

Vancouver: The Global Mining Hub

"The attractiveness of the province relates to the extremely talented pool of people it has to offer.

Vancouver will continue to be a global mining center as it is currently the exploration capital of the world, hosting approximately 800 junior companies."

Brian Abraham,
 Global Mining Expert,
 Dentons

EDITORIAL Global Business Reports

Vancouver: The World's Mining Hub

The British Columbia mining industry looks outwards to export its expertise

Days after the all-share merger between Barrick and Randgold became effective in January 2019, Newmont Mining Corporation entered into a definitive agreement with Goldcorp in a stock-for-stock transaction valued at US\$10 billion to create Newmont Goldcorp, as Newmont announced it will move its North American regional operations office from Nevada to Vancouver. While few mining companies can match Goldcorp's financial clout, the Vancouver-based major has one thing in common with hundreds of players across the value chain headquartered in B.C.: none of its operating mines or development projects are based in British Columbia.

Vancouver can lay claim to being the capital of world mining, with over 800 mining companies and juniors headquartered in the city, more than Toronto and Perth (home to the second and third most) combined. However, B.C. lags behind Québec and Ontario in terms of its ability to attract exploration activity and investment, according to a Fraser Institute report from July 2018, citing factors including onerous regulatory and permitting processes. 2017 saw the first increase in exploration spending in B.C. since 2012, an indication that enthusiasm is returning to the province's domestic industry. Nonetheless, the real driver of Vancouver's mining econo-

my has become its global reach: "Vancouver is truly a mining hub as well as a leading service center for the mining industry. Canada's leadership at extracting natural resources, and Vancouver's unlimited expertise in the sector, leads many to headquarter in Vancouver and then export knowledge around the globe," observed Bryan Cox, president and CEO of the Mining Association of B.C. (MABC).

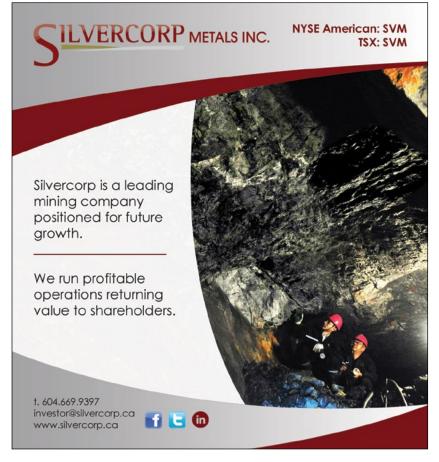
This sentiment was echoed by Ken Embree, managing principal and president of Knight Piésold, the engineering and environ-mental consultancy that helps clients under- stand the regulatory regimes in which their projects are situated: "Many of our Canadian clients have mining properties in other areas of the world... We encourage them to apply the same innovative developments, technologies and best practices to all their operations, including their projects located outside of Canada."

Global law firm Dentons has also noticed the evolving operational footprint of its clients: "Until a couple of years ago, Dentons was primarily focused on the mining industry in Canada and B.C., but the company's focus has now expanded to include Asia, Australia, Latin America, Africa, the Caribbean and Mexico," commented Brian Abraham, the Canada co-chair and a global lead for Dentons' mining group.

Vancouver-based mid-tiers diversify their international asset portfolios

A number of Canadian mid-tier producers have experienced impressive growth in recent years, capitalizing on the availability of undervalued assets in a 'buyer's market.' Precious-metals producers like SSR Mining have been adding value to their asset portfolios by diversifying across the Americas, and have completed four acquisitions in the past four years: the Marigold mine and Valmy property in Nevada, the Seabee gold operation in Saskatchewa, and the Puna operations JV in Argentina. "SSR is proactively on the lookout for more properties," affirmed Paul Benson, president and CEO.

Vancouver-based Silvercorp Metals, with its six operating mines at the Ying mine district in Henan and the GC mine in Guangdong, China, has managed to thrive despite a deflated commodity market, generating positive free cash flow of around US\$40-45 million per annum, according to chairman and CEO, Rui Feng. Citing the significant improve-



ments made in the grades of silver, lead and zinc resources at its operating mines, Feng credited the 2016 implementation of Silver-corp's innovative productivity management tool, "Enterprise Blog", which has increased head grades and minimized dilution through improved efficiencies.

Silvercorp recently diversified its asset portfolio by investing US\$23 million for a 30% stake in in New Pacific Metals Corp., and Feng sees great potential in New Pacific Metals' Silver Sand project in Bolivia: "We believe that the project has the potential to become a formidable mine. The first batch of drilling results were released on January 22, 2019, with a remarkable 94 out of 98 holes having returned attractive grades, the highlights of which included 135 m of 240 g/mt silver."

In January 2019, New Pacific entered into a mining production contract (MPC) with La Corporación Minera de Bolivia (COMI-BOL), the national mining corporation of Bolivia. The MPC grants New Pacific the rights to carry out exploration, mining, and production activities in the areas adjoining the Silver Sand project, and the agreement is the first of its kind to be put into law with a foreign entity. Gordon Neal, New Pacific's president and CEO, believes the recently signed agreement will be used as a template for companies wanting to enter the mining industry in Bolivia. "Since New Pacific singed the MPC, I have had calls and meetings with at least four other foreign companies looking at Bolivia with investment interest. I expect the number of foreign companies operating in Bolivia to double before the end of 2019." stated Neal.

Another silver producer to have entered South America is Endeavour Silver, which has added the Aida, Paloma and Cerro Marquez expansion projects in northern Chile to its portfolio. "We have a great portfolio of 'home run' exploration projects, and our goal is to make a world-class discovery. We want to become a larger, better and more sustainable company. Chile offers us a strategy to attain this. It is a high-risk and high-reward situation," said Brad Cooke, CEO of Endeavour Silver, which produced approximately 10 million oz silver and equivalents in 2018 from its four underground high-grade silvergold mines operating in Mexico.

Chile is the main focus of Amerigo Resources, which produces copper concentrates at its 100% owned MVC operation by processing fresh and historic tailings from Codelco's El Teniente mine. Rob Henderson, Amerigo's president and CEO, believes the country's infrastructure is equivalent to Canada's: "There are people with strong technical skills and the government is supportive of mining, as it makes up 25% of their GDP. Environmental regulations are based on a high standard and are clear, and the rules of business are stable and transparent," noted Henderson, adding: "Additionally, the geological potential is enormous, under-explored, and its position in the Andes indicates there is much to find."

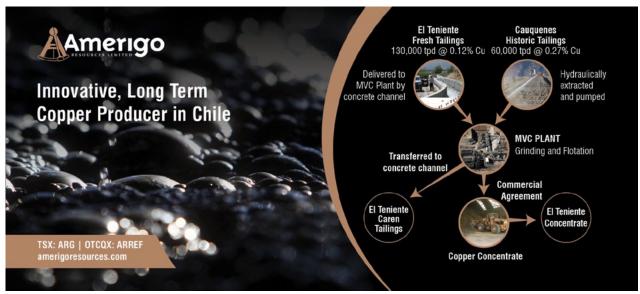
Precious metals in the United States: new players head south of the Canadian border

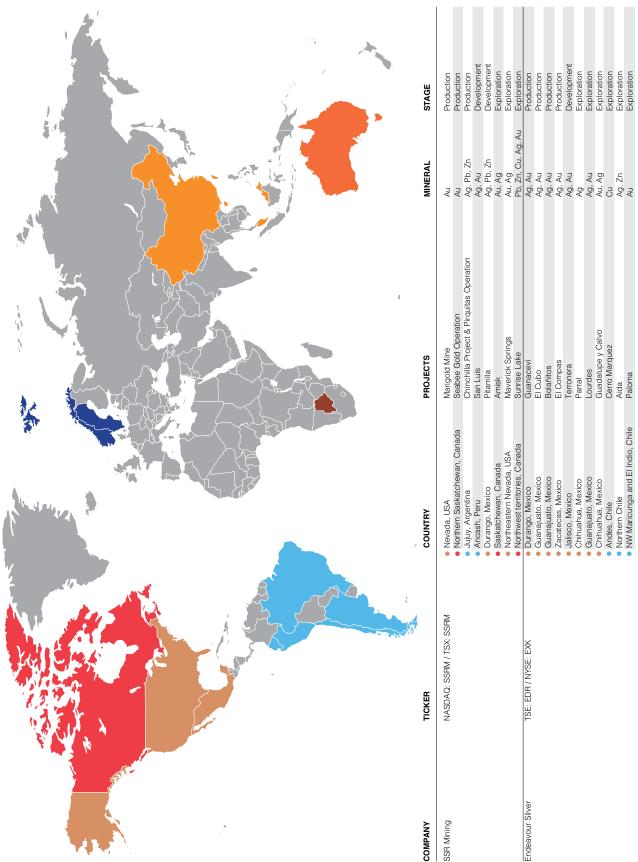
While the influx of Canadian mining companies into Central and South America has

gathered pace, others prefer to look closer to home. Nevada, a two-hour flight from Vancouver, is synonymous with gold and currently ranked the number three global mining jurisdiction by the Fraser Institute. Fiore Gold was founded in 2016 with a focus on exploration stage projects in Latin America, but soon realized the traditional exploration model of having to return to the market to source equity funding for exploration was not conducive to success during the downcycle. A merger with the private company GRP in September 2017 led to Fiore Gold restarting the Carlin-style, open-pit Pan mine in Nevada. "The generalists in the mining sec- tor were no longer involved and many of the mining specific funds had either shrunk or disappeared completely," said Tim Warman, Fiore Gold's CEO and director. "This resulted in us having to investigate more advanced, producing assets that could generate cash flow that in turn could fund exploration," he explained.

Another gold-focused company based in Vancouver to have entered Nevada in 2017 is Contact Gold, focusing on its flagship Pony Creek asset, a 13,771-hectare land package situated on the prolific Carlin trend. The group behind Contact Gold is hoping to repeat the success they had with Fronteer Gold, which was acquired by Newmont in 2011 in a deal valued at US\$2.3 billion. Since going public in June 2017, Contact Gold has conducted comprehensive strategies including soil sampling and mapping at Pony Creek, enabling the company to generate six new targets that are supported by data sets. "Contact Gold now has tangible proof that

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	INTOE: GVINI/ LOA: GVINI	Henon Orina	TDD Miss	Ag, r.b, Zll	Production
		Henan China	H P Mine	Ag, Au, FD Ag Ph	Production
		Henan, China	LM Mine	Ag. Pb	Production
		 Guangdong, China 	GC Mine	Ag, Pb, Zn	Production On Hold
		 Hunan, China 	BYP Mine	Au, Pb, Zn	Production
Lucara Diamond	TSX: LUC	 Central District, Botswana 	Karowe Mine	Diamonds	Production
Amerigo		• Central Chile	MVC Operation	Cu, Mo	Production
Lunain Gold	TSX: LUG / NASDAQ STOCKHOLM: LUG	Southeast Ecuador	Fruta del Norte Project	Au, Ag	Development
New Pacific Metals	ISX-V: NOAG / O LOCK: NOPMIF	Vikon Canada	Silver sand Tagish Lake Gold Project	Ag A	Development Exploration
		Ojnohai, China	RZY	Ag. Pb. Zn	Exploration
Norra Metals	TSX.V: NORA / FRANKFURT: 1KO	BC, Canada	Pyramid	Cu, Au	Exploration
		BC, Canada	Kinskuch Lake	Cu, Au	Exploration
		 North Central Norway 	Bleikvassli	Pb, Zn, Ag	Exploration
		• Norway	Meraker	Cu, Zn, Au	Exploration
		Norway	Sagvoll	Ni, Ou, Co	Exploration
Corp.	MILLYVAST	Oro Equador	Canaraine Project	Zri, Cu, Pb, Au, Ag	Exploration
Luminex Besources	TSX V: I B	Zamora Chichine Ecuador	Condor Project	Au An Cu	Exploration
		Western Cordillera, Ecuador	Pegasus Earn-in	Au. Cu. Mo. Ad	Exploration
		• Foliador	Orguideas/Cascas Farn-in	Cu Mo Au	Exploration
		Morona Santiago, Ecuador	Tarqui Earn-in	Cu. Au	Exploration
Lion One Metals	TSX.V; LIO / OTCQX; LOMLF	Viti Levu, Fiji	Tuvatu Gold Project	Au	Development
Monument Mining Limited	TSX.V: MMY / FSE: D7Q1	 Pahang State, Malaysia 	Selinsing Gold Portfolio	Au	Prod., Dev., Expl.
		Western Australia	Murchison Gold Portfolio	Au	Development, Exploration
		 Pahang State, Malaysia 	Mengapur Copper-Iron Project	Cu, Au, Ag	Development, Exploration
Fiore Gold	OTCMKTS: FIOGF / TSX.V: F	Nevada, USA	Pan Mine	Au	Production
		 Nevada, USA 	Gold Rock	Au	Exploration
		 Washington State, USA 	Golden Eagle	Au	Exploration
		Antofagasta, Chile	Cerro Tostado	Ag	Exploration
		Salares Norte, Chile	Rio Loa	Au, Ag	Exploration
Contact Gold	TSXV: C	Nevada, USA	Pony Creek	, Au	Exploration
		Nevada, USA	South Carlin Projects	Yn,	Exploration
A Pinton	O + O + O + O + O + O + O + O + O + O +	Nevada, USA	Nevada Regional Projects	Au 22.	Exploration
Arizona Silver Exploration	OTCMKTS: AZASF	Arizona, USA	Ramsey Silver Project	Ag, Pb, Zn	Exploration
		Arizona, USA	Sycamore Canyon Property	Au, Ag Å∷ Å≘	Exploration
Dortofino Docouroco	TOD / ESE: DOT	Alizona, USA	Primadelphia Property	Au, Ag	Exploration
	18A.V. POR / PSE: PO	Catalillarca, Argentina	Del Corido	5 =	Exploration
		Catamarca Argentina	Project II	i ::	Exploration
		Catamarca, Argentina	Yerdo	i '5	Exploration
		Catamarca, Argentina	Hombre Muerto West		Exploration
Centurion Minerals Ltd	TSX.V: CTN	 Argentina 	Ana Sofia Agri-Gypsum Project	Gypsum	Production
Falcon Gold Corp	TSX.V: FG	 Ontario, Canada 	Central Canada Cobalt & Gold Project	Cu, Co, Zn, Au	Exploration
	HOMO II OTT STIEM HOM TANKE TO THE	Ontario, Canada	Burton Property	Au	Exploration
Altamira Gold	TSXV: ALTA / FSE: T6UP / US: EQTRF	• Brazil	Cajueiro	Au	Exploration
		Brazil	Crepori	Au	Exploration
Boreal Metals	TSX V: BMX	Sweden	Gusbara VMS Project	Zh Ph Cu Ag	Exploration
		Sweden	Adak VMS Project	Cii Aii An	Exploration
		• Norway	BURFJORD IOCG PROJECT	Cu. Au	Exploration
		Norway	Tynset VMS project (Røros District)	Au, Ag	Exploration
		Norway	Modum Cobalt Project	Co, Cu, Au	Exploration
		• Sweden	Guldgruvan Project	Co, Cu, Ni	Exploration
		Sweden	Mjövattnet and Njuggsträskliden Nickel Projects	Z	Exploration
Southern Silver Exploration Corp	TSX-V: SSV / FSE: SEG1 /	 Durango, Mexico 	Cerro Las Minitas	Ag, Zn, Pb	Exploration
	SSEV: SSVCL / OTCQB: SSVFF	 New Mexico, USA 	Oro Polymetallic Project	Ag, Zn, Pb, Cu	Exploration
Valterra Resources Corporation	TSX.V: VQA / OTC: VRSCF	BC, Canada	Swift Katie Property	Cu, Au, Ag	Exploration
		Nevada, USA	Weepan Property	J. V.	Exploration
Brayada Gold Corporation	TSY V: BVA / BBTN:STI / OTCOB: BGAVE	Criindanda, Mexico	Carlia-twae and Law-Sulfidation-twae Projects	Cu, Au	Exploration
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Global Business Reports INTERVIEW

Ken Embree & Greg Smyth

KE: Managing Principal and President (effective 2019) GS: Project Manager / Associate KNIGHT PIÉSOLD





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Many of our Canadian clients have mining properties in other areas of the world. We help companies understand the regulatory regimes in which their projects are situated so that they can advance their projects in the most efficient manner.

What are Knight Piésold's top priorities for the upcoming year?

KE: In 2019, Knight Piésold will continue to focus on the company's technical excellence and client service. We intend to remain at the forefront of advancing trends in tailings and management of all things related to water. We are also pursuing opportunities in instrumentation and automation that will allow us to enhance this important aspect of our business. We will participate in industry best practice forums, which set standards that are adopted worldwide, and we will focus on the development of our team so that we can continue to provide excellent services to our clients. Knight Piésold has a strong focus on the mining and energy industries, and we are identifying more opportunities to further integrate these two sectors.

Can you elaborate on Knight Piésold's service offering for the mining sector?

GS: Knight Piésold's service portfolio includes geotechnical and hydrogeological site investigations to support mine design; environmental and social baseline studies, impact assessments and permitting; tailings and waste management; dam breach inundation studies; water management with regards to both surface and ground water; rock mechanics, both underground and open pit; and pipelines and pump stations. The power segment of our business provides services relating to energy supply, transmission and distribution. Every mine needs power, and we support our mining clients in this regard.

What is the importance of Canada as a market for Knight Piésold?

KE: Knight Piésold has operations worldwide, and we have nine regional centers in Canada, Australia, Argentina, Chile, Ghana, Peru, South Africa, United Kingdom and the United States. Globally, our practice in Canada is one of the largest, and we work with all of our regional centers. For our Canadian operations, approximately 50% of our project portfolio is in Canada, 25% is in the United States and 25% is in the rest of the world. Within Canada, approximately 65% of our work is within the province of British Columbia.

From your perspective, what are the key challenges that the industry will face in the next five years?

KE: Knight Piésold believes that the main challenge within the industry is, and will continue to be, attracting and retaining skills and talent. We will invest in training for the new generation entering the industry. We have always had the most success through organic growth by finding the right young people that fit our culture and helping them develop their careers. We aim to create an enjoyable and rewarding working environment and give our employees responsibility over their tasks, with the right level of guidance and supervision from our experts. We also have internship programs and offer technical mentoring on every level in the company.

How does Knight Piésold bridge the gap between North American and Asian markets?

GS: Many of our Canadian clients have mining properties in other areas of the world. We help companies understand the regulatory regimes in which their projects are situated so that they can advance their projects in the most efficient manner. We encourage them to apply the same innovative developments, technologies and best practices to all their operations, including their projects located outside of Canada. This is a way in which Canada can transfer knowledge and expertise to other parts of the world.

Do you have a final message for our international readership?

KE: Knight Piésold is recognized for technical excellence and dependability. We are nearing our 100-year anniversary and have operated in Canada for 44 years. Our B.C. based clients will continue to play a very important role in our operations, and we will continue to partner and integrate with them. We are proud of our track record in sustainable development, both in power and mining projects, and aim to continue to grow and enhance our capabilities moving forward.

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