extractive exploitation that defined its colonial past. The oil contract with the Exxon-led consortium drew criticism for being overly generous towards the supermajor.

Oil and gold are often explained in relationship to one another - gold is sometimes referred to as the "new oil," and oil is metaphorized as "black gold," but for a country that is just as gold-rich onshore as it is oil-rich offshore, the connections stretch further. It is not about making gold the new oil, but about making sure neither oil nor gold become the new sugar and re-entact structures that could be critiqued as neo-colonial. By 2026, Guyana will be producing the equivalent of one barrel/day per capita (over 800,000 bpd in a country of over 800,000 people), yet close to half of the population is believed to live below the poverty line. This shows the disconnect between GDP per capita figures, which rank Guyana as the 30th richest country globally, and the broader reality. The environmental impact resulting from oil production has not gone unnoticed either. Georgetown, Guyana's capital where most of the population lives, is identified as one of nine cities that could submerge by 2030 due to rising sea levels. Lastly, the oil discovery stoked old tensions over disputed waters with Venezuela, a leading oil producer itself, reintroducing security concerns.

These negative facets of the oil boom indirectly inform government conversations with mining investors. As a stronger and more attractive economy than a decade ago, Guyana will be in a better position to negotiate fair mining deals and demand equitable taxation as well as environmental and community commitments from its investors.

Besides oil and gold, timber has also become a crucial leg of Guyana's new resource economy. The country is 75% covered by forests. In 2022, the EU signed a Voluntary Partnership Agreement (VPA) with Guyana, ratified in 2023, as part the EU's Forest Law Enforcement, Governance, and Trade (FLEGT) initiative. Holder Resources (HRI), a four-generation family business with multiple alluvial gold mining operations in the country, quickly recognized the timber opportunity. "As supply chains shift and Europe looks for reliable partners, we find ourselves in a unique position to provide sustainably sourced timber to the EU and other Western allies from a jurisdiction we know intimately." With revenues from the forestry business, HRI is looking to develop its three gold properties and launch a new pure exploration vertical for critical minerals. Ultimately, the company is considering creating three separate verticals and is assessing a public listing. HRI calls this trifecta of timber, alluvial gold, and critical minerals a "convergence of opportunities" - and that description is accurate for Guyana itself. The convergence of opportunity across oil, gold, and timber could allow the country to rewrite its resource script and escape the curse of single-commodity dependence. ■



## Louis-Pierre Gignac

Founder, President and CEO  
G MINING VENTURES

“ Guyana is probably one of the best jurisdictions out there in terms of permitting timelines and the ability to move projects into production fast. ”

### G Mining Ventures recently graduated to the TSX. Could you reflect on the company's evolution and recent financial performance?

G Mining was founded in 2020 and acquired the Tocantinzinho (TZ) gold project in the state of Pará, Brazil in 2021. Last year, we put TZ into commercial production at a prolific time for gold prices. We recently reported our financial results for the Q4 of 2024, reflecting our first quarter of commercial production: We produced over 40,000 oz of gold at a competitive AISC of US\$862/oz and generated a net income of US\$47.6 million and free cash flow of US\$53 million. TZ has now become our cash flow engine to fund the next project, the recently acquired Oko West project in Guyana, which will become our largest and flagship mine. While TZ has an annual capacity of 175,000 oz/y Au for a LOM of at least 10 years, Oko West is a larger deposit of 4.6 million oz slated to produce 350,000 oz/y.

### Could you comment on the DFS results at Oko West?

Oko West is a highly robust, large-scale gold project with an estimated initial capital cost of approximately US\$1 billion. The extensive deposit will be developed using both open-pit and underground mining methods. The processing plant is based on a conventional metallurgical flowsheet using gravity concentration and leaching designed for an initial throughput of 7 million t/y. The project has a planned mine life of 12.3 years, and is expected to produce an average of 350,000 oz/y. At a gold price of US\$2,500/oz, the project delivers an after-tax NPV (5%) of US\$2.1 billion, with a payback period of under three years.

### Following the receipt of the interim environmental permit (IEP), what are the current workstreams at Oko West?

Late last year, we received the IEP from the Guyana Environmental Protection Agency and the authorities have reviewed a preliminary ESIA, upon which comments were received and we are currently working on the last adjustments to issue a final ESIA to the government in April. We expect to receive the full environmental permit by mid-year. Making use of the interim permit, we have already begun early works construction activities in March and we are now focusing on logistics infrastructure, including a barge landing on the Cuyuní River, which is a tributary to the Essebuiqo River; this docking area will be used to offload all materials and equipment for delivery to site. We are also busy with site preparation activities like building a permanent camp facility which

we hope to complete by year-end so that we can ramp up our construction workforce. We hope to have 1,000 beds on site by the close of 2025.

### What do you make of Guyana's permitting process and overall environment for building a mine?

Guyana is probably one of the best jurisdictions out there in terms of permitting timelines and the ability to move projects into production fast. It has only been two years between the initial resource estimate at Oko West and receiving an interim permit, something incredibly rare in the permitting world. We are looking at a 2.5-year construction period with first gold pour expected in the last quarter of 2027 and official commercial production kicking off in 2028. Guyana has been altogether very supportive.

### Is access to talent a challenge in the country?

Guyana's entire population is that of a small city in Brazil. Nevertheless, the government is supportive of training and we have collaborated with the Board of Industrial Training to run some capacity building and upskilling programs. Also, Guyana has a long history in both bauxite mining and experience in gold mining with the Omai Gold Mines in the 1990s. The expertise is there. In fact, we had 15 Guyanese mining professionals traveling to Brazil to help with the construction of our TZ mine, and they are now relocating to Guyana to do the same for Oko West.

### Could you also comment on the recent acquisition of the Gurupi project and your longer-term portfolio strategy?

The Gurupi project, formerly known as CentroGold under BHP, consists of three open-pit deposits with an NI 43-101 compliant MRE of 1.83 million oz in indicated resources. We are restarting exploration this year, with an allocated budget between US\$2 to US\$4 million in resource expansion drilling. Though we are always on the lookout for additional assets that could bring value to the company, we are very content on the organic growth that is possible with our existing projects.

### Do you have a final message?

Oko West is one of the world's best gold projects under development right now; its size, grade, and exposure to a relatively new jurisdiction are drawing a lot of attention from investors globally. We are excited to transition into a diversified gold producer with two high quality assets under our belt and a clear pathway for growth going forward. ■

**BUY. BUILD. OPERATE.**

**Who We Are:** GMIN is a gold producer anchored by its Tocantinzinho Gold Mine in Brazil, supported by the Oko West Gold Project in Guyana and the Gurupi Project in Brazil — all with significant exploration upside and located in mining-friendly jurisdictions.

**Vision:** Building the next intermediate gold producer through flawless project development.

**Our Assets:**

- Tocantinzinho Gold Mine, Brazil: Commercial Production
- Oko West Gold Project, Guyana: Development Stage
- Gurupi Project, Brazil: Advanced Exploration

gmin.gold  
info@gmin.gold





“  
Guyana underwent a big shift, rising from being the world’s fifth poorest country per capita just 10 years ago to the ninth richest, surpassing the US and other developed countries like Denmark.  
”

## Lance Mishleau

CEO  
HOLDER RESOURCES (HRI)

### Could you introduce HRI?

Our story goes back four generations to our great-grandfather, Samuel Holder, who started silver and gold mining on the Washington-Idaho border in the US. But it was his son, Jack, who took mining globally, to Latin America, Canada, and Africa. In 1993, our grandfather sent half of his operations crew from Yukon, Canada, down to Georgetown, Guyana, just as the country was opening for the first time to foreign investment. He thus became the first American businessman in Guyana. Though our family grew up in the US, we started to appreciate the great opportunity our grandfather saw in Guyana: Guyana underwent a big shift, rising from being the world’s fifth poorest country per capita just 10 years ago to the ninth richest, surpassing the US and other developed countries like Denmark. Our grandfather Jack passed away in 2018, before Exxon’s pumps got turned on, so he did not get to witness Guyana’s transformation. However, we wanted to take the legacy further.

HRI has a three-tier approach: an asset rich and cash-generative timber operation, multiple alluvial gold mining operations and now launching a third pure-exploration critical minerals vertical.

**How did the timber opportunity come about, and how does it synergize with the gold mining operation?** During the pandemic, mining operations came to a halt, but in 2022, we saw

an opportunity in the EU’s agreement to source timber from Guyana instead of Russia. We founded Holder Resources (named after our great-grandfather) in 2023, as a resource company with both a mining portfolio and a timber operation. The timber business in the country is very new, very unique, and, frankly, there are few who know how to do it. As supply chains shift and Europe looks for reliable partners, we find ourselves in a unique position: providing sustainably sourced timber to the EU and other Western allies from a jurisdiction we know intimately and have worked in for decades. Demand for timber within Guyana itself is also growing rapidly. According to the Guyana Forestry Commission, domestic use of timber has doubled, from 25% to 50% of national production.

### What is Guyana’s current relationship with the US and what opportunities stem from this relationship?

Three American secretaries of state, including most recently Marco Rubio, along with other US’s top diplomats, have visited Guyana in recent years. For a country of just over 800,000 people, this is a big deal. The U.S.-Guyana relationship enjoys strong bipartisan support, with both Republicans and Democrats recognizing the country’s importance. As an oil producer independent of OPEC or Venezuelan oil, with Exxon itself being an American company, Guyana is strategic for the US. Guyana is coming to the world

stage in a big way, after years of being a place few knew about.

In our 30-year history in the country, we know how to do business in Guyana. I always urge investors looking to operate in Guyana to truly understand and work within the existing frameworks - such as the Forestry Act of 2009 and the Mining Act of 1989 - rather than trying to bypass them with money or influence. We’ve brought on ThinkEquity as our strategic advisors, to position HRI as a key conduit for companies entering this emerging market. Our goal is to help others succeed in Guyana, leveraging both our local knowledge and international perspective.

### What is the strategy for HRI moving forward? Are you considering a potential IPO?

One of the things that we’re looking to do now is create different verticals within Holder Resources, exploring options for public market pathways within each of the different verticals. Right now, we see public markets as a more viable funding route since going public would enhance transparency, which is key for investors looking at a frontier jurisdiction.

### Do you have a final message?

We’ve been active in Guyana for over 30 years. This insider understanding is critical. While many new entrants focus on high-profile names or public figures, we know who the decision-makers are. As early movers, we’ve built strong, trusted relationships with the people and institutions that actually get things done.

Guyana has entered into a Voluntary Partnership Agreement with the European Union, effectively giving the EU approval to its forestry practices as sustainable and ethical. On the other hand, Guyana is the fastest-growing economy in the world. Still, for many potential investors, Guyana remains under the radar. It’s not a country people hear about often, and that unfamiliarity can lead to hesitation. We’re working to change that by educating the market: helping people understand Guyana’s governance, its mining and forestry laws, its alignment with Canadian business practices, and its openness to investment from Western partners. ■



## Dan Noone

CEO  
G2 GOLDFIELDS

### Could you comment on the recent MRE update at your flagship Oko-Ghanie Gold Project in Guyana?

Over the past 12 months, we completed 59,000 m of drilling, taking the 2 million oz resource announced in our last resource update one year ago to a total of 3.1 million oz at ~3g/t Au grade. The mineralization remains open at depth, but we primarily focus along strike and above 500 m, where we feel the biggest NPV value will come from.

### G2 Goldfields has announced a spin-out of some of its non-core assets to G3 Goldfields as a wholly-owned subsidiary. Could you comment on this decision?

We currently control 85,000 acres in our district. Of these, we are carving out approximately 11,600 acres around the current Oko resource with enough land for further exploration and a future mine development for G2. The rest of the area would be spun into G3 and extends along the northeast trend all the way from the Cuyuni River southwest to Peter’s Mine. Earlier in March, we made a new high-grade, near surface gold discovery located a few kilometers north of the Oko resource and on the proposed G3 claims. This could be another Oko-scale discovery where we are now actively drilling. In addition, we have recently acquired another promising concession just west of Aremu.

Historically, we focused capital allocation on Oko, so by separating the non-core assets, G2 can continue advancing the Oko discovery while G3 advances the adjacent discovery and exploration targets, unlocking greater shareholder value and visibility in a standalone company. We believe the historic mine sites and our newly acquired claims to the northwest have the potential to yield several Oko-scale discoveries and unlock further value for our shareholders through a repeatable spin-out strategy. ■



## Justin van der Toorn

CEO  
GREENHEART GOLD

### Could you introduce Greenheart Gold?

Greenheart Gold was established as a spin-out resulting from the July 2024 merger of Reunion Gold and G Mining Ventures, following Reunion Gold’s discovery of the flagship Oko West gold project in Guyana. Greenheart Gold is well funded with an initial CA\$15 million investment by G Mining and a subsequent CA\$36 million raise in October 2024.

### Could you provide an overview of your current projects?

We began with the Majorodam project, located just 12 km from the Saramacca deposit—a satellite deposit for Zijin Mining’s Rosebel gold mine in Suriname. Midway through last year, we added the Abuya project in Guyana, which is situated just 20 km from Zijin’s 6-million oz Aurora gold mine. Our most recent addition is Igab, located 30 km from Newmont’s Merian operation in Suriname. This proximity to existing discoveries not only provides good optionality but also lowers the economic threshold related to the discovery.

We are currently working through the basic steps at Majorodam including geochemistry and trenching and these programs have resulted in the discovery of extensive, coherent soil anomalies on two (2) zones. At Igab, we completed a stream sediment sampling program and channel sampling of an exposed outcrop exhibiting evidence of alteration and deformation and we recently released those very promising results.

### And what is your portfolio strategy down the line?

Ultimately, we want to build a portfolio of about five or six projects across Guyana and Suriname. In a year’s time, our objective is to have at least a couple of projects advanced to the point where we can commit to resource definition drilling.

### Could you tell us more about the Guiana Shield and the operational environment in both Guyana and Suriname?

Guyana and Suriname are two countries where you can very easily do work, but in challenging working conditions. One of the main challenges for newcomers is acquiring land, as most of the prospective belts have already been staked by local businessmen. Reputation matters a lot as local people have been burnt by large companies in the past. ■





# Ecuador

## Coming of age

It's been just over five years since Ecuador's two large-scale mines, EcuCorriente's Mirador copper mine and Lundin Gold's Fruta del Norte (FDN) gold-silver, entered production. Both deposits were discovered in the 2000s, traversing different political regimes and some obstacles along the way, including a temporary moratorium on mining back in 2008. Together, these two projects took Ecuador from a frontier mining jurisdiction into a recognized producer of gold and copper; they proved to investors that billions could be raised to fund mining projects in the country, whether from Chinese (EcuCorriente) or Western-led capital (Lundin). They also showed that industrial-scale projects can be per-

mitted and built successfully within the country. Just as importantly, they showed Ecuador how mining can contribute to its dollarized economy.

"Lundin Gold and EcuCorriente (ECSA) are among the top 10 largest taxpayers in the country and I feel like we have been the torchbearers for the whole industry in terms of demonstrating the benefits of mining ... There is a growing acceptance of mining in the country and a greater understanding of what responsible mining means in terms of generating benefits like tax revenues and jobs while still protecting the environment. But like any young mining jurisdiction, Ecuador needs time to mature," said Ron Hochstein, president and CEO of Lundin Gold.

Ecuador occupies a unique position in Latin America, as it does in the supply of copper, gold and silver. It is neither a nascent mining nation like Guyana, nor a mature one like Mexico, Peru and Chile. Thanks to its two industrial-scale operations that derisked the jurisdiction, Ecuador has delivered a proof of concept and even a proof of value, but it is yet to show proof of scale by turning more exploration stories into producing operations to validate its coming of age as a mining nation.

In geological terms, Ecuador is endowed with rich porphyries, and porphyries typically mean scale. Ecuador's development scene is marked by world-class deposits like SolGold's copper-gold Cascabel project, Lumina Gold's Cangrejos or Solaris Resources' Warintza. Titan Minerals' Linderos copper and Dynasty gold projects, as well as Salazar Resources' and Silvercorp Metals' El Domo, together with other earlier-stage projects, complement Ecuador's dynamic exploration arena.

Based on geology alone, Ecuador makes for one of the most attractive jurisdictions in Latin America. "If we refer to the Fraser Institute's Annual Survey of Mining Companies, Ecuador ranks as the fourth most attractive country for its geological potential. However, in terms of regulation and the political environment within the same survey, we are no longer near the top of the rankings," said María Eulalia Silva Ricaurte, executive president of the Cámara de Minería del Ecuador (CME).



**Dan Vujcic**  
CEO  
SOLGOLD

“

The re-election of President Daniel Noboa adds an element of political stability, and success stories like Ron Hochstein's fantastic work at Fruta del Norte have also laid the groundwork for a more supportive view of mining in Ecuador. This benefits companies like ours and those to come.

”

Ecuador's immaturity at the regulatory level is reflected in the lack of what Ricaurte calls a "state mining policy driven from the highest level, supported by all institutions, and setting long-term objectives." Various laws are currently being drafted, according to the CME, including the law on prior consultation, the environmental consultation law, the water resources law, and a reform of the mining law itself. The mining cadastre has also been closed since 2018, effectively halting the issuance of new concessions. In 2023, ENAMI, the country's state-owned mining company, issued a regulation whereby private companies can enter commercial agreements with the SOE, following that the rights to be transferred from ENAMI to the private company. This June, Ecuador's mining ministry announced the launch of a new registry of concessions, with plans to reopen the cadastre in phases starting in 2026.

Only 10% of Ecuador's territory is currently explored, according to Business News Americas, a business intelligence platform. Though this can be read as an opportunity, it also correlates to a lack of available geological data, with just 35% of the country's geological map completed. The World Bank estimates Ecuador holds US\$220 billion value in mineral reserves, a wealth the government is eager to tap into.

Politically, therefore, there is strong support for mining. The recent 2024 election was met with calm confidence among mining stakeholders since both political candidates supported mining.

From just two large operations and in just five years, mining has risen to become an important economic contributor, accounting for 2% of GDP, and the fourth largest exporter. Beyond these raw numbers, mining revitalized Ecuador's languid, oil-dependent and agriculture-based economy, becoming the sector with the highest growth in 2022 and a leading source of dollars. Ecuador's government sees mining as the best option to replace the foreign currency generated by the hydrocarbon sector, which took a hit in 2023 when Ecuador decided to halt oil extraction in the Ishpingo-Tambococha-Tiputini (ITT) park. Meanwhile, agriculture, traditionally Ecuador's leading export sector after oil, has faced volatility. Key

>>89

# LUNDINGOLD

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*Aerial view of Fruta del Norte, the first large-scale underground gold mine in Ecuador.*

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## Ron Hochstein

President and CEO  
LUNDIN GOLD

“ There is a growing acceptance of mining in Ecuador and a greater understanding of what responsible mining means in terms of generating benefits like tax revenues and jobs while still protecting the environment. ”

### Lundin Gold posted record production in FY24. Could you comment?

Fruta del Norte has proven itself as a true tier-one asset, surpassing 500,000 oz/y of production in 2024 and maintaining a guidance of 475-525,000 oz/y over the next three years. Our teams have also shown excellence in reducing operational costs, with an AISC of US\$875/oz – positioning us among the world’s lowest-cost gold producers. Even more impressive is that we maintained this competitive cost profile despite Ecuador’s power crisis, which required us to get creative in offsetting the higher costs of running our own generators as well as collaborating closely with the government.

### What motivated the recent increase of 50% in the quarterly dividend?

After paying back our gold prepay credit facility and our senior debt in 2023, as well as buying back the Newmont stream in full, Lundin Gold has become debt-free as of June 2024. This has enabled us to focus on returning the capital that would have gone to debt holders to our shareholders. We doubled our quarterly dividends from the original 10 cents/share to 20 cents in mid-2024, and now we announced a further 50% increase to 30 cents. This makes Lundin Gold one of the highest-yielding gold stocks in the industry.

### Could you walk us through your exploration focus and the upside potential at Fruta del Norte and the broader district?

We increased our exploration programs significantly in recent years, and the results are shown in our 2025 resource and reserve update: We added resources at an approximate cost of US\$25/oz, a great return for our shareholders. We replaced the 2.4 million oz mined to date with 3.1 million oz. Our resources and reserves today are higher than they were when we put out the DFS.

Ecuador has one of the highest geological potentials in the world. Our near-mine program is proving untapped district prospectivity, with discoveries like FDNS, the Bonza Sur deposit, or the most recently announced Trancaloma discovery. A potential porphyry-style deposit, Trancaloma could become a real game changer for Lundin.

For 2025, we plan a 30,000 m conversion drilling cam-

aign to convert inferred to indicated resources. FDNS remains open at depth and along strike to the north and south. The second priority this year will be Bonza Sur, where we have two drill rigs.

### What has been the company’s role in uplifting communities in the Zamora Chinchipe province in Ecuador?

Over the past decade since signing the agreement with Kinross, we have witnessed a remarkable transformation. Out of the 24 provinces in Ecuador, Zamora Chinchipe ranked 23rd in terms of poverty levels, but today it has climbed up to the top 10 as a result of a 13% drop in poverty. But you can see the real impact behind the statistics through people’s stories. Young people that I met 10 years ago now have thriving careers.

Transparency and communication have always been key to our community engagement programs. From the beginning, we set up roundtables where we would not be the talkers, but the listeners. Every six weeks, we listened to the needs of the community to identify how we could be a better responsible miner - and it is not about handing out money, but improving lives.

### How has Ecuador itself changed in the past decade?

There is a growing acceptance of mining in the country and a greater understanding of what responsible mining means in terms of generating benefits like tax revenues and jobs while still protecting the environment. Like any young mining jurisdiction, Ecuador needs time to mature. Lundin Gold and Ecuacorriente (ECSA) are among the top 10 largest taxpayers in the country and I feel like we have been the torchbearers for the whole industry in terms of demonstrating the benefits of mining.

### How do you think gold surpassing the US\$3,000/oz mark will impact the industry?

A high gold price is a double-edged sword: on the one hand, it translates to increases in margins; on the other, the high price is a reflection of a very turbulent global environment. The junior sector is still not seeing the love from investors. Even at Lundin, we have only started to see new, more generalist-style investors in the last six months. The gold sector has had to earn back the trust and respect of investors after the last cycle. ■



## Jeimi Chiluisa

Community Relations and Communications Coordinator  
ECUACORRIENTE (ECSA)

“ We want our legacy to expand beyond copper production, into education, healthcare, and infrastructure. ”

### Mirador is the first and largest open-pit, large-scale copper mine in Ecuador. Could you provide a brief overview of the operation?

In 2024, Mirador extracted 19.9 million t of ore, maintaining stable production in line with our annual guidance. We also surpassed our investment targets, injecting US\$301 million into the operation—34.4% above the planned US\$224 million.

This year, the construction of the Tundayme tailings dam progressed according to plan. On June 28, the construction of the C935 masl (meters above sea level) crest was completed.

The Expansion Project for the Exploitation and Processing of the Mirador mine, with an investment of US\$650 million, is progressing as planned and will lead to an increase in tax revenues, job opportunities, local material purchases and growth in export trade of products.

### Local acceptance has become one of the critical factors for success in mining in Latin America. Could you share ECSA’s social programs, community engagement efforts, and local impact/investments?

Each year, ECSA develops an operational plan aimed at addressing the real needs of local communities in the Tundayme parish and El Pangui canton (Zamora Chinchipe province). Just last year (fiscal year 2024), we invested US\$2.19 million in our direct area of influence (El Pangui), bringing the total investment since 2010 to US\$16.52 million. As part of our community relations plan, we work across multiple areas.

One of these areas is local development, where we promote progress through infrastructure projects that improve the quality of life in communities near the Mirador mine. We have also implemented internet services to promote digital inclusion in key infrastructure efforts. In communities like San Carlos de Numpaim, Mirador, Manchinatza Alto, and Yanúa Kim, we have invested in the water system. Last year, we also built a bridge over the Cayamatza ravine, a key urban connection between the provinces of Zamora Chinchipe and Morona Santiago, with an investment of nearly US\$1 million.

The other key pillar is education. ECSA has supported high-school acceleration programs, enabling 59 students to graduate; we also award 31 university scholarships, financially sponsoring students to pursue higher education.

In health, we are proud sponsors of the government-led program “Brigadas Comunitarias” (Health Brigades), bring-

ing healthcare services directly to the communities within our area of influence. These include general practitioners, dentists, and other specialists providing door-to-door care. ECSA has also been behind multiple public health campaigns like fumigations, deworming, and vaccination drives.

In agriculture, we supported the breeding of small livestock and the cultivation of pitahaya – our locally grown pitahaya is now exported to countries like China. As a company with Chinese capital, we find the exchange truly meaningful.

In training and development, we offer regular training certified by the Ministry of Labor in electricity, welding, baking, and pastry making, among others.

Other programs involve supporting vulnerable groups in partnership with the Ministry of Economic Social Inclusion, as well as running culture, sports, and social support programs. Last but not least, communication and open dialogue are key to all of our campaigns. In 2024, we published Mirador: In Images and Socio-Environmental Management, a book that showcases these efforts to keep residents informed on our projects.

### How has Mirador contributed to the economy of Zamora Chinchipe?

Mirador plays a key role in driving economic activity in Zamora Chinchipe province and beyond. In 2024, for example, ECSA invested US\$59 million in the purchase of goods and services, which marks a 4.12% increase compared to the US\$56 million invested in 2023. Of these, Pangui benefited the most, with US\$22 million of procurement in the canton and Zamora with US\$20 million. Zamora Chinchipe has experienced a major transformation in recent years, as one of the provinces with the highest sales in the country and a 30% reduction in poverty. The other major and measurable impact has been on local employment; a few years ago, job opportunities were scarce in the province, but ECSA has 1,410 direct employees, generating an additional 4, 848 in contracting jobs, and an astounding 19,000 indirect jobs created by the dynamization of the economy.

### Do you have a final message?

With a projected mine lifespan of 30, Mirador is more than a copper operation. It’s a model of responsible mining. We want our legacy to expand beyond copper production, into education, healthcare, and infrastructure. We want to see dreams fulfilled. ■





FES



FDS

## Fredy E. Salazar and Freddy D. Salazar

FES: CEO and President

FDS: Manager, Corporate Development

**SALAZAR RESOURCES**

**Salazar Resources was involved in the discovery of the largest deposits in Ecuador. Could you tell us about your expertise in the country?**

FES: Founded in 2007, Salazar Resources specializes in generating exploration projects. We are geologists with extensive experience in prospecting and exploration, and have been involved in some of the most significant discoveries in Ecuador, including Fruta del Norte, Loma Larga and Cangrejos, and we know well the country's geology, as well as its social, environmental, and political aspects.

Our origins are closely tied to the discovery of Fruta del Norte, today the country's largest mine, operated by Lundin Gold. Our geologists brought Aurelian Resources to the site and negotiated the deal for the concession package with the original owner. After the discovery of Fruta del Norte in 2005, we listed on the TSX and with the funding from the IPO, we hit another exploration success through the discovery of El Domo (Curipamba project), a high-grade VMS-style copper-gold deposit, in which Salazar holds a 25% stake, the remaining 75% being held by Silvercorp Metals.

**Could you elaborate on the attractiveness of El Domo?**

FES: El Domo was discovered in 2008, but due to a mining ban in Ecuador, we were unable to advance the project for three years. In 2011, we resumed exploration and in 2017 made an earn-in agreement with Adventus, which acquired a 75% majority stake, investing US\$60 million to bring the project into production. Following the acquisition of Adventus Mining by Silvercorp, Silvercorp is now the majority owner and operator.

El Domo has a resource of approximately 10 million t at 5% CuEq, including reserves of 6.5 million t at more than 5% CuEq on its open pit portion according to the 2021 Feasibility Study. As with most VMS projects, this is not a large-scale deposit, but its high grade and its quick timeline to production attracted international attention. El Domo is a highly profitable deposit, generating an estimated free cash flow of around US\$500 million.

The construction phase is expected to last 18 months, with a target completion date of August 10, 2026. After that, the commissioning phase will begin, aiming to start production by the end of 2026.

**Salazar also has an exploration portfolio of five 100%-owned projects. Could you provide an overview of your exploration targets?**

FDS: We currently have five exploration projects, two of which particularly stand out: Santiago, a copper-gold porphyry with promising intersections that we aim to revisit and expand, and Macará, which is located on the border with Peru and shares the same geological basin as Tambo Grande, the largest massive sulfide deposit discovered on the planet. Another project is Tarqui, where drilling has been completed and hit intersections of up to 600 meters with 0.2% Cu. However, further exploration is needed to identify an area with economically viable grades. Out of these, Santiago is the most interesting, having the potential to become a new Warintza (developed by Solaris Resources), showing the characteristics of a large-scale porphyry system. In July, we signed a definitive agreement for the Purchase of Ecuadorian Exploration Properties from Silvercorp Metals. We are excited about these prospects and they will be an integral part of our value generation strategy in the coming year.

**Could you walk us through your financial strategy as you prepare to become a cash-generating company?**

FDS: We currently have US\$1 million in cash and we will likely raise equity over this period to advance our exploration activities. When Curipamba (El Domo) enters production, we plan to reinvest our 25% share of profit proceeds in exploration and strategic growth. We would also like to complement our strategy with a Project Development model by bringing in partners to advance the projects in our portfolio, in the same way we have successfully done with Adventus. This model helps subsidize exploration costs and ensure the maximum returns for our shareholders, who have been extremely committed and patient.

**What message do you have for companies looking to invest in Ecuador?**

FES: Operating costs in Ecuador are extremely attractive, with players like Lundin Gold producing at an AISC under US\$900/oz. However, like many emerging markets, Ecuador faces challenges. Mining is a recurring topic in political debates and is often used as an easy tool during electoral campaigns. ■

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export products like bananas, of which Ecuador is the world's largest exporter, are susceptible to climate events, while the shrimp industry, now the country's top non-oil export, has been impacted by fluctuating global demands and environmental concerns.

This year marks 25 years since Ecuador implemented the US dollar as its currency, in a last-ditch effort to break out of an unprecedented economic crisis. Dollarization has become one of the most popular public policies in the country's history, with an approval rating in polls close to 90%, writes Latinvex, a regional publisher. Though almost everybody supports the dollar, and mining is seen by the political elites as a source of more dollars, local communities often feel differently.

In 2022, nationwide protests led to the shutdown of several mining operations and the government conceding a 12-month moratorium on new concessions until a community consultation law was passed. According to an article by Al Jazeera, local communities and the Confederation of Indigenous Peo-

ple of Ecuador (CONAIE) have opposed the development of La Plata, by Atico Mining, which is expected to start mining next year. Clashes between protestors and security forces have been repeatedly reported in the country.

Before his re-election in April, President Daniel Noboa attended PDAC and signed six mining contracts worth US\$4.8 billion, among which was La Plata, a gold-rich VMS deposit developed by Atico Mining. The president is also in talks for a future free trade agreement with Canada. These moves only intensified the mobilization of several anti-mining trade unions and indigenous organizations like the CONAIE.

There are other marks of a still-immature mining jurisdiction, from the clumsy way in which the country deals with anti-mining resistance and illegal mining, to a shortage of mining-specific available skills, although some of the talent has migrated from the oil sector. Ecuador has also experienced an electricity crisis due to a severe drought impacting its mostly hydro-based power generation.

That said, our commentary on these shortcomings reveal that we hold Ecuador up to higher standards than other jurisdictions. Our critique of Ecuador's areas of improvement is a silent compliment that should tell readers Ecuador is ready to engage in serious conversations. Truth is, with the development of FDN and Mirador, a star was born. The country's ascent into a guild of premier mining jurisdictions is unquestionable. Mining exports have increased from US\$282 million in 2018 to US\$3.3 billion in 2023, and mining is soon to displace bananas as the third-largest export category. Change in the country is imminent. In 1835, Charles Darwin's trip to Ecuador's Galapagos Islands inspired his theory of evolution. The adaptations of the different species to the unique conditions of the Galapagos, a "little world within itself" led him to formulate that adaptation to changing conditions ensures survival. Ecuador is changing, and it must adapt to the mining industry just as the industry adapts to the country. ■

**162**  
ISSUERS

**759<sup>B</sup>**  
MARKET CAP

**33**  
COUNTRIES

**12**  
COMMODITIES

**37<sup>th</sup> ANNUAL  
MINING FORUM  
AMERICAS  
2025**

**AMERICAS.MININGFORUM.COM**



## Ecuador at a Glance



**SURFACE AREA**  
256,370 km<sup>2</sup>

**CAPITAL**  
Quito

**POPULATION**  
17.98 million

**MEDIAN AGE**  
29.3 years

**LITERACY RATE**  
94%



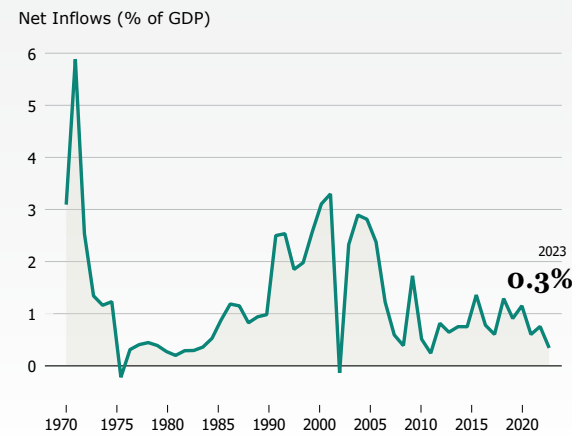
**GDP**  
118.84 billion USD

**GDP PER CAPITA**  
6,609 USD

**MAIN EXPORTS**  
Crude Petroleum, Crustaceans, Bananas, Gold, Processed Fish

**MAIN MINING RESOURCES**  
Gold, Copper, Silver

### FDI Evolution



### Key players

- Atico Mining
- Aurania Resources
- Challenger Gold (Torata Mining)
- Dundee Precious Metals
- Ecuacorriente
- Lumina Gold
- Lundin Gold
- Salazar Resources
- Silvercorp Metals
- SolGold
- Solaris Resources
- Titan Minerals

Sources: World Bank, Worldometer, OEC

### Did you know?

Ecuador's official currency is the USD.



“For long, Ecuador has used the regulation of its established oil industry for its emerging mining sector. As mining continues to grow, the country is now building a mining-specific regulatory framework that is more tailored to the sector and attractive for new entrants.”

Luis Matute, Ecuador Office Manager, **KLOHN CRIPPEN BERGER (KCB)**



Image courtesy of Ecuador Chamber of Mines

## Jamaica at a Glance



**SURFACE AREA**  
10,990 km<sup>2</sup>

**CAPITAL**  
Kingston

**POPULATION**  
2.8 million

**MEDIAN AGE**  
32.8 years

**LITERACY RATE**  
80%



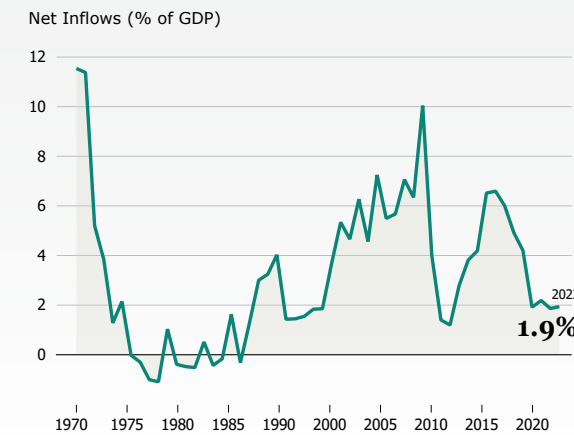
**GDP**  
19.42 billion USD

**GDP PER CAPITA**  
6,840 USD

**MAIN EXPORTS**  
Aluminum Oxide, Refined Petroleum, Petroleum Gas, Hard Liquor, Processed Fruits and Nuts

**MAIN MINING RESOURCES**  
Bauxite, Alumina, Gypsum, Limestone, Copper, Gold

### FDI Evolution



### Key players

- C3 Metals\*
- \*Freeport-McMoRan (earn-in with C3 Metals)
- Geophysx\*
- \*Barrick Mining (earn-in with Geophysx)
- Glencore
- Jamaica Bauxite Mining
- Lydford Mining

Sources: World Bank, Worldometer, OEC

### Did you know?

Jamaica is the 7th largest bauxite producer in the world.



“Limestone is Jamaica’s next frontier. Jamaica possesses vast deposits of both high-grade pharmaceutical and industrial-grade limestone. While the bauxite market is at maturity, limestone presents a significant opportunity for economic diversification and export growth.”

Donna Marie Howe, CEO, **JAMAICA BAUXITE MINING (JBM)**



Image courtesy of C3 Metals



## Dominican Republic at a Glance



**SURFACE AREA**  
146,839 km<sup>2</sup>

**CAPITAL**  
Santo Domingo

**POPULATION**  
11.33 million

**MEDIAN AGE**  
28.3 years

**LITERACY RATE**  
96%



**GDP**  
121.44 billion USD

**GDP PER CAPITA**  
10,718 USD

**MAIN EXPORTS**  
Medical Instruments, Gold, Rolled Tobacco, Low-Voltage Protection Equipment, Ferroalloys

**MAIN MINING RESOURCES**  
Gold, Nickel, Silver, Copper

### Key players

- Barrick Mining (in JV with Newmont)
- GoldQuest
- Precipitate Gold
- Perilya (Corporación Minera Dominicana)
- Unigold

### Did you know?

Mining at Pueblo Viejo started in the 1500s. Barrick acquired the asset in 2006, turning it into one of the largest gold operations globally.

Sources: World Bank, Worldometer, OEC

## Panama at a Glance



**SURFACE AREA**  
75,320 km<sup>2</sup>

**CAPITAL**  
Panama City

**POPULATION**  
4.46 million

**MEDIAN AGE**  
30.3 years

**LITERACY RATE**  
96%



**GDP**  
83.32 billion USD

**GDP PER CAPITA**  
18,686 USD

**MAIN EXPORTS**  
Copper Ore, Special Purpose Ships, Passenger and Cargo Ships, Refined Petroleum, Bananas

**MAIN MINING RESOURCES**  
Copper, Gold, Iron

### Key players

- First Quantum Minerals
- Orla Mining

### Did you know?

Before its suspension, the Cobre Panamá mine represented 4.8% of Panama's GDP - more than the Panama Canal (3.5%).

Sources: World Bank, Worldometer, OEC

## Guatemala at a Glance



**SURFACE AREA**  
108,890 km<sup>2</sup>

**CAPITAL**  
Guatemala City

**POPULATION**  
18.12 million

**MEDIAN AGE**  
22.9 years

**LITERACY RATE**  
83%



**GDP**  
104.45 billion USD

**GDP PER CAPITA**  
5,763 USD

**MAIN EXPORTS**  
Bananas, Coffee, Palm Oil, Raw Sugar, Knit Sweaters

**MAIN MINING RESOURCES**  
Gold, Silver, Nickel

### Key players

- Aura Minerals
- Goldcorp
- Pan American Silver
- Solway Investment Group
- Volcanic Gold Mines (Gold Group)

### Did you know?

About 40% of Guatemala's population is Indigenous.

Sources: World Bank, Worldometer, OEC

## Nicaragua at a Glance



**SURFACE AREA**  
130,370 km<sup>2</sup>

**CAPITAL**  
Managua

**POPULATION**  
6.82 million

**MEDIAN AGE**  
26 years

**LITERACY RATE**  
83%



**GDP**  
17.83 billion USD

**GDP PER CAPITA**  
2,613 USD

**MAIN EXPORTS**  
Gold, Insulated Wire, Knit T-shirts, Coffee, Rolled Tobacco

**MAIN MINING RESOURCES**  
Gold, Silver, Copper

### Key players

- Equinox Gold (Calibre Mining)
- Mako Mining
- Metals Exploration
- Mineros (Hemco)

### Did you know?

Nicaragua has long been considered a potential site for a major canal rivaling the Panama Canal.

Sources: World Bank, Worldometer, OEC





# SERVICES AND EQUIPMENT

“

Notwithstanding the importance of conscious design and technology, the single most important aspect in risk prevention is empowering our employees to work only in safe conditions. Safety starts with planning, identifying hazards, and correcting these hazards long before anyone picks up a tool.

”

Eric Smith  
Managing Director  
**CEMENTATION AMERICAS**

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CARIBBEAN MINING 2025

Image courtesy of Jamaica Bauxite Mining





## Services and Equipment

### Decentralized markets, central challenges

Latam North and the Caribbean present challenging markets for third-party service or equipment providers: As a middle child of the Americas, the region sits awkwardly between the larger mining hubs of the two hemispheres. Mexico's significant mining industry has a service hub of its own, but this is still routinely supported out of the Canadian, American, Peruvian or Chilean offices of multinationals, whether out of convenience or necessity. Colombia has also grown a local suppliers sector, though most local providers focus on multiple verticals within the country rather than being purely dedicated to mining.

As for the other countries, where there are few, if any, producers, indigenous services sectors have not had the time nor the chance to develop, and are usually comprised of intermediaries of sorts, that often count on a single large client. Of course, mining operations in these countries still require everything from equipment to drilling services and support on their latest studies, just like in any other country. Places like Nicaragua, Guyana, and even Ecuador are served through a "mining services without borders" model, characterized by satellite offices, cross-regional talent, and rather interesting organizational structures. Epiroc, for instance, serves the CVCA region of 11 countries from its headquarters in Colombia, while its biggest client sits in the Dominican Republic; Orica also groups Colombia (local HQ) with the Caribbean as a single unit. Others, like Scania, aggregated all those countries too small to validate direct subsidiaries under "Independent Markets," with representatives in Central America and the Caribbean.

In many cases, larger service providers, and especially consultancies, that do not necessarily require local infrastructure, operate through a decentralized model, completing projects as required in a certain jurisdiction. A large project, such as Ausenco had at Las Chispas in Mexico or Klohn Crippen Berger (KCB) has had at Fruta del Norte in Ecuador, motivates the establishment of a direct local footprint. Ausenco had been working in Mexico's mining sector for over two decades from its North American offices until it opened shop in the country in 2020; it now has two Mexican offices. KCB has also worked with Lundin Gold since 2013, seeing the Fruta del Norte through the PFS, FS and detailed engineering phases. "When the project reached the construction stage,

Lundin Gold requested that we establish an entity in Ecuador. We opened a satellite office in the country in 2018. Once Fruta del Norte entered commercial production in 2020, we started hiring permanent local staff and ultimately established a local office in 2022 in Cuenca," said Luis Matute, the Ecuador office manager for KCB.

KCB is the Engineer of Record for both the Fruta del Norte gold mine and the Mirador copper mine of Ecuacorriente, a role that underscores the long-term local partnerships with the two large-scale operations existing in the country.

With Mexico and Colombia's more established mining sectors on a flat growth trajectory, and countries like Ecuador, Guyana and Suriname seeing increased mining and exploration activity, we expect continued local expansion and the cross-pollination of skills from the hubs to the frontiers.

#### **Mañana is not tomorrow: Understanding local differences**

Naturally, being on the same timezone and within the same sphere of knowledge with leading centers of mining excellence in both of the Americas holds strong advantages, allowing mining companies in the Latam North and Caribbean region a broad selection of potential partners. Service and equipment companies can build off existing relationships with clients with international portfolios, like Alamos Gold, Agnico Eagle, Coeur Mining, Hecla Mining, or G Mining Ventures operating across the Americas.

Local expertise, whether coming through a partnership, previous experience, or a temporary set-up in the country, is, however, a must, if not for all the matter-of-fact specific challenges that are to be discussed below in this article, then for the cultural element alone. "When it comes to Latin America, there's a whole different business language. For example, when someone says 'mañana', it doesn't always mean literally tomorrow — culturally and linguistically, it often implies 'sometime in the future,' with a more relaxed sense of urgency. Understanding these nuances and being able to communicate effectively at different levels with stakeholders across the region is essential in our line of work," said Homero Herrera, the president and CEO of Latin American Cargo (LAC).

#### **On the ground: Logistics, security, talent, and the elements**

As this report has hopefully helped illustrate, the region is highly diverse. From the northernmost point in Tijuana, Mexico, to the southernmost in Zamora, Ecuador, there are over 5,000 km in a straight line. Logistics within the region are hampered by outdated infrastructure, the lack of direct connections, and poor border management. A World Bank report has found that the aggregate effect of logistics bottlenecks can more than double optimum logistics costs for both high and low value goods. Additional challenges stemming from historically low water levels at the Panama Canal, a key passage point between the Pacific and Atlantic oceans, have recently exacerbated logistics hurdles. Montreal-based logistics company Latin American Cargo (LAC) had cargo stuck in the Panama Canal for over three months at the time of our interview.

On land, logistics providers face another challenge in the shortage of qualified drivers and established logistics companies. Enrico Boehme, managing director for Mexico at Noatum Logistics, explained: "The market is often served by individual owners/operators with a single truck, contracted through layers of intermediaries. This fragmented structure creates an unregulated environment. As a result, whenever a new project gets underway, securing dependable and consistent logistics support is a problem."

Service providers in the region must also learn how to grapple with security issues. Craig Gibson, the co-founder of Mexican-based exploration services company PRODEMIN (Prospeccion y Desarrollo Minero del Norte) has been working in the country for three decades, learning to accommodate to the different and sometimes dangerous security conditions. "During Felipe Calderón's administration more than 10 years ago, drug activity had increased significantly — and so did the drug war. During that time, certain parts of Mexico had become unsafe to operate in. The situation has improved since. We have worked in the most dangerous parts of the country and we were able to get things done and advance projects — and this is another reason why explorers choose to work with us."

Another consideration for service providers is the natural environment, from climate to topography and seismic risks, which again call for an intimate local knowledge. In Ecuador, Luis Matute of Klohn Crippen Berger paints a vivid picture: "Unlike flat countries where it is easier to build infrastructure like roads, processing plants, and storage areas, Ecuador's mountainous terrain requires much more careful planning. You have to cut into steep slopes carefully, which requires special techniques and can be expensive; manage water flows since steep areas can create drainage and erosion issues; or design narrow and winding roads, as straight roads are often not possible in the mountains."

Another hurdle is the availability of local expertise. While Mexico represents a center of mining excellence with top-tier talent, that talent is not as readily available in nascent mining jurisdictions. In Ecuador, for instance, the mining sector has benefited from the expertise developed in oil and gas, a cousin industry. But that is not sufficient, according to Matute: "For very specialist tasks, the mining services sector is still in its infancy and requires professional support from countries with a longer mining culture (such as Peru) to come to Ecuador and transfer their skills to the local people."

#### **Above the ground: Navigating a mixed bag of market conditions**

The region presents a mix of one leading minerals producer (Mexico), a large coal producer with emerging opportunities in copper and gold (Colombia), a starting copper-gold producer with additional advanced development projects (Ecuador), a buoyant oil industry with an emerging mining exploration sector (Guyana and Suriname), a huge gold producer from one operation with a string of explorers (the Dominican Republic), a stalled but large copper producer (Panama), a few smaller gold producers with uncertain permitting pathways (Nicaragua and Guatemala), and a bauxite producer with early-stage gold-copper prospects (Jamaica). An alternative overview of the region is provided by Jenny Engström, the general manager for CVCA Region at Epiroc: "CVCA is a very dynamic and diverse region where mining is very much in the public eye and a key point of political debate. Panama and Guatemala have put a hold on new mining permits, while in Colombia permit approvals are also lagging. However, Suriname and Guyana are booming, particularly for gold exploration."

Speak to any service provider in the region, and, depending on their own footprint and priorities, they will provide a slightly similar assessment of market conditions in the region, with a different growth plan. What emerges most prominently is a stagnation in growth from conspicuous players like Mexico, Colombia and Panama, balanced by new prospects in Ecuador, Guyana and Suriname. Speaking of the Mexican market, Gerardo Flores, the director of technical service operations at explosives producer Austin Powder Mexico, said: "Considering the 2023 regulatory amendments under AMLO's government and the subsequent change in



**Lorena Montaña**  
Senior Director, Mexico –  
Minerals and Metals  
**AUSENCO**

“Ausenco's expertise in ESG, particularly in jurisdictions with advanced water sustainability frameworks, positions us well to help clients adhere to the most stringent standards. Our solutions focus on improving water circularity without requiring significant capital expenditure.”





LET'S MAKE THE PATH TOGETHER



INCIMMET is an underground construction contractor focused on mining for the Latin American region. Our aim is safe production. We have over thirty years in the mining market and are currently running projects in Peru, Colombia, and Chile. We have ISO 9001:2015, ISO 14001:2015, and ISO 45001:2018.

**OUR SERVICES:**

Mine development & Production

Raise Boring & Raise Mining

EPC Mine Backfilling

EPC Shotcrete

Cable Bolting & Specialized Rock Support

Tunneling

Civil Works

Ancillary Services

**Colombia:** comercial\_colombia@incimmet.com

**Chile:** comercial\_chile@incimmet.com

**Mexico:** comercial\_mexico@incimmet.com

**Brazil, Argentina & Central America:** comercial\_internacional@incimmet.com

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government, the Mexican mining sector is currently at a standstill (...) Austin Powder holds approximately 60% of the underground market share in Mexico, so growth in this segment is currently limited, with few new projects coming through. Meanwhile, the open pit sector is experiencing even bigger difficulties in terms of obtaining permits."

Considering the growth constraints within Mexico, Austin Powder Mexico is diversifying its business into aggregates, clay, stone, construction, roads, civil works, cement and government infrastructure. Its competitor, Orica, is eyeing other countries. We spoke to Manuelangel Aldana, general manager for Colombia and the Caribbean at Orica: "We aim to expand our footprint in Guyana by increasing in-country inventories and technical support capabilities to respond to growing demand from existing clients and capture emerging demand from new clients. Although Orica has worked with the major mining companies in the country since the 90s, supported by key local partners, in the coming months, we will invest in an explosives warehouse facility. We primarily provide explosives to the quarries, construction and mining sectors, leveraging our network of production facilities in Colombia, Mexico, Peru, Brazil, and the US," Aldana said.

At least half of the service and equipment interviewed for this report highlighted regional expansion as a priority. John T. Boyd Company, for instance, whose South American headquarters are in Colombia, is looking to expand beyond Colombia: "The project pipeline here is currently stagnant, with the exception of metallurgical coal projects," said Carlos Felipe Barrera, managing director for the region.

Energold Group, a global driller specialized in greenfield exploration, has significantly decreased operations in Mexico in the past six years, once one of its top markets, as a result of the recent political changes that have crippled the exploration sector. However, the region presents an ideal setting for its modular, lightweight and compact drill rigs, designed primarily for greenfield frontier exploration programs in difficult-to-access areas, and thereby well-suited for Nicaragua's jungles or Ecuador's rain forests.

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“ We want to manage medium to large-scale operations in Central America and Mexico. ”

## Eduardo Cossio Chirinos

CEO  
INCIMMET

### What motivates INCIMMET to invest in Central America as a mining region?

First, we are motivated by the opportunities we foresee in this region because it has significant mining operations that cannot be overlooked. Second, we feel confident about our strength: We have been operating continuously in Colombia for eight years, which has taught us a little bit of everything, from the nuances of developing mining suppliers, training people, and navigating complex social situations. We are particularly interested in Nicaragua with companies like Calibre Mining, Hemco, and Mako Mining, where we see significant potential to add value.

We know there are service providers and contractors in the region; otherwise, the industry would not advance, but we can offer a comprehensive, innovative, and experienced solution with proven productivity results. We have more than thirty years of experience in the underground mining market, experience in mines of the same scale, and a track record to back us up. Furthermore, many leaders supervising these operations come from Peru or Colombia and are already familiar with how we work, which definitely makes things easier.

### What are some of the operations where INCIMMET is currently working?

In Colombia, we have established ourselves as a solid alternative in under-

ground mining by working with two big players: Zijin Continental Gold at Buriticá and Aris Mining at Segovia and Marmato mines.

In Ecuador, we started working with Lundin Gold in Fruta del Norte mine by addressing their specific need regarding detonation and explosives handling.

In Peru, we work in six mines for five mining companies: Nexa Resources (Cerro Lindo), Buenaventura (Tambomayo and Orcopampa), Poderosa (Santa María), Minsur (Raura), and Volcan (Romina).

Finally, in Chile, we work for Antofagasta Minerals (El Cachorro), and Compañía Minera del Pacífico (El Romeral).

### Do you see more cultural alignment between Central America and South America or North America regarding mining practices?

From our experience, Central America tends to look south when seeking a benchmark for its mining development, not to North America. That is precisely where Colombia comes into play. We can pivot from Colombia to Central America, look for regional synergies, and replicate the exact model that worked there. Just as it feels natural to look to Chile from Peru, reaching Central America from Colombia is much easier. There are many cultural and operational similarities with Colombia and the Central American region, something you do not perceive as much from Peru or Chile, even though we are all Latin Americans.

When we entered Colombia, mining was not yet at its current peak, so we had to develop the entire supply chain from scratch, which gave us credibility.

### Why do you consider Mexico a "world apart" in the region?

Although it has many geological and mineralogical similarities with Peru, giving us an advantage because of our Peruvian origins, Mexico is a different market. Mexico is much more regionalized. While Peru is a smaller country with a large mining industry, Mexico is a vast country with a much larger variety of industries. Thus, each region has its own dynamics, and contractors focus on specific areas. Furthermore, in Mexico, connections are much more critical than in Peru.

The big challenge in Mexico is to reduce the atomization of mining contractors. There, operations are often highly fragmented: several contractors for lateral developments, another for vertical excavations, another for shotcrete, and another for civil works. We can offer a comprehensive solution that covers all of these in a single company, translating into fewer operators, faster processes, and simpler client management. One area that has recently garnered much interest is mine backfill, which we hope will soon turn into a contract.

### What benefits does having a presence in multiple countries bring?

For us, the benefits are geographical diversification and enhanced risk management. By being more strategic and selective, we can make better decisions, building a solid pipeline that benefits stakeholders and the company's sustainability.

For our clients, the benefits are new formulas for increasing productivity with an experienced and reliable contractor. Since 2024, INCIMMET has been a public company, so we are one hundred percent transparent with our business and take ESG as our daily road map.

### What are your medium to long-term goals in the region?

We want to manage medium to large-scale operations in Central America and Mexico. We will not try to do everything at once but move step by step with two or three well-structured contracts over the next few years. ■





## Eric Smith

Managing Director

CEMENTATION AMERICAS



“Clients are looking for contractors who can deliver on time and on budget for the assigned scope. The ability to offer realistic timelines and budgets has become a real differentiator.”



### Could you provide an overview of Cementation’s presence in Mexico?

Cementation has been operating on-and-off in Latin America since the late 1990s, delivering projects in Colombia, Chile, Argentina, and, most often, Mexico. We have a fully owned incorporated company in Mexico called Cementation Mining Mexico. Currently, our largest project is in the state of Zacatecas, where Cementation is contracted with a large client in performing mine development.

Cementation specializes in large, complex developments, starting at US\$100 million and bigger, so we are very well positioned in Mexico’s silver space, the country being the largest silver producer in the world, with top-tier assets operated by miners who share our values for safety and responsible

mining. We are actively working to secure another large project in the country in the next year.

### What are some of the main differences between operating in North America and Mexico?

Mexico has a very proud mining history, an experienced workforce, and communities that understand the importance of our industry. No different than in places like the US and Canada, we need to train people on the latest technologies we are adopting. Our main goal with new technologies is to separate people from hazards, especially when working underground, so this is a big push for us in Mexico. What’s really impressive is the underground connectivity and digital infrastructure we are seeing in Mexico, with many of the mines we work in benefiting from Wi-Fi or LTE underground, which is actually not always the case in the US or Canada.

### Can you elaborate on the technologies implemented to separate people from hazards?

One is underground equipment like loaders, haul trucks, and drills that can be operated either from surface or even remotely. Whereas some tasks still need to be performed in-person underground, there are now many autonomous and semi-autonomous remote-operated equipment that reduce humans’ exposure to risks: for instance, one can dig and haul broken rock with a loader operated from thousands of kilometers away. Besides a digitalized fleet, Cementation has implemented virtual reality into our designs so that they can be reviewed in the virtual space before anything is built; with the VR headset on, you can identify and address potential hazards from the design phase.

### Safety is clearly a big part of Cementation’s culture. How is that reflected in the way you work?

Notwithstanding the importance of conscious design and technology, the single most important aspect in risk prevention is actually empowering our employees to work only in safe conditions. Those who started in the mining industry 20-30 years ago are aware of some of the double standards around safety that were generally accepted. There was a time when safety was preached during preparatory shift

meetings on the surface, and as soon as crews reached their underground position, the only thing that mattered was productivity at almost any cost. We are successfully challenging this outdated mindset and steadily building a more positive safety culture where safety is a non-negotiable priority.

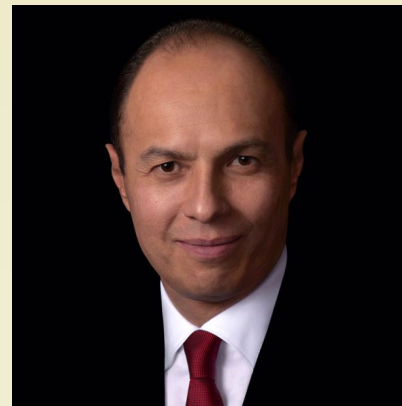
Our tagline at Cementation is “We build mines, safely,” and this is about making safety a baseline of how we work, rather than a separate topic. Safety starts with planning, identifying hazards, and correcting these hazards long before anyone picks up a tool, and we empower every employee to be a part of this protocol.

### Latin America has seen more anti-mining opposition than any other region. How does Cementation engage at a local level to promote training and development?

Though we are a non-unionized company, most of the projects we are working on have their own “sindicatos” (unions), so we work closely with these organizations, emphasizing that we are guests, here to do a job and not to replace people or steal jobs. Our most significant contribution is through upskilling our local employees on the latest safety-enhancing equipment. We seek to nationalize as quickly as we can, usually starting with a few expat trainers and progressively handing over to locals. For instance, by the end of one of our large projects with 280 employees, only one of them was an expat.

### How do you observe client needs evolving in 2025?

Something that our clients want today is certainty of outcome. Before any big capital project, mining companies need to get their budget approved by the board, and they surely do not want surprises later on in the project. As a result, clients are looking for contractors who can deliver on time and on budget for the assigned scope. The ability to offer realistic timelines and budgets has become a real differentiator. To ensure that we deliver that certainty of outcome, we rely on continuous feedback and learning, collecting highly granular data underground – we track productivity, waiting times on materials, equipment efficiency, and daily shift reviews to identify any delays and ensure consistency within the stipulated budget and timeframe. ■



## Mario Salazar

CEO  
DIRAC



“One of our strategic objectives is to position Dirac more strongly in the mining sector, where we believe our expertise, technological acumen and international accreditations are a perfect fit.”



### What opportunities do you identify in the mining sector?

One of our strategic objectives is to position Dirac more strongly in the private sector, particularly in mining, where we believe our expertise, technological acumen, and international accreditations are a perfect fit to answer the industry’s challenges. The world’s largest silver producer, Mexico is a leading mining powerhouse, but it is not without challenges, particularly in terms of the social license to operate. Mining represents 2.5% of Mexico’s GDP and is a major employer paying about 30% higher than the average, yet the sector is often victim to misinformation and sometimes politicization. Water scarcity, particularly in the north of the country, which is also the main hub for mining, calls for very smart planning – something Dirac is an expert in. The 2023 reforms reducing the concession period and introducing stricter regulatory supervisions have created some instability in the sector. More than ever, having well-accredited partners, sound infrastructure, and the right technology, is crucial. The maturity of our organization, the in-house geological, geotechnical, structural, electrical, hydraulic, and processing expertise, and the wealth of experience in various sectors in and outside of Mexico position Dirac as the ideal partner for the mining sector.

### Could you elaborate on Dirac’s international footprint?

About eight years ago, we took a strategic decision to expand our presence beyond Mexico and have since opened subsidiaries in Colombia and Panama, from where we serve clients across the Central and South American regions. In Panama City, for instance, we are involved in a large project to relay the drainage system for the main river going through the city (Matasnillo River). We are currently deepening our footprint in both Colombia and Panama, while also bidding for projects in countries like Costa Rica and El Salvador and keeping Peru and Argentina on our radar for expansion in the near term.

### What role does technology play in Dirac’s strategy and why have you decided to spin out QUBI?

Technology has been one of our key strategic directions – and a transformational one for Dirac. We had been in the market for over six decades and could not risk becoming overconfident and letting new-generation companies come

into the market with cutting-edge solutions, while leaving us irrelevant. So we took control of our own destinies and became a technology-first company. Dirac developed a collaborative Advanced Project Management (APMÒ) platform to follow up on the progress of a project in real time, equipped with AI modules for price and estimates reporting. Registered in Mexico, the solution became very successful, not only allowing for seamless interaction with clients, contractors, and internal teams for Dirac but also evolving into a self-standing solution that we could sell into the market. Similarly, we developed other software solutions for human resources, project management, ISO certifications, integrity systems, and so on, and decided it was not wise for Dirac to handle both the engineering and tech solutions side. This is why we created QUBI (short for Quantum Bit), a new company representing the technological solutions, while Dirac stays focused on its core business. QUBI will be spun out this year and have its own mission as a tech partner.

Technological advancement will remain a constant priority at Dirac. For instance, we recently acquired drones to conduct spectral analysis, applied not only for infrastructure projects but also in sectors like land registry, agriculture (winemaking) – we just had a pilot where we sent our drones to survey a vineyard – and other industries.

### What makes Dirac a partner of choice for the private sector, including mining?

Private contractors are very keen on the latest technologies that can improve the bankability and performance of their projects, especially when they are handling multiple ongoing projects. As for the mining sector, we are certain that our technical expertise, our technological advancement as well as our international certifications under ISO 9000, ISO 14000 and ISO 45000 make of Dirac an asset and a strategic partner for the mining industry.

### What are some of the challenges of operating in Mexico?

A lack of dialogue and transparency in policy-making is one of the main issues. For instance, a new reform (Public Works and Related Services Law), applicable to infrastructure projects, has been drafted without the industry’s consultation, which risks hindering the industry’s competitiveness. ■





**Julien Le Marquand**  
Regional Director for Mexico,  
Central America and the Caribbean  
**SEEQUENT**

“ ESG data monitoring has become a means of differentiation. Our solutions can help customers make informed, better, and faster decisions, which is even more important in today’s environment as the market adapts to changing regulatory conditions. ”

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**Common ground: Compliance**

Regardless of these regional differences, overarching trends unite the region and its service providers alike. One of the major growth drivers for service providers, primarily concerning engineering firms and consultancies, is the industry’s need to comply with both international and local standards, both evolving yet not always evolving in tandem with one another. In Mexico, for example, we note an accelerated interest in complying with international mineral resource classification instruments, primarily the NI 43-101 Canadian standard.

The same focus on compliance falls on tailings management. The need for professionals with experience in designing tailings management facilities in compliance with international standards is what brought the likes of Knight Piésold into Mexico five years ago, when the Global Industry Standard on Tailings Management (GISTM) was introduced. “We brought in specialists from the US, Chile and other hubs, while also investing in training local engineers to develop the know-how in the country. After celebrating our fifth year in Mexico, our team has become a trusted partner for clients seeking expert insight and top-tier solutions,” said Gilberto Domínguez, vice president of US and operations manager for Mexico, at Knight Piésold.

Though neither the GISTM nor filtered tailings (dry stacking) technologies are new, the technologies to make these dehydrated tailings safer and more stable are, as explained by Diego Cobos, president and practice leader in geotechnical and tailings engineering at SRK Consulting Colombia: “The industry is shifting away from simply walking away from an old tailings facility to finding innovative solutions to repurpose them in a way that contributes to the surrounding communities and the environment. We have worked on such projects where we converted old facilities into solar and wind farms, as well as a small hydropower energy project concept at the Buriticá project in Colombia. Other closed facilities were transformed into parks and recreation areas.”



**Andres Aramayo-Prudencio**  
Industrials and Energy Partner  
**EY (LATAM)**

“ With regulations becoming increasingly stringent, compliance has been top of mind for mining companies. More than ever, the relationship between mining operations and local communities has moved to the forefront of industry discussions. ”

If international compliance is purported as the MNC’s domain, local compliance calls for local expertise. Gruminex, a multidisciplinary engineering house focused on updates and optimizations of mineral processing plants, has a diverse project list, sometimes helping companies meet new regulatory requirements by Mexico’s STPS (Secretariat of Labor and Social Welfare), and other times helping with accurate facility documentation for Cyanide Code certification. Crucially, it is evident that both local and international providers must blend expertise to navigate both realms of regulations. “One of our standout projects involved supporting the development of a new industrial plant whose processes and technologies were based on European designs. Our role was to adapt the entire design, technical codes and specifications to Mexican regulations, ensuring full compliance without compromising the original project vision. This project demonstrated our ability to bridge international engineering standards with local regulatory frameworks,” commented Cynthia Villa Nafarrate, Gruminex’s founder.

A third dimension to international and local legal compliance is the voluntary standards and targets set under the umbrella of ESG. Industry efforts to reduce carbon emissions, water consumption, pollution and other metrics have been transforming the mining services and equipment sector. Mexican producers like Torex Gold have started new mines on 100% battery electric powered equipment – that sends a chain reaction to the OEMs providing the equipment, the contractors making the recommendations, and consultancy and software companies designing, monitoring and analyzing the implementation. Clean power options, electrically powered equipment, waste-to-value and circular projects, lifecycle assessments, a strong local training mandate, ESG data monitoring, and consultancy on social engagement have become staples of the requirements that the services sector has adapted to – and flourished in, as these demands provide new growth vectors. ■

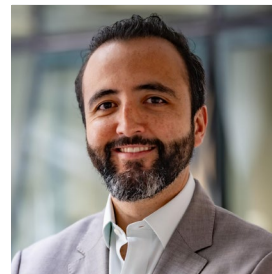
# Service and Equipment Providers Adapt to Higher ESG Expectations



**The contractor**  
“One of our clear differentiators is that we work very closely with our clients to help them meet ESG best practices, particularly around local training and providing employment opportunities for local communities. We act as partners, helping locals upskill so they can either join us as employees or establish small businesses and become subcontractors.”  
**Jose Luis del Corral Delgado,**  
Executive VP, **STRACON** and COO, **DUMAS CONTRACTING**



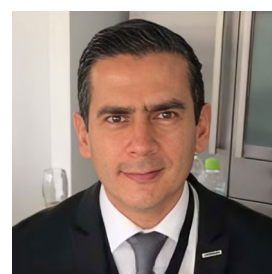
**The driller**  
“Energold’s equipment is designed to be non-invasive, with a significantly smaller environmental footprint compared to traditional rigs. Because our rigs are modular, they can be easily transportable using ATVs, canoes, helicopters, or even by hand, whereas conventional rigs need to be transported via large trucks.”  
**Marco Garrido Vidaurreta, VP Operations and Sales Americas,**  
**ENERGOLD DRILLING**



**The processing equipment provider**  
“We are strongly promoting Dry Stack Tailing systems (DST) as the most environmentally conscious way to manage tailings. Depending on the type of system, DSTs have the potential to recover and recycle 90-95% of process water within the plant, not to mention completely eliminating the structural risks associated with traditional tailings management.”  
**Diego Torroella, General Manager (Mexico), TAKRAF**



**The support fleet provider**  
“Scania’s new generation of powertrains, with a 13-liter engine optimized for fuel efficiency and emissions control, delivers a groundbreaking step towards tomorrow’s sustainable heavy transport, offering 8% fuel savings from the previous generation, as well as being available for Euro 3 solutions.”  
**Fernando Ríos, Independent Markets Director, Americas, SCANIA**



**The yellow fleet provider**  
“In more developing countries such as Colombia, we see a greater demand for modularity and machines that currently operate on diesel engines but can be retrofitted to hybrid or battery electric technologies or rely on IC engines that can also be compatible with alternative, sustainable fuels. It is a lot more affordable to retrofit than invest in a new fleet as part of the broader net zero transition.”  
**Álvaro Jiménez Giraldo, Director of Operations, LIEBHERR COLOMBIA**





MINING COMPANIES	WEBSITE
Aris Mining (TSX: ARIS; NYSE-A: ARMN)	<a href="https://aris-mining.com/">https://aris-mining.com/</a>
Avino Silver & Gold Mines (TSX: ASM; NYSE: ASM)	<a href="https://avino.com/">https://avino.com/</a>
Carbomax	<a href="https://www.carbomax.co/">https://www.carbomax.co/</a>
C3 Metals (TSXV: CCCM)	<a href="https://www.c3metals.com/">https://www.c3metals.com/</a>
Challenger Gold (ASX: CEL)	<a href="https://challengergold.com/">https://challengergold.com/</a>
Chesapeake Gold (TSXV: CKG)	<a href="https://chesapeakegold.com/">https://chesapeakegold.com/</a>
Coeur Mining (NYSE: CDE)	<a href="https://coeur.com/">https://coeur.com/</a>
Compañía Minera Santa Lucía	<a href="https://www.minerasantalucia.com.mx/">https://www.minerasantalucia.com.mx/</a>
Copper Giant Resources (CVE: CGNT)	<a href="https://coppergiant.co/">https://coppergiant.co/</a>
Cordoba Minerals Corp. (TSXV: CDB)	<a href="https://cordobaminerals.com/es/">https://cordobaminerals.com/es/</a>
Denarius Metals (Cboe CA: DMET; OTCQX: DNRSF)	<a href="https://denariusmetals.com/">https://denariusmetals.com/</a>
Ecuacorriente (ECSA)	<a href="https://www.ecsa.com.ec">https://www.ecsa.com.ec</a>
Endeavour Silver Corp. (TSX: EDR; NYSE: EXK)	<a href="https://edrsilver.com/">https://edrsilver.com/</a>
Fuerte Metals (TSX-V: FMT)	<a href="https://fuertemetals.com/">https://fuertemetals.com/</a>
Fura Gems	<a href="https://www.furagems.com/">https://www.furagems.com/</a>
G Mining Ventures (TSX:GMIN; OTCQX: GMINF)	<a href="https://gmin.gold/">https://gmin.gold/</a>
G2 Goldfields (TSX: GTWO)	<a href="https://g2goldfields.com/">https://g2goldfields.com/</a>
Geophysx Jamaica	<a href="https://www.geophysxjamaica.com/">https://www.geophysxjamaica.com/</a>
Gold Group Management	<a href="https://www.goldgroup.com/">https://www.goldgroup.com/</a>
GoldMining Inc. (TSX: GOLD, NYSE: GLDG)	<a href="https://www.goldmining.com/">https://www.goldmining.com/</a>
GoldQuest Mining (TSX-V: GQC)	<a href="https://www.goldquestcorp.com/">https://www.goldquestcorp.com/</a>
GR Silver (TSXV: GRSL)	<a href="https://grsilvermining.com/">https://grsilvermining.com/</a>
Greenheart Gold (TSXV: GHRT)	<a href="https://www.greenheartgold.com/">https://www.greenheartgold.com/</a>
Grupo Mexico	<a href="https://www.gmexico.com/">https://www.gmexico.com/</a>
Guanajuato Silver (TSXV: GSVR; OTCQX: GSVRF)	<a href="https://www.gsilver.com/">https://www.gsilver.com/</a>
Heliostar Metals (TSXV: HSTR)	<a href="https://www.heliostarmetals.com/">https://www.heliostarmetals.com/</a>
Holder Resources (HRI)	<a href="https://holderresources.ca/">https://holderresources.ca/</a>
Impact Silver (TSX-V: IPT; FSE: IKL)	<a href="https://impactsilver.com/">https://impactsilver.com/</a>
Jamaica Bauxite Mining (JBM)	<a href="https://jbm.gov.jm/">https://jbm.gov.jm/</a>
Luca Mining (TSXV: LUCA)	<a href="https://lucamining.com/">https://lucamining.com/</a>
Lumina Gold (TSXV: LUM)	<a href="https://en.cmoc.com/">https://en.cmoc.com/</a>
Lundin Gold (TSX: LUG)	<a href="https://lundingold.com/">https://lundingold.com/</a>
Maison Clarke Minerals	<a href="https://www.maisonclarke.com/">https://www.maisonclarke.com/</a>
MAG Silver (TSX / NYSE: MAG)	<a href="https://magsilver.com/">https://magsilver.com/</a>
Mako Mining (TSXV: MKO)	<a href="https://www.makominingcorp.com/">https://www.makominingcorp.com/</a>
Minaurum Gold (TSX.V: MGG)	<a href="https://minaurum.com/">https://minaurum.com/</a>
Oroco Resource Corp. (TSX-V: OCO)	<a href="https://orocoresourcecorp.com/">https://orocoresourcecorp.com/</a>
Orosur Mining (TSXV: OMI / AIM: OMI)	<a href="https://www.orosur.ca/">https://www.orosur.ca/</a>
Peña Colorada	<a href="https://www.pcolorada.com/">https://www.pcolorada.com/</a>
Prime Mining (TSX: PRYM)	<a href="https://www.primeminingcorp.ca/">https://www.primeminingcorp.ca/</a>
Pueblo Viejo Dominicana	<a href="https://www.barrick.com/">https://www.barrick.com/</a>
Quimbaya Gold (CSE : QIM)	<a href="https://quimbayagold.com/">https://quimbayagold.com/</a>
Reyna Silver (TSXV: RSLV)	<a href="https://reynasilver.com/">https://reynasilver.com/</a>
Salazar Resources (TSXV: SRL)	<a href="https://salazarresources.com/">https://salazarresources.com/</a>
Santacruz Silver Mining (TSXV: SCZ)	<a href="https://santacruzsilver.com/">https://santacruzsilver.com/</a>
Sierra Madre Gold and Silver (TSXV:SM)	<a href="https://sierramadregoldandsilver.com/">https://sierramadregoldandsilver.com/</a>
Sierra Metals (TSX: SMT   OTCQX: SMTSF   BVL: SMT)	<a href="https://www.sierrametals.com/">https://www.sierrametals.com/</a>
Silver Storm Mining (TSXV: SVRS)	<a href="https://www.silverstorm.ca/">https://www.silverstorm.ca/</a>
Silver Tiger Metals (TSXV: SLVR)	<a href="https://silvertigermetals.com/">https://silvertigermetals.com/</a>
Solaris Resources (TSX: SLS; NYSE: SLSR)	<a href="https://www.solarisresources.com/">https://www.solarisresources.com/</a>
SolGold (TSX: SOLG; LSE: SOLG)	<a href="https://solgold.com.au/">https://solgold.com.au/</a>

MINING COMPANIES	WEBSITE
Sonoro Gold (TSXV: SGO)	<a href="https://sonorogold.com/">https://sonorogold.com/</a>
Southern Silver Exploration (TSX-V: SSV)	<a href="https://southernsilverexploration.com/">https://southernsilverexploration.com/</a>
Titan Minerals (ASX: TTM)	<a href="https://www.titanminerals.com.au/">https://www.titanminerals.com.au/</a>
Vizsla Silver Corp (NYSE:VZLA; TSX: VZLA)	<a href="https://vizslasilvercorp.com/">https://vizslasilvercorp.com/</a>
Volcanic Gold Mines Inc (CVE: VG)	<a href="https://volgold.com/">https://volgold.com/</a>
<b>GOVERNMENTS, ASSOCIATIONS AND FINANCIAL INSTITUTIONS</b>	
Association of Mining Engineers, Metallurgists and Geologists of Mexico (AIMMGM)	<a href="https://geomin.com.mx/">https://geomin.com.mx/</a>
Colombian Mining Association (ACM)	<a href="https://acmineria.com.co/">https://acmineria.com.co/</a>
Ecuador Mining Chamber (CME)	<a href="https://cme.org.ec/">https://cme.org.ec/</a>
Government of Guyana: Ministry of Natural Resources	<a href="https://nre.gov.gy/the-ministry/">https://nre.gov.gy/the-ministry/</a>
Government of Jamaica: Ministry of Agriculture, Fisheries, and Mining	<a href="https://www.moa.gov.jm/">https://www.moa.gov.jm/</a>
La Mancha Resource Capital	<a href="https://lamancharresourcecapital.com/">https://lamancharresourcecapital.com/</a>
National Federation of Coal Producers, Colombia (Fenalcarbón)	<a href="https://fenalcarbon.org.co/">https://fenalcarbon.org.co/</a>
Panama Mining Chamber (CAMIPA)	<a href="https://www.camipa.org/">https://www.camipa.org/</a>
Sandstorm Gold Royalties	<a href="https://www.sandstormgold.com/">https://www.sandstormgold.com/</a>
Sinaloa Mining Cluster (CLUMISIN)	<a href="https://www.clumisin.com/">https://www.clumisin.com/</a>
Toronto Stock Exchange and TSX Venture Exchange	<a href="https://www.tsx.com/">https://www.tsx.com/</a>
Wheaton Precious Metals	<a href="https://www.wheatonpm.com/">https://www.wheatonpm.com/</a>
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Klohn Crippen Berger (KCB)	<a href="https://klohn.com/">https://klohn.com/</a>
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Liebherr	<a href="https://www.liebherr.com/">https://www.liebherr.com/</a>
Kal Tire	<a href="https://www.kaltire.com/">https://www.kaltire.com/</a>
Scania	<a href="https://www.scania.com/">https://www.scania.com/</a>
Seequent	<a href="https://www.seequent.com/">https://www.seequent.com/</a>
TAKRAF	<a href="https://www.takraf.com/">https://www.takraf.com/</a>
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Cementation Americas	<a href="https://www.cementation.com/">https://www.cementation.com/</a>
Dirac	<a href="http://www.dirac.mx">http://www.dirac.mx</a>
Dumas Contracting / STRACON	<a href="https://www.stracon.com/">https://www.stracon.com/</a>
Energold Drilling	<a href="https://energold.com/">https://energold.com/</a>
Incimmet	<a href="https://incimmet.com">https://incimmet.com</a>
Orica	<a href="https://www.orica.com/">https://www.orica.com/</a>
<b>LOGISTICS</b>	
Latin American Cargo (LAC)	<a href="https://www.latinamericancargo.com">https://www.latinamericancargo.com</a>
Noatum Logistics	<a href="https://www.noatumlogistics.com/">https://www.noatumlogistics.com/</a>



Maison Clarke Minerals



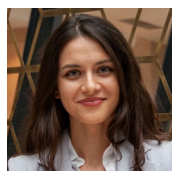


## Editorial and Management Team

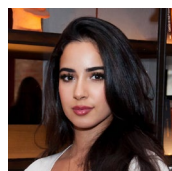
**Senior Project Director:** Lorena Postelnicu-Stancu

**Project Director:** Salma Khaila

**Project Coordinator:** Helene Jaspers



LS



SK



HJ

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**Graphic Designer (cover):** Gonzalo Da Cunha

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*Thank you!*

We would like to thank all the executives and authorities that took the time to meet with us.

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The logo for Global Business Reports (GBR) features the letters 'GBR' in a dark blue, serif font. A thin, dark blue horizontal line is positioned behind the letters, starting under the 'G' and ending under the 'R', with a slight upward curve at the ends.

GLOBAL BUSINESS REPORTS

The logo for TMX features the letters 'TMX' in a dark blue, bold, sans-serif font. A thick, dark blue curved line starts from the bottom left, sweeps under the 'M' and 'X', and then curves upwards to cross the right side of the 'X'.