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NORTH OF 60 MINING NEWS

The Mining Newspaper for Alaska and Canada's North

Mining Explorers

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ABOUT THE COVER:

Crystal Lake Mining drills a zone of copper and gold mineralization freshly exposed by the rapid retreat of snow and ice on its Newmont Lake project in British Columbia's Golden Triangle.
Photo by Anatole Tuzlak;
Courtesy of Crystal Lake Mining Corp.

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In memory of a rising geology superstar



SHANE LASLEY

Julia Lane lights up the room with her smile and impresses with her geological knowledge while explaining Carlin-type gold mineralization at Rackla during a tour to the Yukon project in 2011.

On Aug. 8, 2011, I landed at the exploration camp at ATAC Resources' Rackla Gold property, a place buzzing with excitement and activity from the recent discovery of Carlin-style gold mineralization. Finding out more about this intriguing new find was the highlight of my tour of Yukon mineral projects that year.

This is where I first met Julia Lane, a 25-year-old geologist tasked with explaining "Carlin-style gold mineralization" to me and my media colleagues, and what this unique geology meant for ATAC Resources and its work at Rackla.

Being young, enthusiastic and photogenic, I initially assumed that Julia was a geological underling selected as a spokesperson for ATAC. It did not take long, however, for me to be deeply impressed with her solid understanding of Carlin-style gold and the geology of the enormous Rackla property.

The only thing that may have outshined Julia's geological acumen was her passion for mineral exploration and ability to imbue this excitement into anyone who listened to her talk about the work being carried out at Rackla.

Over the years since I first met Julia, she spread her deep geological knowledge and passion with the wider mining community while discussing ATAC's Carlin-type

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SHANE LASLEY



Julia Lane explains intercepts from a hole drilled at the Carlin-type gold on the Osiris project on ATAC Resources' Rackla Gold property in the Yukon.

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WELCOME *continued from page 7*

gold discoveries and their characteristics at conferences across Canada and the United States. As a result, many others have gained the respect and admiration of this geologist I met on that August day in the Yukon.

As a result of her excellent work and understanding of the various mineralized systems across the enormous Rackla Gold belt, by the age of 29 Lane had earned the post of vice president of exploration for ATAC.

On Aug. 6, 2019, however, the North of 60 Mining sector lost this rising geology superstar to a tragic plane crash while flying from Rackla to the Yukon community of Mayo.

While I did not know Julia well – having only spoken with her during that first visit to Rackla and a few times at mining conventions – I felt a deep sense of loss at hearing the news that she was one of the two people aboard the downed plane.

This sense of loss for someone I did not know personally speaks to the lasting impression Julia left on the mineral exploration sector in the Yukon and beyond – an influence established with her bright eyes and cheerful smile, and then solidified with a remarkable understanding of geology.

This ability to light up a room and then impress with knowledge seemingly beyond her years is reflected in the words of some of her closest colleagues.

“Julia’s infectious enthusiasm and passion will be deeply missed by ATAC and the entire exploration community,” said ATAC Resources President and CEO Graham Downs, summing up how many of us who had the opportunity to meet her feel.

“Julia was beloved by everyone who had the opportunity to work with her and was deeply respected across the industry,” said Rob Carne, former president of ATAC Resources.

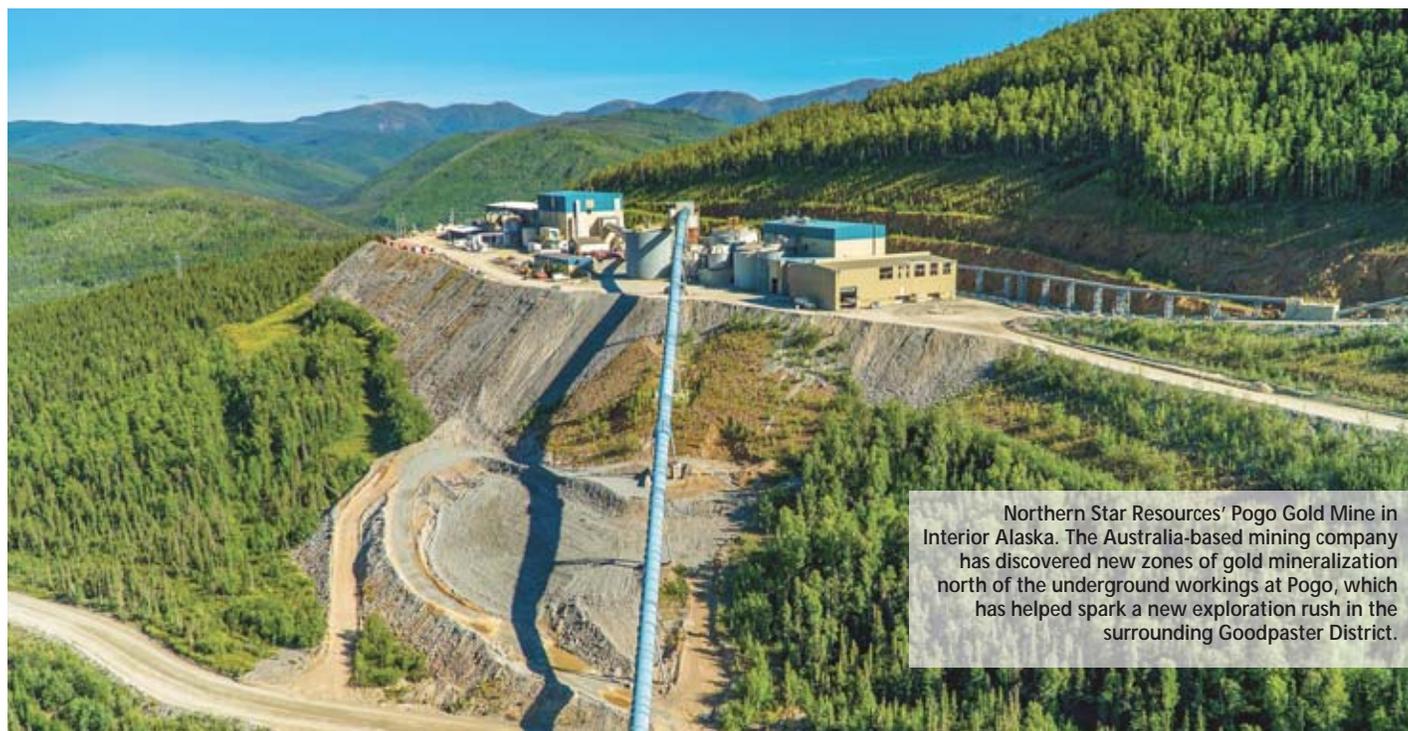
Mining Explorers 2019 is dedicated to the memory of Julia Lane, a rising geology superstar who will be missed by family, friends, colleagues and one journalist whom she impressed with the enthusiasm of youth and knowledge that seemed to defy it.

–Shane Lasley

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Northern Star Resources' Pogo Gold Mine in Interior Alaska. The Australia-based mining company has discovered new zones of gold mineralization north of the underground workings at Pogo, which has helped spark a new exploration rush in the surrounding Goodpaster District.

Alaska Exploration 2019

Alaska is a great place to do business

Global mining companies agree with assessment of Last Frontier

By SHANE LASLEY
Mining News

When it comes to mineral exploration incentives, currency exchange and infrastructure, Alaska is at a disadvantage in the realm of attracting exploration investments from Canada and Australia, countries that are home to the majority of mining companies. The Far North State's vast and underexplored mineral potential, however, trumps these handicaps in the minds of a growing number of miners and mineral explorers.

Mining executives from around the globe perennially rank Alaska among the richest mineral provinces on Earth in the Fraser Institute Survey of Mining Companies, including third in the most recent survey.

"You guys are seriously blessed by Mother Nature here – the geology of Alaska is fantastic!" Northern Star Resources Ltd. Executive Chairman Bill Beament said during a recent visit to Alaska.

With Northern Star leading the charge, more than US\$170 million is being invested into exploring this fantastic geology during 2019.

For Beament, whose company accounts for roughly 20 percent of this mineral exploration spending, Alaska possesses more than great rocks.

"Alaska is a great place to do business," he said.

Massive potential, less competition

In some ways, the incentives and unfavorable currency exchanges that encourage Australian and Canadian exploration companies to invest in their home countries are beginning to work to Alaska's advantage.

This is because the intrinsic value for Australian and Canadian exploration companies to explore domestically has created a crowded field, making quality mineral assets on home turf hard to come by and expensive to acquire.

Instead of paying a premium for assets in the countries where their corporations are headquartered, many Australian and Canadian mining companies are looking at the rich, underexplored and easy to acquire mineral properties Alaska has to offer.

In addition to Perth-based Northern Star, at least six Australia-based companies – South32 Ltd., Sandfire Resources NL, PolarX Ltd., White Rock Resources Ltd., Nova Resources Ltd., Northern Cobalt Ltd. and Jurassic Mining Ltd. – are actively exploring or acquiring mineral properties in Alaska during 2019.

The same crowding that is causing Australian companies to look north is causing Canadian mineral explorers to move west to Alaska, despite the tantalizing financial incentives domestic exploration has to offer.

With one Canadian dollar only fetching US76 cents, however, it is expensive for these companies to invest on the Alaska side of

the border.

Flow-through financing is another Canadian edge that causes exploration companies to think twice before jumping across the border into America's northernmost state.

Under the Canada's Income Tax Act, flow-through financings allow exploration companies to transfer exploration expenses to individual investors that purchase flow-through shares. These investors, in turn, can apply their portion of the exploration expense to reduce or eliminate personal tax liabilities.

The catch for Canadian junior's considering Alaska as an option is that flow-through dollars raised must be invested in exploration in Canada.

This has fostered high competition for mineral properties in Canada, which is one reason so many Australian companies are looking at Alaska.

"I think locally in Canada there's already a lot of Canadians exploring at home, which reduces the number of opportunities available for foreign explorers to enter. When you look over the Canadian border into Alaska, you see the same rocks but far fewer companies exploring them," PolarX Executive Director Jason Berton told Mining News. "There's nothing really different about the geology but on one side of the border there's plenty of mining development and on the other very little. That's the scenario I look for, massive mineral prospectivity but less competition."

Crossing the Border Fault

Despite the financial edge exploring in Canada offers, British Columbia-based Tectonic Metals Inc. agrees that Alaska has numerous other advantages that more than offset the otherwise higher costs of doing business there.

And, considering Tectonic is founded by former executives of Kaminak Gold Corp., a gold exploration junior that had outstanding success at the Coffee Gold Mine project in the Yukon, the new junior exploration company has seen both sides of the coin.

Tony Reda, former vice president of corporate development of Kaminak is the president and CEO of Tectonic Metals. He is joined by Eira Thomas and Rob Carpenter, both former president and CEOs of Kaminak.

Though these former Kaminak executives hold Yukon and its vast untapped gold potential in high regard, and Tectonic owns properties in the territory, they have decided to focus their exploration prowess on eastern Alaska, an area less than 70 miles west of Coffee Gold but with large swaths of land wide open for acquisition and staking.

"For guys like us, looking for district-scale deposits, it was pretty crowded to get into the Yukon," Reda said.

The overcrowding in the Yukon compared to relative quiet in eastern Alaska has given rise to a tongue-in-cheek theory that there must be a major fault separating the mineral rich lands in western Yukon from barren lands west of the border.

This apparent "Border Fault," however, is not a major geological structure. Instead, it represents a socioeconomic divide between one of the top mining nations on the planet and a country that has done less to nurture its mining sector.

"Alaska has always intrigued us, and that political border is by no means a geological border," Reda told Mining News.

The region of eastern Alaska where Tectonic has optioned three large properties – Northway, Seventymile and Tibbs – is being validated by the global players exploring there.

This includes two of the world's largest mining companies –

continued on page 14



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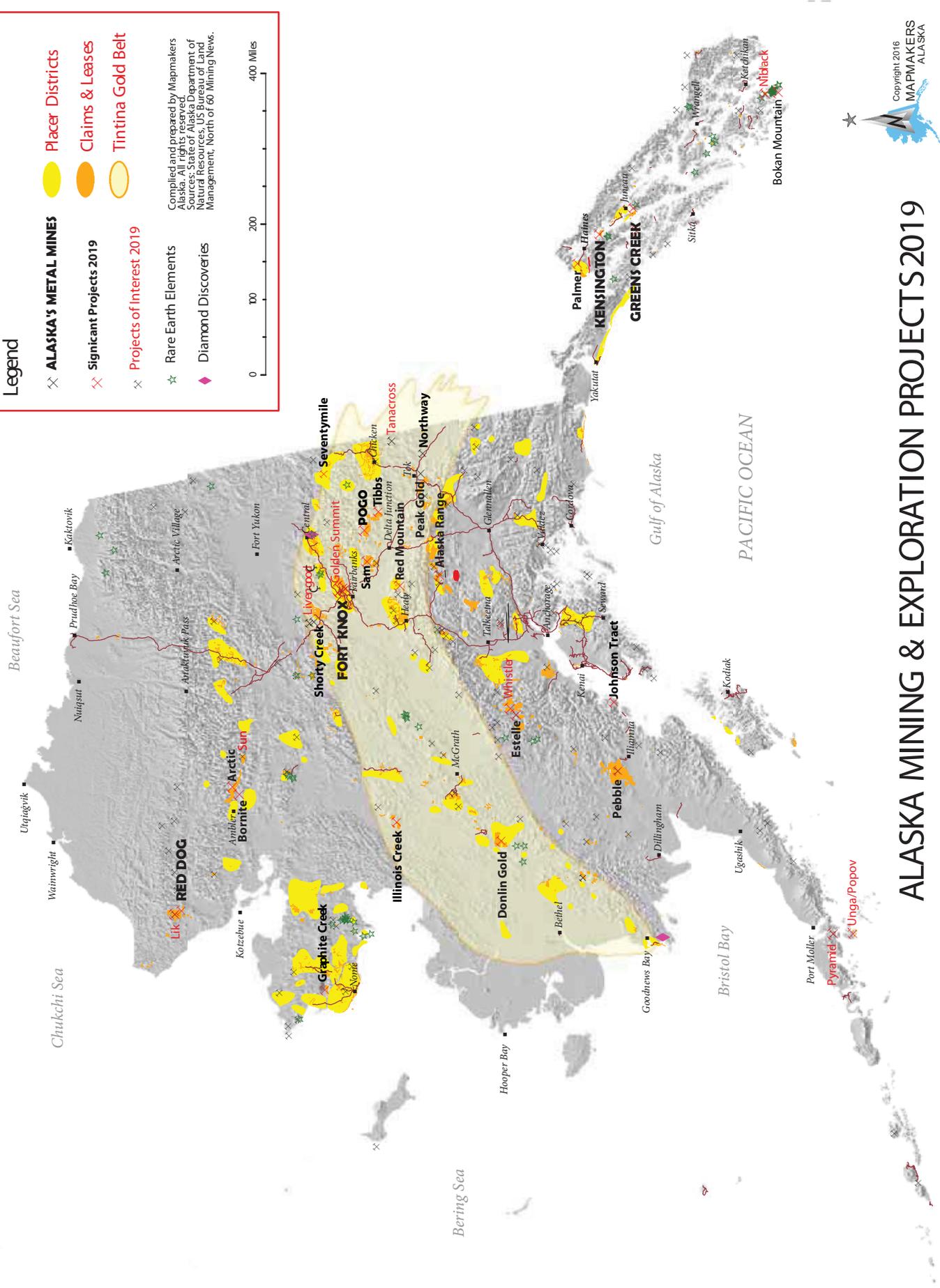
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ALASKA MINING & EXPLORATION PROJECTS 2019

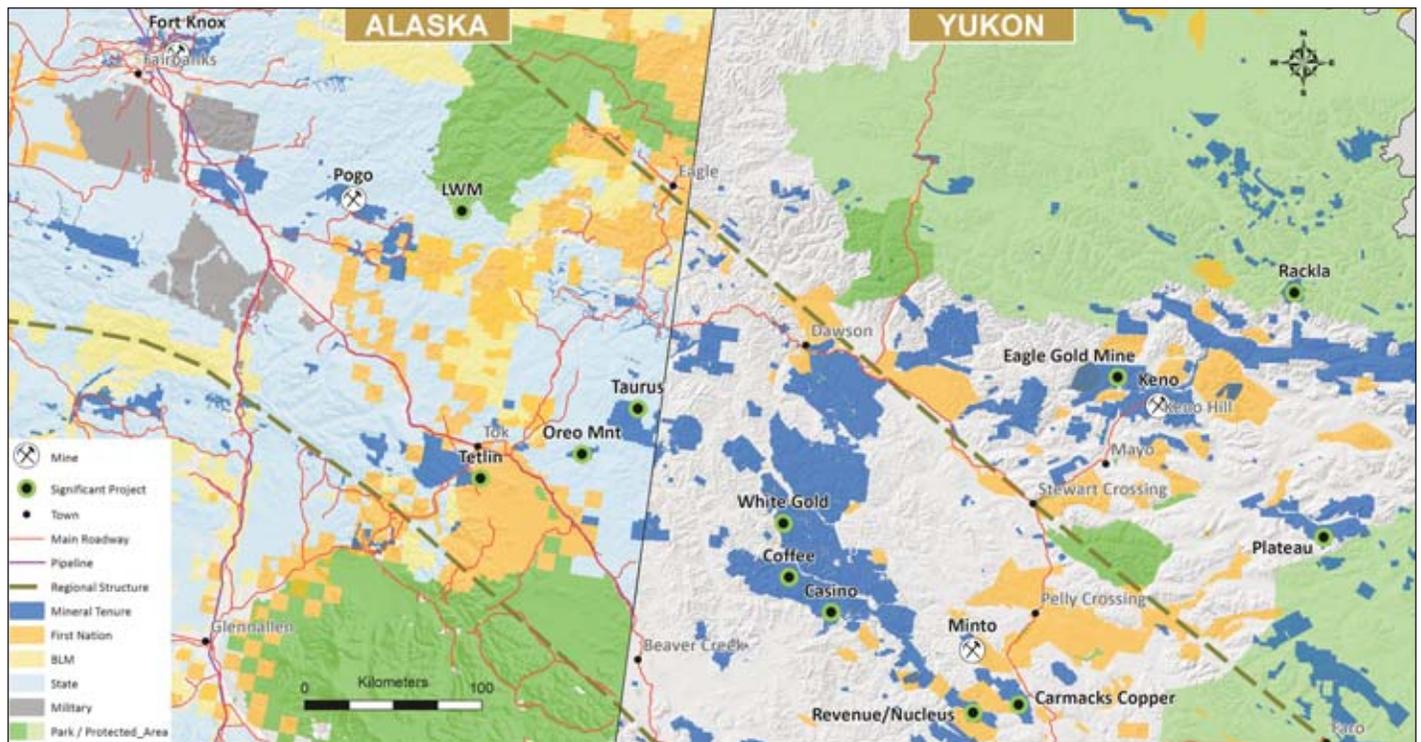




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While Alaska and Yukon share very similar geology and mineralization, there is a lot more mineral claims staked east of the "Border Fault" than on the west side.

ALASKA EXPLORATION *continued from page 11*

Freeport-McMoRan and Rio Tinto – quietly grabbing interests in copper-gold projects in the region.

Freeport-McMoRan has entered an agreement to option Tanacross – a porphyry copper-gold project that lies right against the Yukon border about 50 miles northeast of Tok, Alaska – from Kenorland Minerals, a privately held project generating explorer.

Tanacross shares many similarities to Western Copper and Gold's Casino in the Yukon. Located about 100 miles Southeast of Tanacross, Casino hosts 1.12 billion metric tons of reserves containing 4.5 billion pounds of copper and 8.9 million ounces of gold.

Prior to Freeport-McMoRan's involvement, shallow drilling had outlined 68.3 million metric tons of inferred resource at Taurus, one of the deposits at Tanacross, averaging 0.28 percent copper, 0.03 percent molybdenum and 0.17 g/t gold.

While Freeport is keeping its exploration program and results close to the vest, the company has been busy at the property over the 2018 and 2019 seasons.

At the same time, Kennecott Exploration, the exploration arm of Rio Tinto, is exploring the Oreo Mountain copper project about 10 miles southwest of the Tanacross property.

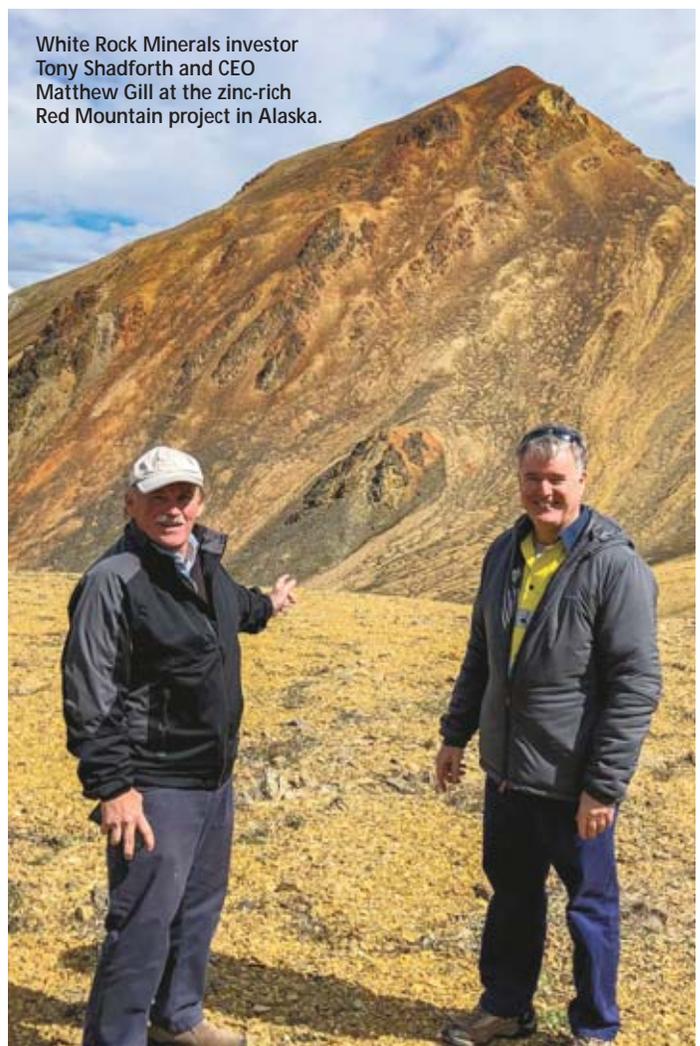
Kennecott optioned Oreo Mountain from Tubutulik Mining Company during 2018 and has drills turning on the property this year.

David Hedderly-Smith, owner of Tubutulik Mining, said Oreo Mountain shows the potential to host a Casino-sized deposit only about 20 miles north of the Alaska Highway.

"They are there because Oreo Mountain has the potential to host a significantly large copper-molybdenum-silver-gold porphyry system and is very close to Alaska's road system," Hedderly-Smith told Mining News.

When you add in Peak Gold, where Royal Gold Inc. and Con-tango ORE Inc. have outlined 9.2 million metric tons of measured

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White Rock Minerals investor Tony Shadforth and CEO Matthew Gill at the zinc-rich Red Mountain project in Alaska.

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A technician logs core from the 2017 drill program at Donlin Gold. Information from this program is being used for optimization studies focused on starting mining in the higher-grade portions of this 39-million-ounce deposit in Southwest Alaska.

NOVAGOLD RESOURCES INC.

ALASKA EXPLORATION *continued from page 14*

and indicated resources averaging 4.08 g/t (1.21 million ounces) gold and 14.19 g/t (4.2 million oz) silver in two adjacent skarn deposits, this eastern Alaska section of the Tintina Gold Belt has been validated in terms of mineral potential.

ANCSA advantage

While Alaska's vast and largely untapped mineral wealth is celebrated, the Far North state has a lesser known and not as widely understood advantage over many other mining jurisdictions – an aboriginal land claims settlement that many consider to be the most successful on Earth.

Signed into law by U.S. President Richard Nixon in 1971, the Alaska Native Claims Settlement Act (ANCSA) organized Alaska Natives into 12 regional corporations, with each of these corporations having its own geographical regions based largely on heritage and shared interests.

Over the past 48 years, these ANCSA regional and associated village corporations have grown to business titans that hold 17 of the top 20 Alaska-owned businesses listed on the Top 49ers, an annual list published by the Alaska Business magazine that ranks Alaska-owned businesses by gross revenue.

As provision of ANCSA, Alaska Native regional and village corporations were able to select roughly 45 million acres of lands across the state, making them major landholders with some of the prime mineral real estate across the Last Frontier.

Red Dog, which accounts for roughly 5 percent of the global zinc mine production, for example, is located on lands owned by NANA Regional Corp., the regional Alaska Native corporation

for Northwest Arctic.

Donlin Gold, a 39-million-ounce gold mine project situated on lands owned by Calista Corp. and The Kuskokwim Corp., is another example of the rich mineral tenures ANCSA corporations identified and selected for ownership.

ANCSA corporation ownership of lands was among the deciding factors for Tectonic Metals when it chose Alaska as a jurisdiction to build a world-class gold exploration company.

"We saw an opportunity to work with the Native corporations in Alaska," Reda told Mining News.

Two of Tectonic's gold properties – Seventymile and Northway – are optioned from Doyon Ltd., an ANCSA Regional corporation that also happens to be the largest private landowner in Alaska.

While both properties show the potential for large gold deposits, neither has been explored in nearly two decades.

And Northway has the Alaska Highway running through its entire length.

Reda says he cannot think of anywhere else on the planet where an exploration company could find such a promising gold property along a paved highway and have such a great working agreement with the original peoples in the short time that Tectonic has been working in Alaska.

"We are going into a jurisdiction where the rocks are the same (as Coffee Gold) and we have a highway trucking right through our property – an actual highway!" the Tectonic Metals CEO told Mining News.

More information on ANCSA, as it relates to mining, can be found in "An Alaska Native claims primer for miners," published in the February 2019 edition of North of 60 Mining News.

Beyond the beaten path

While Northway and many other mineral projects in eastern and southern Alaska are on or near roads, much of Alaska's vast expanse is well beyond the beaten path.

Lying west of the highway linking Anchorage and Fairbanks, and the road continuing from Fairbanks to the oil-rich North Slope, is a roadless and mineral-rich expanse about twice the size of California.

This lack of infrastructure, which makes it costly to explore and even more expensive to establish a mine across large swaths of Alaska, is not lost on mining executives.

In the most recent Fraser Institute mining survey, these leaders ranked Alaska a paltry 62nd when it comes to quality of infrastructure.

While the costs associated to exploring for and developing mines in remote regions of the Far North State presents challenges, the Alaska Industrial Development and Export Authority (AIDEA) is helping mining companies bridge the gap between tremendously rich but isolated deposits and a world that needs the metals these projects have to offer.

Red Dog, for example, is extremely remote and far north, yet it is the single top supplier of mined zinc to global markets. There are two reasons for Red Dog's success – AIDEA helped fund the road and port that delivers zinc-, lead- and silver-laden concentrates to world markets; and the ore mined at this Northwest Alaska operation over the past three decades has averaged more than 15 percent zinc, which is more than rich enough to pay for infrastructure and the rigors of mining in the arctic.

Delong Mountain Transportation System (DMTS), the 52-mile road and port facilities linking Red Dog to world markets, is the most successful AIDEA-funded project to date and a model for future partnerships with companies looking to develop mines off Alaska's beaten path.

For Teck Resources Ltd., operator of Red Dog, AIDEA's US\$267 million investment in building, upgrading and maintaining DTMS helped reduce the upfront capital needed to get the mine into production in 1989.

Over the ensuing three decades, the development authority has more than recouped its investment and pays a dividend to state coffers from the profits it gets from ongoing tolls.

Each year, roughly 5 percent of the world's mined zinc supply traverses

DMTS, including roughly 1.3 billion lb of zinc and 217 million lb of lead trucked over the transportation system and onwards to world markets during 2018.

NANA Vice President of External and Government Affairs Liz Cravalho said Red Dog is a prime example of the benefits mining can bring to the local governments, businesses and residents of rural Alaska.

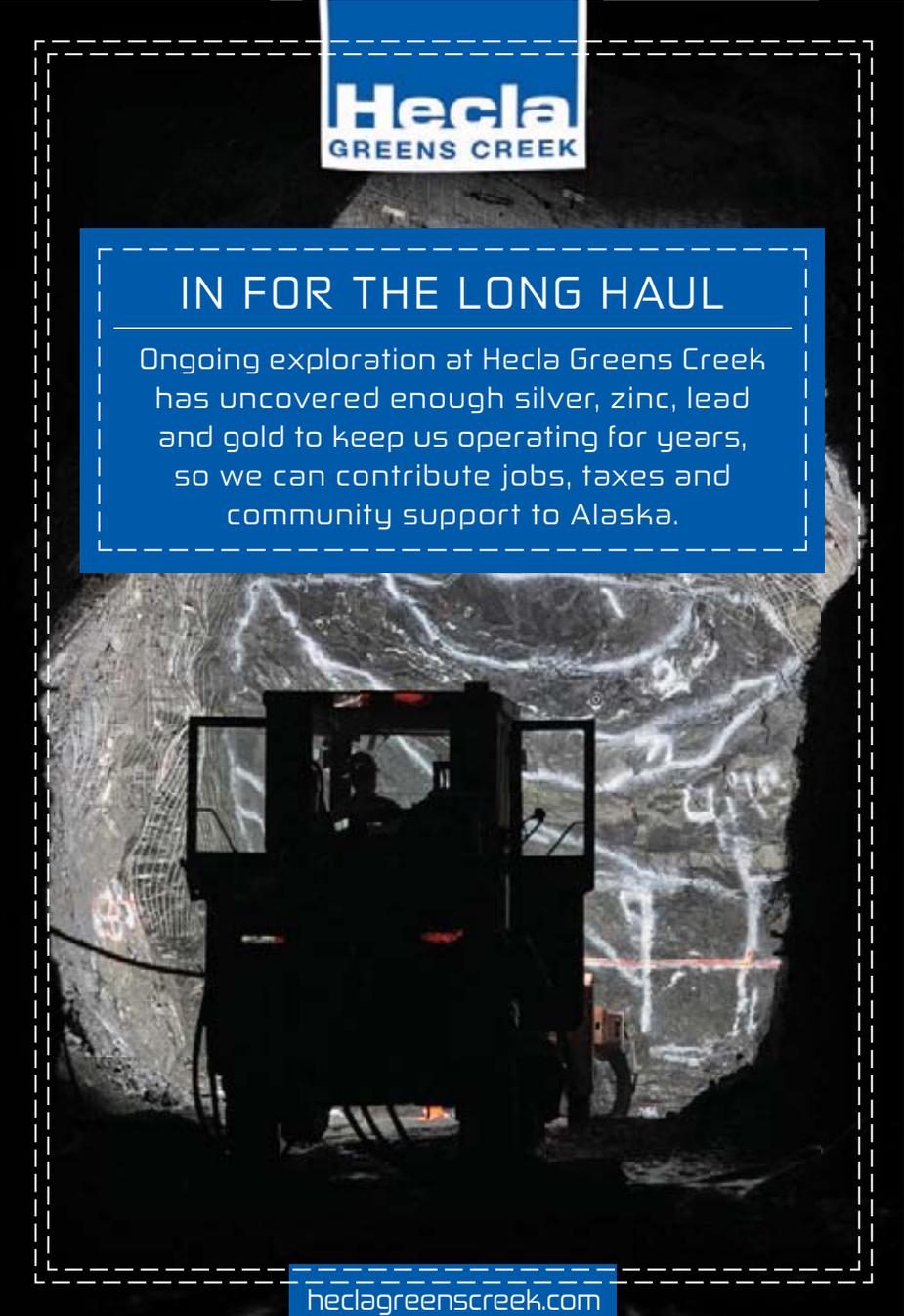
"The mine was an opportunity to responsibly develop resources in this area of the state and provide economic development to the communities," she said. "The mine continues to have a significant impact on the NANA region."

Another AIDEA funded road that is proposed to link the extremely metal-rich Ambler Mining District to global markets could bring an additional economic boost to the NANA region.

The 211-mile Ambler Mining District Industrial Access Project (AMDIAP), the official name of this transportation corridor colloquially known as the Ambler Road, is a key piece of infrastructure needed to begin realizing the vast potential of this minerals-rich region of Northwest Alaska.

Much of this potential is found on the Upper Kobuk Mineral Projects (UKMP), a

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During the summer months, this conveyor at the Delong Mountain Transportation System port loads zinc and lead concentrates from the Red Dog Mine onto ships bound for global markets.



ALASKA INDUSTRIAL DEVELOPMENT AND EXPORT AUTHORITY

ALASKA EXPLORATION *continued from page 17*

partnership that brings the Bornite copper-cobalt deposit, along with several other copper-rich prospects on NANA-owned lands, together with the world-class Arctic Mine project, and dozens of similar volcanogenic massive sulfide prospects located on Trilogy's state, federal and patented mining claims in the Ambler Mining District.

Located a mere 16 miles apart, Arctic and Bornite are each considered world-class copper assets that would have long since been developed if not for their remote location, some 200 miles off the beaten path in Northwest Alaska.

Together, these projects host roughly 8.9 billion pounds of copper, 3.6 billion lb of zinc, 626 million lb of lead, 77 million lb of cobalt, 770,000 ounces of gold and 58.3 million oz of silver.

Trilogy and South32 are advancing these deposits in tandem, which is expected to improve the economics of both.

The UKMP partners, however, are not the only companies exploring the Ambler District.

Valhalla Metals Inc., a private Alaska company, is exploring Sun, a 10.7 million metric ton VMS project at the eastern end of the district rich in zinc, lead, copper and silver.

The proposed Ambler Road runs across Sun's doorstep on its way to UKMP.

Realizing the potential of this metals-rich district is dependent on a means to deliver the metal-rich concentrates to global market.

AIDEA filed an application for rights of way, permits and other authorizations needed for the Ambler Road in 2015 and the U.S. Bureau of Land Management, the lead agency for permitting the project, began the Environmental Impact Statement (EIS) in 2017. This process is on pace to be completed this year.

"The completion of the federal EIS process for the Ambler Mining District Access Road represents a significant milestone for the company and is a demonstration of what Governor Dunleavy has stated clearly many times: 'Alaska is open for business,'" said Rick

Van Nieuwenhuyse, founder and former CEO, Trilogy Metals.

Much like the DTMS, AIDEA plans to use funds raised from private investments to build and maintain the Ambler road and be paid back by collecting tolls from Arctic, Bornite and other mines developed in the Ambler District.

Size offsets costs

Two near-development projects – Donlin Gold and Pebble – are examples of where the sheer size of remote Alaska deposits helps to offset the costs of developing a mine beyond the state's road system.

Situated about 300 miles west of Anchorage, Donlin hosts 39 million oz of gold in measured and indicated resources that average 2.24 g/t gold.

A 2011 feasibility study for Donlin Gold envisions a 53,500-metric-ton-per-day operation that would produce an average of roughly 1.1 million oz gold annually over a projected 27-year mine-life.

This mine would singlehandedly double Alaska's yearly gold production.

The price tag to build this mega-mine, however, was calculated at roughly US\$7 billion, which includes a roughly US\$1 billion pipeline to deliver natural gas to the enormous gold project.

Barrick Gold Corp. and Novagold Resources Inc., equal partners in the Donlin Gold project, are investigating ways to reduce upfront costs and improve the overall economics of this project.

"With permitting largely complete, we are shifting more focus on integrating scoping-level optimization work into a study that will serve as the basis for an updated project development plan," Novagold Resources President Greg Lang said earlier this year.

One of the options being considered is to start out with a somewhat smaller mine that focuses on higher-grade portions of the deposit, an operation that could be scaled up in the future.

Pebble Partnership is taking a similar approach at Pebble, an

even bigger deposit of metals in Southwest Alaska.

Considered the largest undeveloped copper and gold deposit on Earth, Pebble hosts 6.46 billion metric tons of measured and indicated resource averaging 0.4 percent (56.9 billion lb) copper, 0.34 g/t (70.6 million oz) gold, 240 parts per million (3.4 billion lb) molybdenum and 1.7 g/t (344.6 million oz) silver.

Pebble Partnership, however, is permitting an environmentally optimized operation that considers mining roughly 10 percent of this resource over two decades.

Even so, this operation is expected to produce 5.74 billion lb of copper, 6.4 million oz of gold, 260 million lb of molybdenum and 32 million oz of silver over this 20-year mine life.

The reason for this modest mine in relation to the deposit size is to address concerns over potential impacts to the salmon fisheries in the region of Southwest Alaska where Pebble is located.

"We have stated that the project must co-exist with the important salmon fishery in the region and we believe we will not harm the fish and water resources in Bristol Bay," said Pebble Partnership CEO Tom Collier. "Now we have a science-based, objective assessment of the project that affirms our work."

Unlike Donlin, however, Pebble will need to deliver metal concentrates to refineries in order to extract the copper, gold, molybdenum and other metals. This necessitates surface transportation linking the mine to a deep-water port. A combination of roads and an icebreaking ferry across Iliamna Lake is the plan for linking the nearly 50-mile gap between the Pebble Mine and a proposed port on the west side of Cook Inlet.

U.S. Army Corps of Engineers, the lead agency for permitting Pebble, is scheduled to have the final EIS for the mine and transportation corridor completed by early 2020 and the record of decision for developing this copper-gold-molybdenum project by

mid-year.

Much of the uncertainty surrounding the Pebble permitting process was dispelled with a July decision by the U.S. Environmental Protection Agency to scrap an earlier pre-emptive veto determination that threatened debilitating restrictions on development of a mine at this world-class project.

The finalization of the pre-emptive veto under consideration by EPA would have set a precedent that would have likely weighed heavily on the minds of mining companies considering investing in Alaska and across the U.S.

"We are glad to see the EPA has removed this proposed determination and that fair and due process is back on the table for Pebble," said Alaska Miners Association Executive Director Deantha Crockett. "Development proposals must be stringently evaluated, and only fair reviews of project proposals will ensure continued investment in Alaska's economy."

And, with Pebble being located on state land, the project will contribute to Alaska coffers.

Pebble said the smaller, environmentally optimized mine it submitted for permit approvals is expected to generate tens of millions of dollars in state government revenues each year at a time when Alaska is facing a fiscal crisis. The proposed mine is also expected to support some 2,000 Alaska jobs, with an income average for the mine workers at Pebble topping \$100,000 per year.

"This is a magnificent mineral deposit that would bring substantial revenues and jobs to Alaska at a time when we need both more than ever," Crockett said.

EPA's reversal also removes one more concern for Australian and Canadian companies hoping to explore and develop the other magnificent mineral deposits Alaska has to offer. ●

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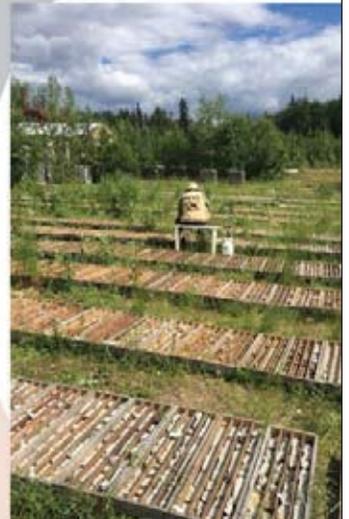
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Tectonic Metals Vice President of Exploration Eric Buitenhuis investigates Seventymile, a large Alaska gold exploration project the company is leasing from Doyon Ltd.



A Tectonic shift for gold exploration

New company putting the art of business in mining explorers

By SHANE LASLEY
Mining News

Emerging on Alaska's exploration scene in 2018, Tectonic Metals Inc. is a new junior mining company that applies a business-first strategy to managing the risks inherent to advancing grassroots gold discoveries to a multi-million-ounce gold reserve that global mining companies want to buy and the local people want to see developed into a mine.

"Junior mining is 99 percent risk, the failure rate is huge, yet nobody has any protocols in place for managing the risks," Tectonic Metals President and CEO Tony Reda told Mining News. "Within an industry that is so inherently risky, you would think that managing risks would be a primary objective."

For the Tectonic Metals management team, this risk management begins before a project is brought into their portfolio.

While the property selection process begins with evaluating the potential for a gold deposit with the size and grade that would attract the attention of global mining companies, the due diligence centers on answering one simple question: If this prospect turns out to be the large gold deposit, can it be developed into an economically viable mine?

"We start looking at things from the end and start reverse en-

gineering it," Reda said.

This mine-first assessment measures the geological potential against proximity to infrastructure; potential geometry and depth of the deposit, and how does that relate to the mining techniques and costs; and does the metallurgy allow for decent recovery of the metals at a reasonable price?

The one facet that rises above them all, however, can this project earn the social license needed to be developed into a gold mine?

It was this strategy to de-risk a project as much as possible from the start that landed Tectonic Metals in Alaska.

Tectonic team

A good start to risk management is having a team that knows every facet of the mineral exploration business, from identifying promising prospects to brokering deals with some of the biggest names in mining.

Comprised largely of former executives of Kaminak Gold Corp. – the team that advanced the Coffee Gold project in the Yukon from a grassroots discovery to a roughly 5-million-ounce gold asset now being taken toward mine development by Newmont Goldcorp – Tectonic Metals has such an ensemble.

President and CEO Reda is not a renowned geologist, a com-

mon path to top executive positions of today's junior exploration companies. Instead, the Tectonic co-founder was first exposed to the industry as an investor looking to reap high rewards from the exciting but inherently risky business of exploring for new sources of metals to meet the world's insatiable need.

Like most of his peers, Reda made money on some mining investments and lost on others. More importantly, however, he gained insights into the junior mineral exploration sector that are best observed by a young entrepreneur looking in from the outside – an investor's perspective that is helping to shape the business-first strategy of Tectonic Metals.

While Reda first became involved in mineral exploration as an investor, he demonstrated his acumen as a mining executive during his 11 years at Kaminak. As vice president of corporate development, Reda helped that junior raise more than C\$160 million in capital before Goldcorp Inc. acquired the company for C\$520 million in 2017.

Eira Thomas, who was president and CEO of Kaminak at the time of the half-a-billion-dollar sale of the company, is Tectonic's founding chairman.

Long before her role as top executive at Kaminak, Thomas was proving her skills as both a geologist and executive.

Her illustrious career includes involvement in the discovery of two diamond mines in Canada – first Diavik, as a geologist straight out of college in the 1990s, and then Renard, during her time as CEO of Stornoway Diamond Corp. in the 2000s.

Thomas is not the only former Kaminak CEO on the Tectonic Metals team. Rob Carpenter, who had the vision to see what others passed over at Coffee and then advanced the grassroots property in Yukon's White Gold District to a multi-million-ounce deposit, is now a technical adviser for Tectonic.

"Now that we had a taste of what it takes to discover and advance a multi-million-ounce gold district, we are hungrier than ever to not only do it again, but to do it better on every front imaginable," said Reda.

This highly respected exploration team is now setting itself up to build another multi-million-ounce gold district a few miles west of Coffee – in Alaska.

To this end, the former Kaminak team have joined forces with Curt Freeman, a

TECTONIC METALS INC.

CHAIRMAN: Eira Thomas
PRESIDENT AND CEO: Tony Reda
VP, EXPLORATION: Eric Buitenhuis

PROPERTIES WITH MINERAL(S) EXPLORED:

Tibbs, Alaska: Gold

Northway, Alaska: Gold-Copper

Seventymile, Alaska: Gold

MCO, Yukon: Gold

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 Tel: 604-283-3298 • Email: info@tectonicmetals.com



renowned Alaska geologist and owner of the Fairbanks-based Avalon Development Corp., to round out a team seeking to trigger a tectonic shift in Alaska's gold exploration game.

"It was clear from day-one that Eira, Rob, Curt and I shared a passion for mineral exploration and discovery and the desire to bring something different to the mineral industry. Tectonic was the answer," Reda said.

Alaska ticks the boxes

While the Tectonic team has a fondness for the Yukon and a high regard for the vast gold potential there, they have decided to center their exploration focus west of the "Border Fault," a political structure that separates the now crowded

Klondike and White Gold districts in the Yukon from largely overlooked eastern Alaska.

"Alaska has always intrigued us, and that political border is by no means a geological border," Reda told Mining News.

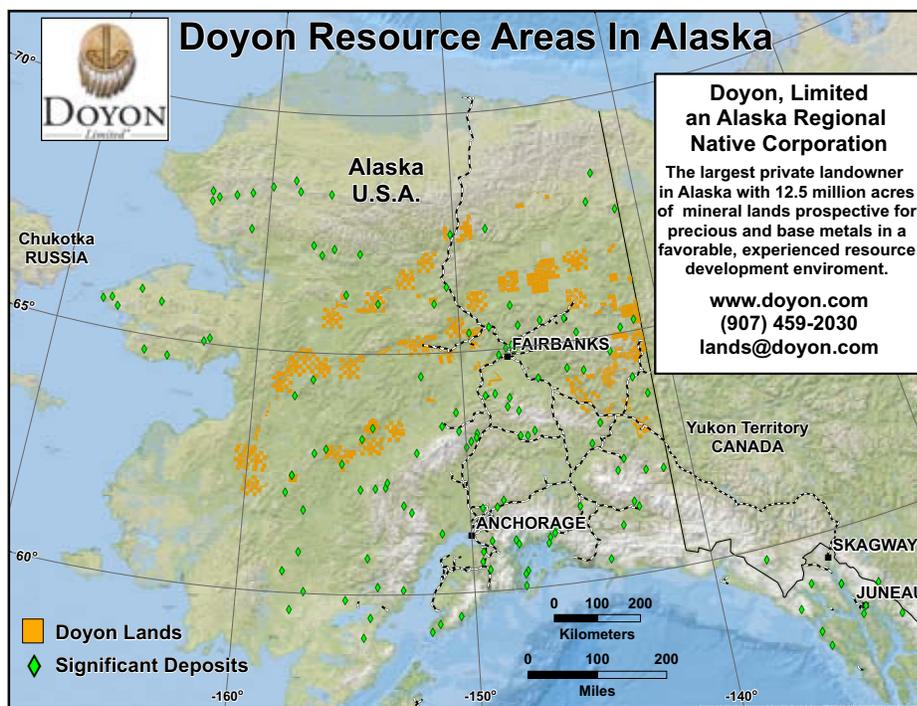
Transcending this border is the Tintina Gold Belt, a 125- by 750-mile gold-rich province that hosts several multi-million-ounce gold projects and mines such as Donlin Gold, Liven-good, Fort Knox and Pogo in Alaska, as well as the Coffee and Golden Saddle deposits in Yukon's prolific White Gold District.

Similar to the White Gold District prior to the exploration rush there a decade ago, a wide swath of the Tintina Gold Belt stretching west from the Yukon border remains open for the discovery of the multi-million-oz gold deposits Tectonic is seeking.

In addition to being vastly underexplored, this gold-rich region of eastern Alaska provides other advantages that play into Tectonic's de-risking strategy:

- prospective geology that the Tectonic team is vastly familiar with;
- district-scale properties with compelling gold grades;
- great infrastructure, including paved highways and power; and
- the ability to do business with Native corporations that own gold-rich ground in Alaska.

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TETONIC METALS *continued from page 21*

"As an explorationist, there is nothing I love more than exploring and Alaska ticks the boxes on so many fronts," Reda said.

Exploring two Doyon gold properties

Tectonic's two largest Alaska gold properties – Northway and Seventymile – are being explored under an agreement with Doyon Inc., the Alaska Native regional corporation for Interior Alaska.

The agreement with Doyon covers all phases of mining – mineral exploration, mine development and production – providing surety for a future company that wants to mine any deposits Tectonic turns up on the properties.

"The agreements we have with Doyon, from a de-risking perspective, are huge – to have that sort of production agreement at the onset brings confidence to everyone, including a potential partner down the road," Reda said.

Northway blankets 25 miles (40 kilometers) of robust gold-in-soils along the paved Alaska Highway and in terrane Tectonic is familiar with, checking off Tectonics de-risking boxes.

"We are going into a jurisdiction where the rocks are the same (as Coffee Gold) and we have a highway trucking right through our property – an actual highway!" Reda said.

When you consider the Peak Gold project is only a few miles to the west, and Oreo Mountain and Tanacross (both potentially larger copper-gold deposits being explored by majors) are to the north, this section of the Tintina Gold Belt has been validated in terms of its mineral potential.

Stream sediment, soil and rock sampling carried out by Tectonic in 2018 validated two Northway targets – Area 6 and Area 7 – just off the highway.

Area 6, an undrilled target toward the northwest end of the

property, hosts a 1,200-meter-long soil anomaly that has returned soil samples with as much as 597 parts per million copper and 253 parts per billion gold.

Area 7 hosts an 800-meter-long gold-in-soil anomaly toward the southeast end of the Northway property where soil sampling in 2018 returned assays with as much as 2.12 grams per metric ton gold.

Each of these areas coincide with robust geophysical anomalies that indicate large mineralizing systems.

To further prepare these targets for drilling, Tectonic hired Dawson City, Yukon-based GroundTruth Exploration to collect top of bedrock samples with its track-mounted GT Probe.

Used extensively in the Yukon in recent years, the GT Probe pushes a casing through the soil to collect a sample from the top of the bedrock. With less environmental disturbance than trenching and much less expensive than drilling, the GT Probe provides geologists a glimpse of the bedrock that is typically hidden by wind-blown glacial sediment and tundra that commonly mask the rocks across the Tintina Gold Belt.

The Tectonic team from Kaminak witnessed the effectiveness of the GT Probe at the Coffee project and are helping to pioneer the use of this innovation in Alaska.

This efficient rig also tested the bedrock at Seventymile, a property that blankets a 25-mile-long gold trend between Yukon's Klondike District to the east and Alaska's Circle Mining District to the west.

While some 83 historical holes tested seven prospects across Seventymile, Tectonic Metals believes these holes targeted the wrong style of mineralization.

"We are looking at it from a structural, high-grade shear zone lens," Reda said.



Tectonic Metals' Tibbs camp is set up at Michigan, one of several underexplored high-grade gold zones on this property about 20 miles southeast of the Pogo Mine.

SHANE LASLEY

Flume is a 7,000-meter-long trend on the Seventymile that could host the high-grade shear zones Tectonic is looking for. Historical drilling along this trend did not test for the lithological contacts – where two rock types come together – that could provide channels for the gold-rich fluids to form deposits.

Exploration carried out last year, however, found evidence that a gold enriched shear zone exists at Flume and GT Probe sampling completed this year is further testing lithological contact zones where soils sampling has turned up robust gold.

In addition to testing for shear zones at Flume, the GT Probe also tested Flanders, a Seventymile prospect where past drilling cut as much as 8.6 g/t gold over 4.9 meters.

High-grade gold in Goodpaster

Tibbs, a high-grade gold property that has many similarities to Northern Star Resources' Pogo gold mine property about 20 miles to the northwest, is the first project drilled by Tectonic.

Past exploration at Tibbs, referred to as Rob by previous explorers, has turned up some very high-grade gold showings at surface, just the kind of project Tectonic Metals is looking for.

"I will take high-grade gold at surface to drill any day of the week," Reda said.

While Tibbs had shown high-grade gold potential, intermittent exploration since the discovery of Pogo has not turned up a cohesive deposit there.

Tectonic believes that the reason for this lack of discovery is past exploration was seeking the type of flat lying veins that has provided the bulk of the gold at Pogo, not the higher-grade vertical feeder veins also being mined by Northern Star.

"This property still has not been tested from that perspective," Reda said.

A number of these high-grade vertical gold veins have been identified at Tibbs.

Grey Lead is one such vein. Previous drilling at this high-grade target cut 5.7 meters of 19.14 g/t gold, 5.3 meters of 15.76 g/t gold and 4.26 meters of 6.13 g/t.

Trenching completed by Tectonic during 2018 encountered similar widths and grades, including five meters of 38 g/t gold and eight meters of 14.8 g/t gold.

Hilltop-Oscar, an undrilled target just north of Grey Lead, indicates the potential to further expand the high-grade gold mineralization. Rock samples collected from Hilltop-Oscar have returned grades as high as 75.6 g/t gold.

Tectonic has also identified similar gold in trenches at Connector, a new target



The Road Metal silver-gold prospect on Tectonic Metals Northway property was discovered when geologists noticed intrusive rocks in a gravel pit alongside the Alaska Highway. Rock samples collected from this borrow pit contained up to 135 oz/ton silver and 2.51 oz/ton gold.

about 400 meters east of Grey Lead. This trenching encountered six meters of 8.1 g/t gold and 13 meters of 1.5 g/t gold. Rock samples collected at this target and a northern extension have returned assays of 32.3, 17.4 g/t and 101.3 g/t gold.

When combined the targets in the larger Grey Lead-Connector area extend for some 1,000 meters along strike.

About 3,000 meters northeast of the northeast trending Grey Lead area lies Michigan, another 1,000-meter-long mineralized corridor where rock samples contained as much as 900 g/t (28.9 ounces per

metric ton) gold.

One hole drilled in 2011 to test a deep geophysical anomaly at Michigan cut 1.57 meters of 57.21 g/t gold and 9.14 meters of 2.58 g/t gold.

Three trenches dug by Tectonic last year – 3.3 meters of 11.5 g/t gold, six meters of 1.96 g/t gold and eight meters of 1.01 g/t gold – confirms mineralization along the trend.

Johnson Saddle, which lies between Grey Lead and Michigan, is a bit different but interesting.

"This is not vein-style mineralization – it is intensely altered and is sitting on top of a plateau. It definitely warrants more work," said Reda.

In total, Tectonic has identified eight areas of the Tibbs property with high-grade gold on the surface.

"We are blessed with so many targets," Reda said, referring to Tibbs.

In order to prioritize these targets for a diamond drilling, Tectonic launched a 3,000-meter rotary air blast drill program at Tibbs in August.

Being carried out by Ground Truth Exploration, this RAB drilling is a cost-effective way to test for extensions of the high-grade vertical veins that are not readily evident on the surface due to the lack of outcrop.

"The work we are doing is very cost effective and it is simple," said Reda.

This unassuming program will provide a relatively low-cost glimpse of the underlying geology – further de-risking Tibbs before determining whether to deliver more expensive diamond drill rigs to begin to build a high-grade gold resource at this Goodpaster property in 2020. ●

From a vantage above the Peak Gold zones, Avalon Development President Curt Freeman explains the geology of these high-grade skarn deposits near the crossroads town of Tok in eastern Alaska.



AVALON DEVELOPMENT CORP.

ALASKA

Peak Gold LLC

(A joint venture between Contango ORE Inc. and Royal Gold Inc.)

Partners explore wider Peak Gold potential

Building upon the strong economics of developing a mine at the high-grade Peak Gold project, joint venture partners Contango ORE Inc. (60 percent) and Royal Gold Inc. (40 percent) are investing US\$6.9 million on exploring some of the intriguing outlying targets across this highway-accessible property in eastern Alaska.

Discovered by Contango ORE in 2009, Peak Gold (sometimes referred to as Tetlin) hosts two skarn deposits – Main Peak and North Peak – on an underexplored property that covers roughly 850,000 acres west and south of Tok, a crossroads town on the Alaska Highway.

The adjacent deposits host 9.2 million metric tons of measured and indicated resources averaging 4.08 grams per metric ton (1.21 million ounces) gold and 14.19 g/t (4.2 million oz) silver.

A preliminary economic assessment completed toward the end of 2018 outlines plans for open-pit mines at these deposits and a 3,500-metric-ton-per-day mill that would produce 1.09 million oz of gold and 2 million oz of silver over an initial eight-year mine-life. Based on US\$340 million in capital and closing costs, the cost for every ounce recovered from the mine outlined in the PEA is a remarkably low US\$470.

As a result, the after-tax net present value (at a 5 percent discount) for the proposed Peak Gold Mine is calculated to be US\$393 million and the after-tax internal rate of return is 29.1 percent.

This combination of relatively low development and production costs, coupled with a mine-plan designed to maximize grade in the early years, means it is only expected to take two years to pay back the initial development capital, after taxes.

The Peak Gold partners put this tantalizing project on the market early in 2019. However, despite the strong economics of developing a mine and the prospectivity of the wider property, a deal was not reached that reflects the value of the Peak Gold land package.

The Peak zones proposed to be mined in the PEA represent a small section of the prospective ground held by the Peak Gold JV.

Sampling, mapping and geophysics have identified multiple exploration targets across this larger land package.

"The joint venture's technical team has identified both porphyry and skarn type exploration prospects following a comprehensive review of all data collected over the past 10 years on the project," said Contango

ORE President and CEO Brad Juneau.

The Peak Gold JV continued to add to this data with a US\$6.9 million exploration program this year.

Funded on a pro rata basis – Contango ORE (US\$4.1 million) and Royal Gold (US\$2.8 million) – this program began with an induced polarization geophysical survey and additional sampling over new and existing exploration targets at Peak Gold.

Results from this work was used to target a 5,000-meter drill program that got underway in August. This drilling Tested three targets – East Peak, a new target in the Peak zone area; North Saddle, an interesting zone about 2,000 meters north of the Peak deposits; and Taixtsalda, a large circular geophysical anomaly about 25 miles southeast of the Peak zones with a magnetic and resistivity signature indicative of a porphyry copper system.

In addition to work in an area surrounding the Peak Gold deposits, the JV is investigating porphyry targets across the 675,000-acre land package leased from Tetlin Village Council, as well as reconnaissance mapping and sampling on blocks of state of Alaska claims immediately to the north and west.

"We continue to believe that our large acreage position holds significant exploration upside, and we remain focused on maximizing the value of this project for our shareholders," said Juneau.

While the formal joint sales process has ended, Contango ORE said it is continuing to work with its advisors to evaluate strategic options for its share of Peak Gold while at the same time the JV is continuing exploration and collecting the baseline data that will be needed to advance the mine outlined in the PEA toward permitting.

"As previously announced, we are continuing with our permitting activities for development of our defined resource areas in Peak and North Peak, as well as exploration activities to find new resources," said Juneau.

CONTANGO ORE CEO: Brad Juneau

ROYAL GOLD CEO: Tony Jensen

ROYAL GOLD VP, OPERATIONS: Mark Isto

Contango ORE Inc.

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713-877-1311 • www.contangoore.com

Royal Gold Inc.

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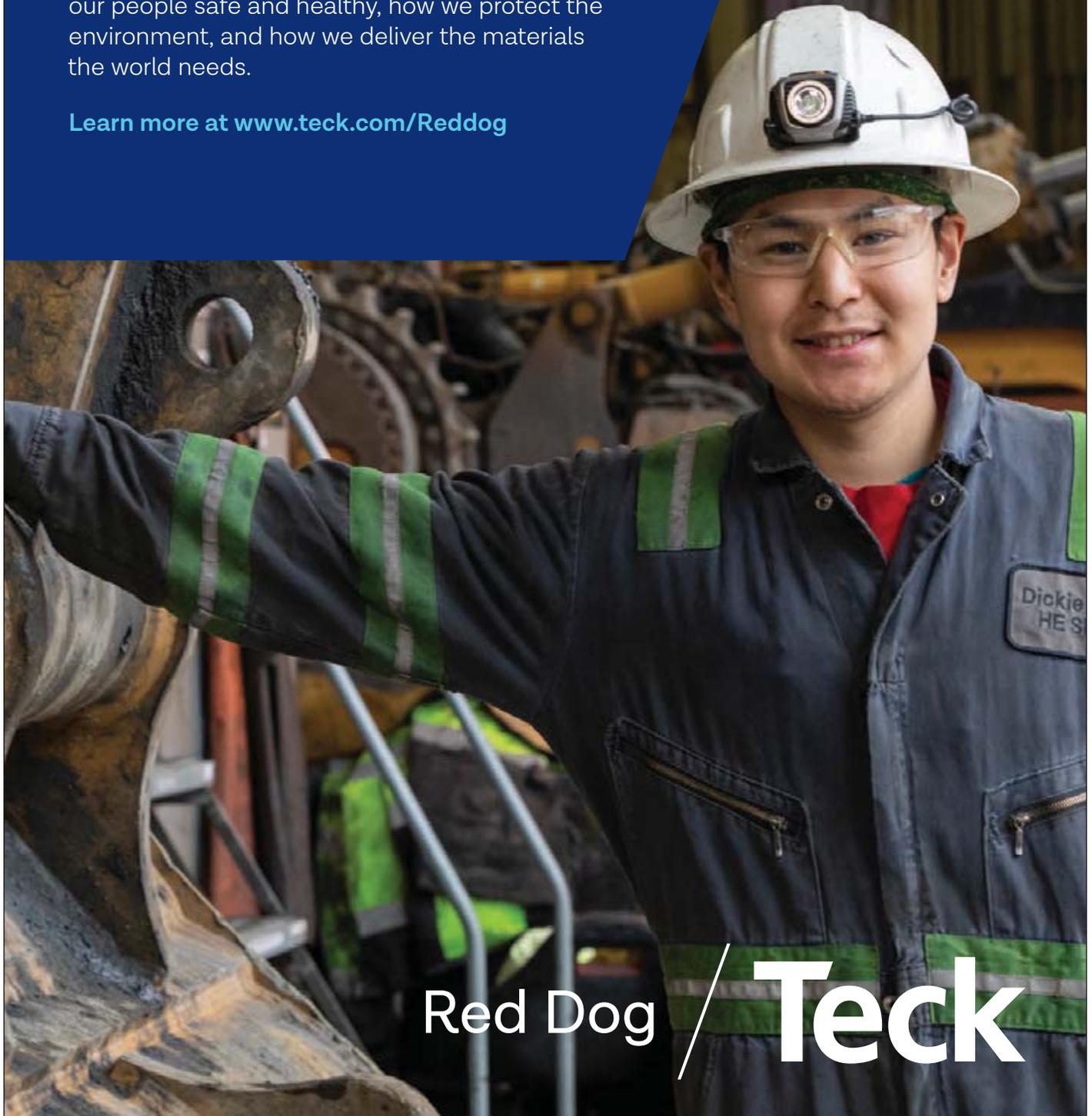
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South32 invests in two Alaska copper projects

South32, an Australia-based major with a portfolio of base metal and coal projects spun out of BHP Billiton in 2015, is expanding its presence in Alaska.

This company went into business with an impressive portfolio of base and precious metals mining assets in Australia, South Africa and Brazil. While all of South32's initial portfolio was south of the Equator, the Perth-based major is interested in high-quality exploration and mining projects around the globe.

"Our exploration activities are carefully selected to have a high chance of success and are spread around the world, including places we have not operated in before," according to the South32 website. South32's first exploration foray north of the Equator came in 2017 when it entered into an option to earn up to a 50 percent interest in Trilogy Metals Inc.'s Upper Kobuk Mineral Projects (UKMP), a large land package that blankets most of Northwest Alaska's Amblor Mining District.

To keep its UKMP option in good standing, South32 agreed to invest US\$30 million in exploring the copper-rich land package over a three-year period. Under an agreement struck early in 2017, the Aussie major has the option to buy a 50 percent stake in UKMP for US\$150 million. Over the previous two exploration seasons, the company invested US\$20.8 million into UKMP, leaving a balance of US\$9.2 million for 2019. Similar to the previous two years, this year's funding by South32 is going toward infill and resource expansion drilling at Bornite, a large copper-cobalt deposit.

At a cut-off grade of 0.5 percent, the open-pit portion of Bornite hosts 40.5 million metric tons of inferred resource averaging 1.02 percent (913 million pounds) copper; and 84.1 million metric tons of indicated resource averaging 0.95 percent (1.77 billion lb) copper. At the same cut-off grade, the Bornite open-pit also hosts 124.6 million metric tons of inferred resource averaging 0.017 percent (45 million lb) cobalt.

The below-pit portion of Bornite, at a cut-off grade of 1.5 percent, hosts 57.8 million metric tons of inferred resource averaging 2.89 percent (3.68 billion lb) copper and 0.25 percent (32 million lb) cobalt. This year's work at Bornite included roughly 8,000 meters of infill and expansion drilling in 12 holes; additional metallurgical work to optimize copper recoveries and the determination of next steps for the recovery of cobalt; and initial engineering studies in preparation for a preliminary economic assessment currently underway.

While South32 invests in Bornite, Trilogy continues to advance feasibility work and permitting at Arctic, a base and precious metals-rich vol-



SHANE LASLEY

Copper- and cobalt-rich mineralization extracted from an exploration shaft Kennecott Exploration sunk into the Bornite deposit during the 1960s.

canogenic massive sulfide project about 16 miles north of Bornite. Arctic, the most advanced UKMP project, hosts 43.04 million metric tons of probable reserves averaging 2.32 percent copper, 3.24 percent zinc, 0.57 percent lead, 0.49 grams per metric ton gold and 36 g/t silver. In addition to investing in Bornite and Arctic, South32 and Trilogy each contributed US\$1 million toward exploring earlier staged Arctic-like deposits and targets along a 60-mile (100 kilometers) VMS belt that spans UKMP.

South32 has until the end of January 2020 to decide to invest the additional roughly US\$150 million to acquire half of the prolific mineral district that UKMP blankets.

In March, South32 entered into an agreement with Freegold Ventures Ltd. to earn up to a 70 percent interest in Shorty Creek, an early stage porphyry copper-gold-silver-tungsten project about 75 miles northwest of Fairbanks, Alaska.

Under this agreement, a South32 subsidiary will fund up to US\$10 million of exploration over the next four years, including US\$2.2 million in 2019.

This exploration spending keeps an option open for South32 to acquire 70 percent of a newly formed project company for US\$30 million, less any money the Perth-based major invested in Shorty Creek exploration.

Freegold Ventures identified the potential for porphyry-style copper-gold mineralization at Shorty Creek in 2014, which was confirmed with drilling the next year.

One of the 2015 holes, SC 15-03, cut 91 meters grading 0.55 percent copper, 0.14 g/t gold and 7.02 g/t silver at the Hill 1835 target at Shorty Creek.

Overall, Freegold had drilled 12 holes at Hill 1835 prior to 2019, outlining a 750- by 300-meter area of porphyry copper-gold-silver-tungsten mineralization, which represents a small portion of the larger magnetic and geochemical anomaly found there.

South32 invested US\$2.3 million for an exploration program at Shorty Creek during 2019. This program included geophysical and geochemical surveys carried out early in the season, and roughly 2,000 meters of drilling aimed at further expanding the mineralization at Hill 1835 and further testing of the Hill 1710, another target on the property.

CHAIRMAN: Karen Wood

CHIEF EXECUTIVE OFFICER: Graham Kerr

MANAGER CORPORATE DEVELOPMENT CANADA: Darryl Steane

CASH AND CASH EQUIVALENTS: US\$1.41 billion (June 30, 2019)

WORKING CAPITAL: US\$1.17 billion (June 30, 2019)

MARKET CAPITALIZATION: A\$13.69 billion (Sept. 23, 2019)

Level 47,108 St Georges Terrace, Perth, 6000, Western Australia
Tel: +61 8 9324 9000 • www.south32.net



A rainbow touches down next to the copper-rich Bornite project in Northwest Alaska.

SHANE LASLEY

ALASKA

Trilogy Metals Inc.

TSX/NYSE-MKT: TMQ

Trilogy explorers prolific Ambler District

Trilogy Metals Inc. is closing in on the completion of a feasibility study for Arctic, the first of a series of mines the company envisions being developed across the Upper Kobuk Mineral Projects in Northwest Alaska's Ambler Mining District.

Arctic, the most advanced of the Upper Kobuk Mineral Projects, hosts 43.04 million metric tons of probable reserves averaging 2.32 percent copper, 3.24 percent zinc, 0.57 percent lead, 0.49 grams per metric ton gold and 36 g/t silver.

A 2018 prefeasibility study detailed plans for an open-pit mine to extract the volcanogenic massive sulfide mineralization at Arctic and a 10,000-metric-ton-per-day mill that is expected to produce more than 159 million pounds of copper, 199 million lb of zinc, 33 million lb of lead, 30,600 ounces of gold and 3.3 million oz of silver annually over a 12-year mine-life.



To provide the additional data needed to elevate Arctic to the feasibility level, Trilogy completed 24 holes during 2018 to gather geotechnical and hydrological information at the proposed tailings dam, waste rock facility and grinding mill locations.

For 2019, Trilogy Metals budgeted US\$7 million to carry out the hydrological, geotechnical, water management, tailings facility design, and other work needed to put the finishing touches on the feasibility study for Arctic, expected to be finalized in the first half of 2020.

While Trilogy focuses on readying Arctic for permitting, Australia-based South32 Ltd. is investing in Bornite, a large copper-cobalt deposit about 16 miles southwest of Arctic that is second in the pipeline of Ambler District mine development projects.

Early in 2017, South32 agreed to invest up to US\$30 million into exploration at UKMP as part of an option to acquire a 50 percent stake in UKMP by paying an additional US\$150 million and other considerations. Over the 2017 and 2018 exploration seasons, South32 invested US\$20.8 million in exploration focused on expanding and upgrading Bornite. Based on this and previous drilling, an updated resource for Bornite was calculated earlier this year.

At a cut-off grade of 0.5 percent, the open-pit portion of Bornite hosts 40.5 million metric tons of indicated resource averaging 1.02 percent (913 million pounds) copper; 84.1 million metric tons of inferred resource averaging 0.95 percent (1.77 billion lb) copper.

With none of cobalt yet upgraded to the indicated category, the Bornite open-pit hosts 124.6 million metric tons of inferred resource averaging 0.017 percent (45 million lb) cobalt.

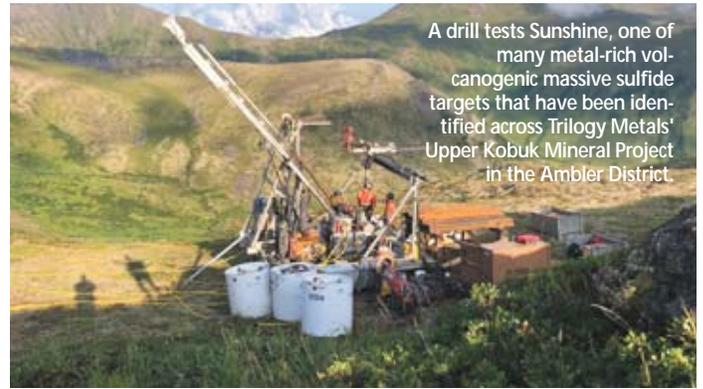
At a cut-off grade of 1.5 percent, the below-pit portion of Bornite hosts 57.8 million metric tons of inferred resource averaging 2.89 percent (3.68 billion lb) copper and 0.25 percent (32 million lb) cobalt.

To ready Bornite for a preliminary economic assessment, South32 invested the US\$9.2 million balance of its option commitment on roughly 8,000 meters of infill and expansion drilling in 12 holes; additional metallurgical work to optimize copper recoveries and determine the next steps for the recovery of cobalt; and initial engineering studies.

In addition to advancing Bornite and Arctic, Trilogy carried out a US\$2 million exploration program, funded equally by Trilogy and South32, that investigated earlier staged deposits and targets along a VMS belt that stretches roughly 60 miles (100 kilometers) across the Ambler District.

To refine targets for further sampling and drilling, this 2019 regional program began with a district-wide VTEM (versatile time domain electromagnetic) and ZTEM (z-axis tipper electromagnetic) geophysical surveys flown over both the Cosmos Hills, which host Bornite, and the Ambler Belt, which hosts Arctic.

After compiling the data, Trilogy and South32 decided to complete six holes at Sunshine, where historical drilling tapped substantial widths of massive sulfide mineralization similar to the nearby Arctic deposit. In 1997, Kennecott Mines estimated that Sunshine hosts 20 million met-



BONNIE BROMAN - TRILOGY METALS INC.

ric tons of resource averaging 1.4 percent copper, 2.5 percent zinc, 0.5 percent lead and 28.1 g/t silver. While not compliant to modern standards, this historical resource demonstrates the tenor and potential of the deposit.

The first hole drilled at Sunshine this year, SC19-019, encountered five zones of Arctic-like VMS mineralization, including a newly discovered high-grade zone:

- 9.1 meters of 3.02 percent copper, 1.42 percent zinc, 0.27 percent lead, 0.14 g/t gold and 24.65 g/t silver in New Zone;
- 3.3 meters of 1.68 percent copper, 1.77 percent zinc, 0.47 percent lead, 0.12 g/t gold and 27.57 g/t silver in Zone 1;
- 3.7 meters of 4.74 percent copper, 0.97 percent zinc, 0.13 percent lead, 0.15 g/t gold and 28.96 g/t silver in Zone 2;
- three meters of 0.75 percent copper, 1.4 percent zinc, 0.35 percent lead, 0.08 g/t gold and 21.02 g/t silver in Zone 3; and
- 7.88 meters of 2.23 percent copper, 5.62 percent zinc, 1.1 percent lead, 0.18 g/t gold and 46.95 g/t silver in Zone 4.

These Sunshine intercepts shed a light on the wider potential of Trilogy's large land package in the Ambler Mining District.

CHAIRMAN: Janice Stairs
INTERIM PRESIDENT AND CEO: James Gowans
SENIOR DIRECTOR, OPERATIONS: Robert Jacko

CASH AND CASH EQUIVALENTS: US\$25.8 million (May 31, 2019)
WORKING CAPITAL: US\$26 million (May 31, 2019)
MARKET CAPITALIZATION: US\$233.6 million (Sept. 23, 2019)

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Freegold attracts South32 to Shorty Creek

Freegold Ventures Ltd. is focused on exploring for copper and gold on two properties in Interior Alaska – Golden Summit, an advanced stage gold project just north of Kinross Gold Corp.'s Fort Knox Mine, and Shorty Creek, an enticing porphyry copper-gold project about 75 miles northwest of Fairbanks.

In March, South32 Ltd. entered into an option agreement with Freegold Ventures to acquire 70 percent interest in Shorty Creek for US\$30 million, less any money the Australia-based major invested in exploring the promising copper-gold-silver-tungsten deposits that have been identified across the property.

To keep the option in good standing, South32 has agreed to fund up to US\$10 million on exploration over a four-year span, including a roughly US\$2.3 million program aimed at investigating the Shorty Creek potential in 2019.

The 2019 program began with induced polarization surveys, as well as geochemical surveys that got underway in May.

A severe wildfire in the Shorty Creek area, however, delayed the anticipated mid-July start to drilling. Getting underway in mid-August, this roughly 2,000-meter drill program targeted further expansion of Hill 1835, the most advanced Shorty Creek target, and Hill 1710, a very large porphyry target about 2,000 meters to the northwest.

When Freegold acquired Shorty Creek in 2014, the Vancouver, British Columbia-based explorer had a hunch this highway-accessible property could be hiding one or more large deposits of porphyry copper-gold mineralization, an intuition that was affirmed with drilling carried out during an inaugural drill program in 2015.

One of the porphyry confirmation holes, SC 15-03, cut 91 meters grading 0.55 percent copper, 0.14 grams per metric ton gold and 7.02 g/t silver at the Hill 1835 target at Shorty Creek.

Overall, Freegold had drilled 12 holes at Hill 1835 prior to the 2019 season, outlining a 750- by 300-meter area of porphyry copper-gold-silver-tungsten mineralization, which represents a small portion of the larger magnetic and geochemical anomaly found there.

This includes two holes drilled last year:

- SC 18-01 – drilled to a depth of 555.2 meters and terminated in a significant fault zone – cut 442.2 meters of 0.24 percent copper, 0.09 g/t gold, 4.74 g/t silver and 0.02 percent tungsten trioxide; and
- SC 18-02 – drilled 175 meters southeast of 18-01 and to a depth of 610.85 meters – cut 442.4 meters of 0.22 percent copper, 0.13 g/t gold, 4.03 g/t silver and 0.02 percent tungsten trioxide.

Where one porphyry deposit is found, there are often others nearby. The strong magnetic and geochemical anomalies across the roughly 39-square-mile (100 square kilometers) Shorty Creek property indicate Hill 1835 is not the only, and potentially not the largest, copper-gold-silver-tungsten porphyry found there.

Hill 1710, a very large porphyry target about 2,000 meters northwest of Hill 1835, is centered on a 6,000-meter-long magnetic anomaly that coincides with a large copper and molybdenum geochemical anomaly. Four widely spaced holes that tested a 1,600-meter stretch of the magnetic high at Hill 1710 cut porphyry style mineralization, with copper grades increasing to the northeast.

Follow-up rock sampling at Hill 1710 returned values between 0.11 to 0.39 percent copper in porphyry mineralization to the northeast of this drilling.

Steel Creek, another strong magnetic high anomaly about 2,000 meters northeast of Hill 1835, was initially tested by a 2017 drill hole that encountered anomalous copper, along with a suite of minerals similar to Hill 1835.

Quarry is an interesting undrilled target about 5,000 meters east of Steel Creek and at the northeast end of an 11,000-meter-long magnetic



FREEGOLD VENTURES LTD.

high feature. Samples of oxidized porphyritic rock with stockwork veining collected from Quarry contained as much as 500 parts per million copper.

Freegold's Golden Summit property about 25 miles north of Fairbanks hosts 61.5 million metric tons of indicated resource averaging 0.69 g/t (1.36 million ounces) gold; and 71.5 million metric tons of inferred resource averaging 0.69 g/t (1.58 million oz) gold.

The oxide portion of this deposit, found largely within the upper 60 meters, has 16.2 million metric tons of indicated resource averaging 0.66 g/t (345,000 oz) gold; and 9.6 million metric tons of inferred resource averaging 0.59 g/t (183,000 oz) gold.

In 2016, Freegold Ventures published a preliminary economic assessment that evaluates a 10,000 metric-tons-per-day heap leach facility to process the oxide material and a 10,000 tpd plant for the sulfide material.

The company said the entire 13,000-acre Golden Summit property is prospective to expand the oxide resource well beyond the 300- by 1,500-meter resource area outlined so far.

CASH AND CASH EQUIVALENTS: C\$189,436 (June 30, 2019)

WORKING CAPITAL: C\$878,086 deficit (June 30, 2019)

MARKET CAPITALIZATION: C\$18.7 million (Sept. 23, 2019)

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ALASKA

PolarX Ltd. ●●●



ASX: PXX

PolarX tests Saturn porphyry potential

Australia-based PolarX Ltd. and its copper- and gold-rich Alaska Range property has drawn the interest of Canada-based Lundin Mining Corp.

In a deal finalized in June, Lundin invested roughly US\$3 million to acquire a 12.85 percent interest in PolarX. This investment provides the Toronto-based miner an option to earn a 51 percent interest in Stellar, a porphyry copper-gold portion of the larger Alaska Range property, by investing US\$24 million in exploration and making US\$20 million in payments to PolarX over a three-year span.

To accommodate this arrangement, PolarX subdivided Alaska Range into three projects – Stellar, Zackly and Caribou Dome.

Stellar encompasses Saturn and other copper and gold targets on the large Stellar property that PolarX acquired from Millrock Resources Inc.

Zackly hosts 3.4 million metric tons of inferred resource averaging 1.2 percent (90.4 million pounds) copper, 2 grams per metric ton (213,000 oz) gold and 14 g/t (1.5 million oz) silver, according to an Australian Joint Ore Reserves Committee- (JORC) resource calculated in 2017.

Zackly lies in the middle of the larger Stellar project, a block of claims covering this skarn deposit and its potential extensions are excluded from the agreement with Lundin. This separation allows PolarX to continue to expand and upgrade the high-grade gold-copper Zackly skarn as an independent project.

PolarX also retains ownership of Caribou Dome, a roughly 14-mile-long property immediately southwest of Stellar that hosts 1.6 million metric tons of near-surface JORC-compliant resource (measured, indicated and inferred) averaging 3 percent (107.8 million lb) copper; and 1.2 million metric tons of underground mineable resource averaging 3.2 percent (82.3 million lb) copper.

Lundin's first Stellar interest is Saturn, a compelling porphyry target. While testing southeast extensions of Zackly during 2018, PolarX encountered signs the drills were closing in on porphyry mineralization as it stepped out in the direction of Saturn. This evidence was bolstered by the initial data from a high-resolution aeromagnetic geophysical survey flown last fall, which showed that Saturn has the donut-shaped magnetic pattern typical of a porphyry deposit.

The Perth-based explorer said a magnetic survey completed late last year adds to the evidence, detailing a roughly cone-shaped magnetic

body that is approximately 2,000 by 1,000 meters at the top and extends to a depth of at least 3,000 meters, the lower extent of the modelling. This evidence was bolstered further by ground-based IP geophysics data completed this year.

PolarX said the highest chargeability shown by the IP survey is associated with the magnetic highs at Saturn in a pattern that is consistent with the classic porphyry copper exploration model.

A 5,000-meter drill program that got underway in July tested this classic porphyry signature at Saturn.

The Stellar property also hosts Mars, another compelling porphyry target located at the west end of a 7.5-mile (12 kilometers) structural corridor that runs through the Zackly skarn and to Saturn at the east end.

Apart from the Lundin-funded exploration at Saturn, PolarX funded its own drilling at Zackly this year. The goal of the 2019 Zackly program is to continue expanding this high-grade skarn deposit to a size that will support an economically viable mining operation.

While the main skarn body that hosts the currently calculated resource was expanded last year and shows potential for further growth, especially at depth, the most compelling expansion area is to the east. ZX-18020, drilled about 850 meters east of the resource boundary, cut 54.6 meters averaging 2.8 g/t gold, 9.4 g/t silver and 0.6 percent copper, including a 0.3-meter (one foot) section from 56.7 meters averaging 27.3 percent copper, 2.5 g/t gold and 82.5 g/t silver. ZX-18024, drilled about 40 meters north of hole 20, cut 46.7 meters of 3.1 g/t gold, 0.6 percent copper and 3.3 g/t silver from a depth of 37 meters.

The 2018 program also hit the skarn between the eastern boundary of the resource and hole 20, indicating that continued drilling could trace a connection.

Hole ZX-18023, drilled 350 meters east of the Zackly deposit and 500 meters west of ZX-18020, cut 9.3 meters of magnetite skarn containing 3.3 percent copper, 2.3 g/t gold and 19.7 g/t silver.

PolarX said it has consistently observed a close association between copper, gold and magnetite in the drilling. Detailed aeromagnetic survey carried out last fall, which can trace the magnetite, has greatly improved the company's understanding of the continuity of mineralization, which was used to target a roughly 2,000-meter drill program that got underway in August.

EXECUTIVE CHAIRMAN: Mark Bojanjac

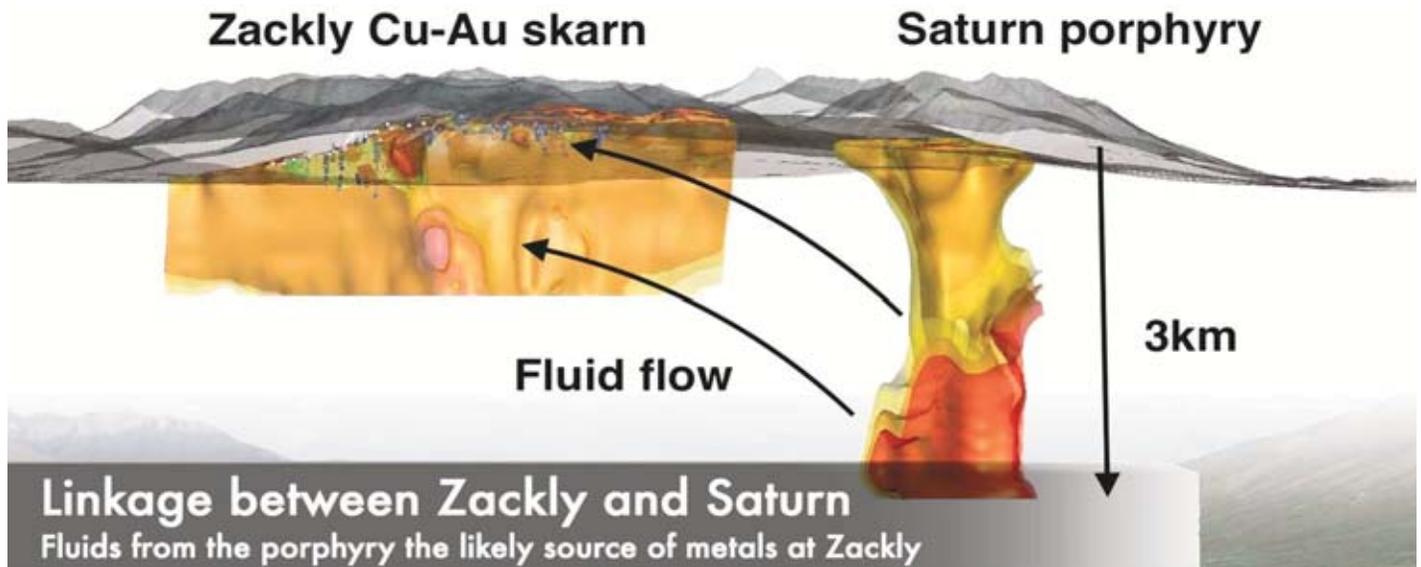
MANAGING DIRECTOR: Frazer Tabear

EXECUTIVE DIRECTOR: Jason Berton

CASH AND CASH EQUIVALENTS: A\$4.26 million (June 30, 2019)

MARKET CAPITALIZATION: A\$32.2 million (Sept. 23, 2019)

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ALASKA

Nova Minerals Ltd. ● ● ●

ASX: NVA 



Nova Minerals excited about Estelle gold

Melbourne, Australia-based Nova Minerals Ltd. first looked north to Alaska late in 2017, when it acquired five Alaska properties – Estelle, a gold-copper-silver project about 100 miles northwest of Anchorage; Chip-Loy, a nickel-copper-cobalt-gold-silver-platinum group element project; Bowser Creek, a silver-zinc-lead project; Windy Fork, a rare earth elements property; and Ozzna Creek, a gold-silver-zinc-copper-lead property.

Nova Minerals' 2019 exploration focused primarily on testing the district-scale gold potential in the Oxide area at the north end of the roughly 18-mile-long Estelle property.

Mapping and sampling carried out in 2018 identified two targets at Oxide – Oxide North and Oxide South – that show similarities to the intrusive-related gold deposits being mined at Kinross Gold Corp.'s Fort Knox Mine near Fairbanks and Victoria Gold Corp.'s Eagle Gold Mine in the Yukon.

As the result of an accelerated induced polarization (IP) geophysical survey and drill campaign carried out this year, Nova made significant headway toward reporting an initial Australian Joint Ore Reserves Committee- (JORC) compliant for Oxide Korb, a new occurrence in the Oxide area at the north end of the roughly 18-mile-long Estelle property.

"The speed of IP completion, drilling and our commencement of the resource estimation report shows the commitment by all involved to unlock the potential at the under-explored highly prospective Estelle gold project which we believe to be the next globally significant gold camp," Nova Minerals Managing Director Avi Kimelman said in August. Oxide Korb is a prospect area that roughly covers the area previously referred to as Oxide Ridge.

SE11-01, the Oxide Ridge discovery hole drilled by Millrock Resources Inc. in 2011, cut 450.7 meters averaging 0.38 grams per metric ton gold. This hole lies in the southeast corner of what Nova now refers to as Oxide Korb Resource Block A.

SE12-04, drilled about 450 meters southeast of the discovery hole in 2012, cut 41.5 meters averaging 1.1 g/t gold, indicating the drilling was vectoring toward higher gold grades as it approached a strong geophysical anomaly further southeast.

This hole is within Oxide Korb Resource Block B.

The results from the drilling at Oxide Korb were used to calculate an inaugural JORC-compliant inferred resource.

At a cut-off of 0.18 g/t gold, Oxide Korb hosts 181.3 million metric tons of inferred resource averaging 0.43 g/t (2.5 million oz) gold.

These grades are similar to the 267.6 million metric tons of reserves averaging 0.4 g/t (3 million oz) gold at a Kinross Gold Corp.'s Fort Knox Mine near Fairbanks, Alaska.

Nova said the Oxide Korb mineralization remains open and a major drill program is being planned to target potential extensions.

In addition to Oxide, Nova is carrying out exploration at Shoeshine, an area about 10 miles to the south that covers the Mount Estelle, Train and Shoeshine prospects; and RPM, which covers the Revelation and RPM prospects at the south end of the property.

MANAGING DIRECTOR AND CEO: Avi Kimelman

EXECUTIVE DIRECTOR: Louie Simens

NORTH AMERICA GM: Christopher Gerteisen

CASH AND CASH EQUIVALENTS: A\$3.1 million (June 30, 2019)

MARKET CAPITALIZATION: A\$36.5 million (Sept. 23, 2019)

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www.novaminerals.com.au



Nova Minerals' 2019 drilling at the Oxide Korb target on the Estelle property in Alaska has outlined 181.3 million metric tons of JORC-compliant inferred resource averaging 0.43 g/t (2.5 million oz) gold.

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A drill tests Arete, a new volcanogenic massive sulfide zinc target on the Glacier trend running across the northern part of White Rock and Sandfire's Red Mountain property in Alaska.



WHITE ROCK MINERALS LTD.

ALASKA

White Rock Minerals Ltd. ● ● ● ●

ASX: WRM 

White Rock, Sandfire team up in Alaska

With a major investment by fellow Australian company, Sandfire Resources NL, White Rock Minerals Ltd. focused its 2019 exploration on discovering the next high-grade zinc and precious metals deposits on the Red Mountain volcanogenic massive sulfide property in Interior Alaska. Sandfire, a mid-tier mining company with a growing portfolio of assets in the United States, first became involved in Red Mountain when it invested A\$2.5 million in White Rock shares during 2018.

This initial investment provided Sandfire an exclusive option to enter into a joint venture on Red Mountain, a strategic partnership the expanding Aussie miner has decided to pursue.

Under an option agreement signed early in 2019, Sandfire has the opportunity to earn up to a 70 percent JV interest in Red Mountain by investing US\$21.6 million into exploring the 183-square-mile (475 square kilometers) property and completing a pre-feasibility study for developing a mine there over the next six years.

Red Mountain already hosts two zinc-lead-copper-silver-gold deposits – Dry Creek and West Tundra Flats (WTF) – with 16.7 million metric tons of Australian Joint Ore Reserves Committee- (JORC) compliant inferred resources averaging 4.1 percent (1.49 billion pounds) zinc; 1.7 percent (630 million lb) lead; 0.2 percent (57.3 million lb) copper; 99 grams per metric ton (53.5 million ounces) silver; and 0.7 g/t (352,000 oz) gold.

With dozens of underexplored prospects across the Red Mountain

property, White Rock and Sandfire's strategy for 2019 is to investigate the district-scale potential of this highly prospective land package.

"The agreed exploration strategy with our JV partner Sandfire is to test away from the known high-grade deposits in pursuit of the next big deposit," said White Rock Minerals Managing Director Matthew Gill. Toward this goal, the more than A\$8 million (US\$5.4 million) exploration program at Red Mountain included surface reconnaissance mapping; soil and rock chip sampling; ground-based geophysics; roughly 4,000 meters of core drilling; and downhole electromagnetic surveys. This work was carried out across two main trends – Glacier, a newly identified alteration zone running 10 kilometers (six miles) across the northern part of the property, and Dry Creek, a trend extending west from Dry Creek that includes Hunter and other prospects identified last year.

By the end of July, White Rock and Sandfire had drilled seven outlying prospects but had not encountered significant mineralization. The partners, however, had not yet tested the most compelling target turned up by the reconnaissance work.

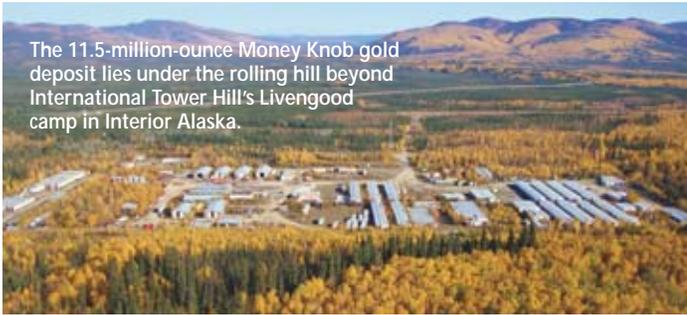
This prospect, Arete, was identified with geophysical anomalies associated with massive sulfide outcrops along the Glacier Trend. In addition to Arete, White Rock Minerals and Sandfire are refining drilling targets at several other new targets along the Glacier Trend.

CHAIRMAN: Peter Lester
MANAGING DIRECTOR, CEO: Matthew Gill
EXPLORATION MANAGER: Rohan Worland

CASH AND SHORT-TERM DEPOSITS: A\$3.9 million (June 30, 2019)
MARKET CAPITALIZATION: A\$10 million (Sept. 23, 2019)

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 Email: info@whiterockminerals.com.au
www.whiterockminerals.com.au

SHANE LASLEY



The 11.5-million-ounce Money Knob gold deposit lies under the rolling hill beyond International Tower Hill's Livengood camp in Interior Alaska.

ALASKA

International Tower Hill Mines Ltd. ●

TSX: ITH / NYSE: ATHM 



Tower Hill advances Livengood optimization

International Tower Hill Mines Ltd. continued metallurgical work to define and refine the project flowsheet for its Livengood gold project located along a paved highway about 70 miles north of Fairbanks, Alaska.

A pre-feasibility study (PFS) completed for Livengood in 2017 outlines plans for a 52,600-metric-ton-per-day mill that would produce 6.8 million ounces of gold over a 23-year mine life, or roughly 294,100 oz annually.

This is based on 392 million metric tons of reserves averaging 0.71 grams per metric ton (9 million oz) gold. Overall, the Money Knob deposit at Livengood hosts 525 million metric tons of measured and indicated resource averaging 0.68 g/t (11.5 million oz) gold.

"The 11.5-million-ounce gold resource at the Livengood Gold Project is in a great jurisdiction and is highly leveraged to the price of gold," said International Tower Hill Mines CEO Karl Hanneman. Since the completion of the PFS, Tower Hill has focused its efforts on studies to optimize the economics of mining this world-class gold project.

This optimization work has primarily focused on metallurgical studies aimed at optimizing gold recoveries and refining the project flowsheet. The 2018 program included the collection of 4,000 kilograms (8,818 pounds) of metallurgical composites from select areas of Money Knob, the deposit that carries the gold resource at Livengood.

Roughly half of these samples were processed during 2018 to evaluate optimum grind size and to determine whether different recovery parameters should be applied to different areas of the orebody.

The balance of the samples collected are being used to further this metallurgical work during 2019.

This year, a US\$3.7 million program also included the continuation of environmental baseline studies needed to support future permitting and development.

Given the size of the gold deposit, coupled with it lying alongside a paved highway in Alaska's gold mining country, Tower Hill is confident that it can attract a strategic partner with a long-term development horizon to Livengood.

Three major shareholders – Paulson and Co. (31.9 percent), Tocqueville Asset Management (16.1 percent) and Electrum Group (14.2 percent) – share this view and as of June owned more than 62 percent of Tower Hill shares.

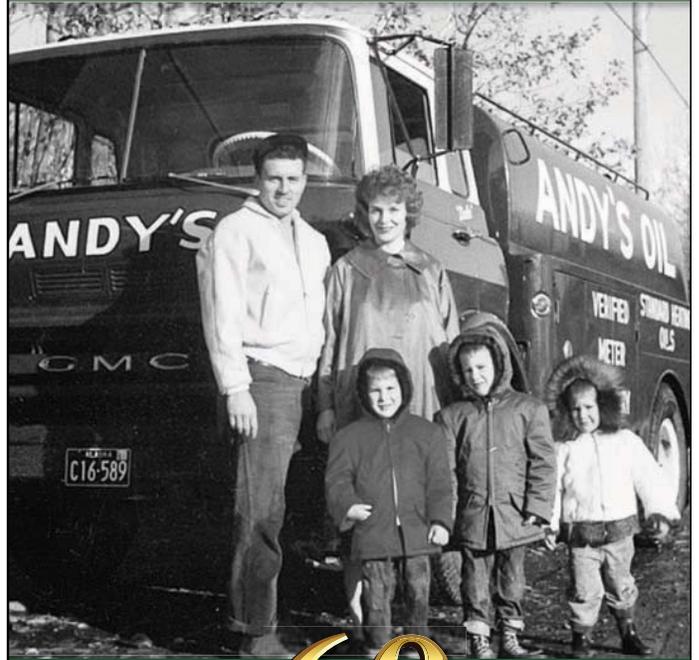
CHAIRMAN: Marcelo Kim
CHIEF EXECUTIVE OFFICER: Karl Hanneman
INVESTOR RELATIONS MANAGER: Rick Solie

CASH AND CASH EQUIVALENTS: US\$8.3 million (June 30, 2019)
WORKING CAPITAL: US\$8.1 million (June 30, 2019)
MARKET CAPITALIZATION: US\$100.2 million (Sept. 23, 2019)

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Western Alaska Copper & Gold CEO Kit Marrs takes notes as the drill tests the Round Top porphyry copper-molybdenum-silver target in the Illinois Creek District.

SHANE LASLEY

ALASKA

Western Alaska Copper & Gold

WAC&G consolidates Illinois Creek District

Western Alaska Copper & Gold is a private exploration company focused on the rich gold, silver, copper and zinc potential of the Illinois Creek Mining District located near the lower Yukon River about 65 miles southwest of the Galena and 120 miles north of the Donlin Gold Mine project.

This more than 26,000-acre land package blankets the past producing Illinois Creek gold-silver mine; Round Top, a porphyry copper-molybdenum-silver target; and Honker, a high-grade gold target. Western Alaska Copper & Gold, which has been advancing exploration at Round Top and Honker, entered into an exploration and option agreement on the Illinois Creek Mine property with Piek Inc. during 2018.

Joe Piekenbrock, who has won multiple awards for his Alaska discoveries during his tenure with Novagold Resources Inc. and Trilogy Metals Inc., is the owner of Piek Inc. and now chief exploration officer for Western Alaska Copper & Gold.

Upon signing the agreement that consolidates the three projects in this district originally discovered by Anaconda Minerals in 1980, Western Alaska Copper & Gold has begun to investigate the potential of resuming mining at Illinois Creek, which produced roughly 130,000 ounces of gold and 500,000 oz of silver from an open-pit mine and heap leach recovery plant that operated from 1997 until 2003.

While the company that developed Illinois Creek ran into hardship early when gold prices dipped below US\$300 per ounce, another firm leased the mine from the state of Alaska and was able to continue operations long enough to pay for the closure of the mine and put nearly US\$850,000 in a fund to support monitoring of the site.

This abbreviated operation left plenty of gold and silver behind. According to a resource study completed in March, Illinois Creek hosts 6.76 million metric tons of indicated resource averaging 1.04 grams per metric ton (226,000 oz) gold and 34.3 g/t (7.5 million oz) silver; plus 2.03 million metric tons of inferred resource averaging 1.06 g/t (70,000 oz) gold and 38.8 g/t (2.5 million oz) of silver.

This does not count gold and silver remaining on the heap-leach pad, which could provide additional material for a restart of operations. Western Alaska Copper & Gold plans to test this material in 2020. In the meantime, the company is having a preliminary economic assess-

ment prepared for the resumption of mining at Illinois Creek.

The company also began environmental baseline studies that would be needed for permitting Illinois Creek and other mines in the district.

Honker, which lies about six miles northwest of Illinois Creek, is seen as a potential satellite source of high-grade gold ore for a future mine. The main vein at Honker is about one to five meters thick and has been traced for about 800 meters along strike. This vein was historically drilled with 10 holes. While the recoveries from the historical drilling were poor, these holes encountered grades of up to 45 g/t gold. Western Copper & Gold believes Honker could add 200,000 to 300,000 oz of gold available to a future mine at Illinois Creek and is planning a 10- to 12-hole program to investigate this potential.

In addition to its work associated with studying the viability of resuming mining at Illinois Creek, the company continued to explore the potential of its Round Top copper project. This year the company completed roughly 1,536 meters of infill drilling ahead of calculating a maiden resource for this emerging porphyry deposit.

Highlights from 2016 to 2018 drilling at Round Top include 64.7 meters of 0.65 percent copper-equivalent in RT-18; 166 meters of 0.51 percent copper-equivalent in RT-19, including a 28.7-meter section of 1 percent copper-equivalent; 22.8 meters averaging 0.5 percent copper-equivalent in RT-22; 209.7 meters of 0.28 percent copper-equivalent in RT-23, including 37.4 meters of 0.63 percent copper equivalent; and 64 meters of 0.74 percent copper equivalent in RT-32.

Including this year's program, Western Alaska Copper & Gold has completed more than 9,900 meters of drilling into the Round Top porphyry. Once the assays from the 2019 program are complete, the company will have a maiden resource estimate calculated for this copper deposit.

The Illinois Creek district also hosts undrilled skarn deposits proximal to Round Top, as well as zinc-lead-silver targets. One zinc-rich targets just northeast of the Illinois Creek Mine, Waterpump Creek, hosts 166,000 tons of historical resource averaging 16.1 percent zinc, 5.5 percent lead and 9.5 g/t silver. A similar replacement style deposit lies northwest of Round Top.

PRESIDENT AND CEO: Kit Marrs
CHIEF EXPLORATION OFFICER: Joe Piekenbrock
ILLINOIS CREEK MANAGER: John Lamborn

MARKET CAPITALIZATION: US\$14.8 million (Sept. 23, 2019)

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 Tel: 520-237-1475 • kitmarrs@mac.com

ALASKA

Graphite One Inc.

TSX.V: GPH 

EV demand drives Graphite One in Alaska

With the goal of helping to meet the rocketing demand of graphite needed as anode material for the lithium-ion batteries that power electric vehicles, Graphite One Inc. is focused on advancing its Graphite Creek deposit in western Alaska toward development.

A 2017 preliminary economic assessment outlines a roughly 2,800-metric-ton processing facility at



Graphite Creek. Once this operation is running at full capacity, which the PEA slates for the sixth year of production, this mine would be churning out roughly 60,000 metric tons of 95 percent graphite concentrate per year.

In addition to the mine, the PEA also considers an advanced material processing facility to refine these concentrates into 41,850 metric tons of the coated spherical graphite used in lithium-ion rechargeable batteries and 13,500 metric tons of purified graphite powders annually.

According to a resource calculated early in 2019, Graphite Creek now hosts 10.95 million metric tons of measured and indicated resources averaging 7.8 percent (850,534 metric tons) graphite; plus 91.89 million metric tons of inferred resource averaging 8 percent (7.34 million metric tons) graphite.

This marks an 8 percent increase in grade and 14 percent increase in total graphite in the combined measured and indicated resource categories; and a 14 percent increase in grade and 48 percent increase in inferred resources, when compared to the resource used for the 2017 PEA.

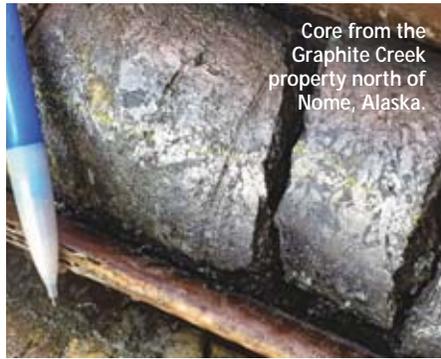
The company is planning to further expand the measured and indicated resource with a 2,000-meter drill program being carried out this year.

The increased and upgraded resource at Graphite Creek will form the basis for a prefeasibility study expected to be completed early next year.

In preparation for this PFS, Graphite One initiated a pilot-scale program aimed at further demonstrating that Graphite Creek is particularly well suited to fill the growing graphite demand being driven by batteries and the EVs they store power for.

The company coined the acronym STAX to describe the distinctive spheroidal, thin, aggregate and expanded graphite in the Graphite Creek deposit – characteristics that may make the material a good fit for high-tech and green energy sector applications that are driving the rapidly expanding graphite market.

Graphite One believes the uniqueness of STAX graphite could provide a major competitive advantage by delivering an American supply of high-end graphite products at lower



Core from the Graphite Creek property north of Nome, Alaska.

GRAPHITE ONE INC.

costs and with superior performance.

The naturally occurring spherical graphite is of particular interest because it is the form used as the anode material in lithium-ion batteries.

Preliminary tests found that more than 74 percent of the STAX flake graphite could be turned into spherical graphite without milling. To further test this material, Graphite One shipped roughly 12,000 pounds of graphitic material from surface sampling at Graphite Creek to a United States-based industrial partner for processing into advanced graphite materials.

Primary and secondary processing is being carried out on the bulk sample material from Graphite Creek, which includes the production of batches of value-added products for market sampling in the energy storage and other high-margin market segments.

Results from this pilot-scale program will also provide vital data and sample material for the PFS.

Together, the mine and advanced processing facility being considered in this detailed engineering and economic study are known as Graphite One.

"With the prospect of a low-cost, 40-year mine life using half of the identified graphite mineral resources and, given our projected production costs and conservative pricing assumptions, we are confident that Graphite One has the potential to become a reliable provider of graphite materials critical to clean-tech, high-tech and national security applications," said Graphite One CEO Anthony Huston.

EXECUTIVE CHAIRMAN: Doug Smith
PRESIDENT AND CEO: Anthony Huston
CHIEF OPERATION OFFICER: Stan Foo

CASH AND SHORT-TERM DEPOSITS: C\$907,442 (June 30, 2019)

WORKING CAPITAL: C\$1.03 million (June 30, 2019; secured US\$4.8 million loan on Sept. 9)

MARKET CAPITALIZATION: C\$6.5 million (Sept. 23, 2019)

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Constantine Metal Resources Ltd. ●●●●

TSX.V: CEM 

Constantine unlocks gold, advances Palmer

In order to focus on its flagship Palmer project in Southeast Alaska and to realize greater value from its portfolio of gold properties, Constantine Metal Resources Ltd. spun its gold assets into a new exploration junior, HighGold Mining Inc.

"Constantine will continue to create shareholder value by advancing the Palmer project and will allow shareholders to realize the value locked in the gold assets through their spin-out into a separate entity," said Constantine Metal Resources President and CEO Garfield MacVeigh.

With HighGold advancing the gold properties, Constantine focused its 2019 exploration on expanding and upgrading the zinc-copper-gold-silver-barite resources at the Palmer volcanogenic massive sulfide project near Haines, Alaska.

A preliminary economic assessment completed in June outlines plans for developing an economically robust and environmentally conscientious mine at Palmer.

The PEA considers an underground mine providing ore for a 3,500-metric-ton-per-day mill that would produce 1.07 billion pounds of zinc, 196 million lb of copper, 18 million ounces of silver, 91,000 oz of gold and 2.89 million metric tons of barite over an initial 11-year mine life. This operation is based on 4.68 million metric tons of indicated resource averaging 5.23 percent zinc, 1.49 percent copper, 30.8 grams per metric ton silver, 0.3 percent gold and 23.9 percent barite; and 9.59 million metric tons of inferred resource averaging 4.95 percent zinc, 0.59 percent copper, 69.3 g/t silver, 0.39 g/t gold and 27.7 percent barite. Underground mining would begin at the Palmer (Southwall-RW) deposit, which currently hosts all the indicated resource and about 56 percent of the inferred resources. During the third year of operation, AG Zone, a newly discovered deposit about 3,000 meters to the southwest, would be mined in conjunction with Palmer.

The capital costs to build this mine are calculated to be US\$278 million, which would be split between the Constantine Mining LLC Joint Venture partners, Constantine (51 percent) and Dowa Metals & Mining Co. Ltd. (49 percent).

A wide margin between operating costs and the value of the metals being mined creates compelling economics and a quick payback of the capital needed to develop this mine.

The PEA forecasts the Palmer Mine to have a post-tax net present value (7 percent discount rate) of US\$266 million; a 21 percent post-tax internal rate of return; and a payback period of 3.3 years.

Looking to expand the life of the mine beyond the 11 years considered in the PEA, the 2019 program included roughly 8,000 meters of drilling aimed at expanding the Palmer and AG deposits as well as testing other prospects within 2,000 meters of the mines detailed in the economic assessment.

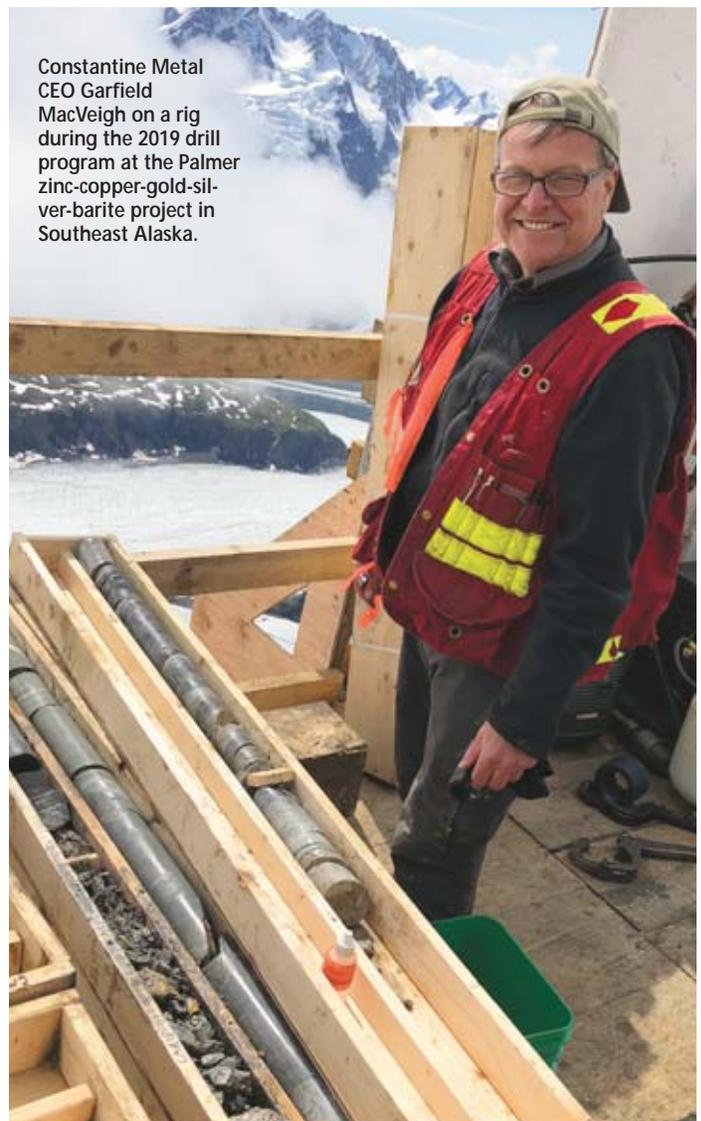
"We are excited to build upon the very strong results of the recently completed PEA, with a focus on continuing our excellent record of discovery and resource growth at Palmer," said MacVeigh.

VMS deposits such as those found at Palmer are formed as hydrothermal fluids associated with volcanic activity leave metal and sulfide deposits on the ocean floor. When emplaced, this area is typically fairly linear and along a horizon that matches the ocean floor at the time.

Due to structural folding from subsequent tectonic activity, more than six miles (10 kilometers) of the key VMS horizon at Palmer has been folded into a relatively compact area, which could allow for multiple deposits to be accessed by a single, centrally located portal.

Outcrops of the VMS horizon, coupled with geophysics and geological observations, is assisting in identifying new prospects close to the current resources. The most promising are HG, CAP and Waterfall, situated along steep folds between the Palmer and AG deposits.

Drills will also target expansion of the established deposits.



Constantine Metal CEO Garfield MacVeigh on a rig during the 2019 drill program at the Palmer zinc-copper-gold-silver-barite project in Southeast Alaska.

CONSTANTINE METAL RESOURCES LTD.

Now that the PEA is complete and encourages further advancement at Palmer, one of the next steps is to develop an exploration ramp that will provide a platform for drilling the deposits from underground with the spacing needed to advance pre-feasibility and feasibility level studies.

Toward this next step, the Palmer Joint Venture is awaiting final approvals to proceed with an underground exploration plan that includes developing a roughly 2,000-meter exploration ramp and 30,000 meters of underground drilling.

Part of this summer's work included portal site preparation, access road completion, and installation of waste rock and water management facilities support of this proposed underground development ramp and exploration drift.

The Palmer JV hopes to obtain confirmation of its permit approvals in time to begin underground exploration work in June of 2020.

CHAIRMAN: Wayne Livingstone
PRESIDENT AND CEO: Garfield MacVeigh
VP, EXPLORATION: Darwin Green

CASH AND CASH EQUIVALENTS: C\$2.7 million (April 30, 2019)
WORKING CAPITAL: C\$2.9 million (April 30, 2019)
MARKET CAPITALIZATION: C\$13.2 million (Sept. 23, 2019)

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ALASKA

HighGold Mining Inc.TSX.V: HIGH **HighGold hit the ground running in Alaska**

HighGold Mining Inc. was launched this summer to explore gold properties spun out of Constantine Metal Resources Ltd.

While the spin-out of HighGold was not finalized until early August, the new company hit the ground running with drills turning at Johnson Tract, a gold-rich volcanogenic massive sulfide VMS project in Southcentral Alaska.

Situated about six miles west of Cook Inlet and roughly 125 miles southwest of Anchorage, the 20,942-acre Johnson Tract property hosts a gold and base metals deposit that is reminiscent of the historical Eskay Creek Mine in British Columbia.

Under a joint venture with Cook Inlet Region Inc. (CIRI), the underlying Johnson Tract landowner, Anaconda Minerals discovered the Johnson Tract deposit in 1982. The discovery hole cut 102.6 meters grading 10.94

grams per metric ton gold, 8.01 percent zinc, 0.75 percent copper, 2.13 percent lead and 8.5 g/t silver; including 50 meters averaging 20 g/t gold, 9.4 percent zinc, 1 percent copper, 2.8 percent lead and 12.7 g/t silver.

Westmin Resources Ltd., which in the 1990s was investigating the idea of shipping ore from Johnson Tract to mill facilities at its Premier Mine in northwestern British Columbia, carried out extensive engineering studies for the Alaska property.

Based on 88 holes drilled prior to 1995, Westmin calculated that Johnson Tract had 1.04 million metric tons of resource averaging 10.05 grams per metric ton gold, 7.63 g/t silver, 8.32 percent zinc and 1.13 percent lead.

Resampling carried out by Constantine prior to spinning Johnson Tract into HighGold Mining returned grades and widths that strongly correlate with the drill results that formed the basis of this resource calculation.

An industry compliant NI 43-101 technical report confirmed that the "re-sampling program replicated similar assay values as historic data, indicating that the historic assay results can be considered accurate and representative of the mineralization observed."

The primary objective of HighGold's 2019 program is to complete enough drilling to elevate the historical resource to NI 43-101 standards, setting the property up for an even more robust drill program in 2020. In addition to the main deposit area, a 7.5-mile stretch of prospects at Johnson Tract provide HighGold plenty of upside potential.

One such prospect is Northeast Offset, a target that is interpreted as the fault displaced extension of the Johnson Tract deposit. Limited historic drilling at this target has documented alteration and mineralization that shares characteristics with the main deposit.

Difficult Creek, which is about three miles northeast of the main Johnson Tract deposit is another prospect that was tested with two holes in the 1990s.

DC-001, cut three meters of 7.54 g/t gold, 3.72 percent zinc, 0.11 percent copper, 1.15 percent lead and 27.4 g/t silver; and DC-02 encountered 13 meters of 8.57 g/t gold, 4.7 percent zinc, 0.5 percent copper, 0.9 percent lead and 37.7 g/t silver.

In addition, Easy Creek, Kona and South Valley show promising surface results that require further field work to establish drill targets. HighGold Mining's portfolio also includes the Munro-Croesus, Golden Mile and Golden Perimeter projects in Ontario's Timmins Gold Camp; a Yukon joint venture project; and certain royalty rights in Ontario.

PRESIDENT AND CEO: Darwin Green
VP, STRATEGIC PLANNING: Naomi Nemeth
VP, EXPLORATION: Ian Cunningham-Dunlop

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ALASKA-BC-YUKON

Coeur Mining Inc. ●●

NYSE: CDE 

Success funds Silvertip, Kensington drilling

Coeur Mining Inc. entered 2019 with more silver reserves at higher grades, thanks to a maiden reserve calculation for Silvertip, a northern British Columbia silver mine the company acquired in 2017. While this newly built mine came with a rich resource base, a technical report and mine plan to elevate the high-grade silver resources to reserves had yet to be completed.

With the information gleaned from a rigorous drill program, by the end of 2018 Coeur had converted some 58 percent of the resources that came with Silvertip into enough reserves to support the mine for about 4.5 years.

According to this maiden reserve calculation, Silvertip hosts 1.6 million metric tons of reserves averaging 289 grams per metric ton (14.98 million oz) silver, 8.2 percent (292.71 million pounds) zinc and 5.6 percent (198.66 million lb) lead.

This is enough ore to boost Coeur's silver-equivalent reserves by 14 percent, while also boosting its company-wide silver reserve grade by 16 percent, as the silver reserve grade at Silvertip going into 2019 was 15 times higher than the combined silver reserves grades of the Chicago-based miner's other projects.

To expand Silvertip resources and reserves, Coeur will focus on drilling five near-mine zones – Discovery, Discovery North, Central, Silver Creek and 65.

Discovery zone is the primary target this year.

Highlights from Discovery zone drilling through mid-year include 7.9 meters of 428 g/t silver, 19.1 percent zinc and 8.1 percent lead in DSC19-Pad4-002; 7.9 meters of 153 g/t silver, 12.6 percent zinc and 3.1 percent lead in DSC19-Pad4-004; and 4.5 meters of 483 g/t silver, 16.5 percent zinc and 10.6 percent lead in DSC19-Pad1-003.

Given its success at Discovery through mid-year, the remainder of the 2019 Silvertip exploration drilling is focused on expanding the resource there to the north, east and south.

The company also invested in Alianza Minerals Ltd., a junior exploring the Tim silver property in southern Yukon.

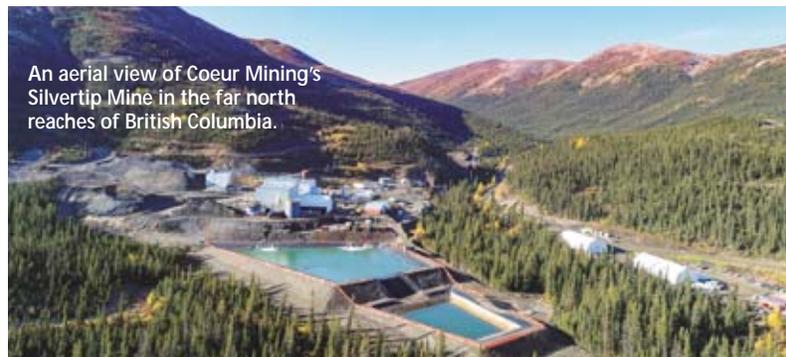
Situated just 12 kilometers (7.5 miles) north of Silvertip, Tim is an early staged exploration property with similar high-grade silver-lead-zinc mineralization.

Historical chip sampling from a trench cut across a zone of carbonate replacement mineralization at Tim returned 352 g/t silver and 9.12 percent lead across four meters. Similar mineralization was also reported in adjacent trenches 180 and 250 meters on either side of the central trench.

Under a June agreement with Alianza, Coeur can earn a 51 percent interest in Tim by funding C\$3.5 million in exploration over five years and making staged cash payments totaling C\$275,000. Coeur can then elect to complete an option to earn 80 percent in the property by funding a positive feasibility study in the following three years and making



**MITCHELL
KREBS**



An aerial view of Coeur Mining's Silvertip Mine in the far north reaches of British Columbia.

COEUR MINING INC.

annual payments of C\$100,000.

At Kensington, reserve tonnages going into 2019 shrunk slightly when compared to a year earlier. However, thanks to higher grade reserves from the Jualin deposit, this lower quantity of ore contains more gold.

Going into 2019, Kensington has 2.59 million tons of proven and probable reserves averaging 6.6 g/t (552,000 oz) gold, compared to 2.67 million tons of proven and probable reserves averaging 6.1 g/t (520,000 oz) gold a year earlier.

This ore is contained in two historic mine areas that date back to the dawn of the 20th century –Kensington and Jualin.

The roughly 9 percent increase in reserve grade at this Southeast Alaska operation is largely attributed to upgrading portions of the resources in the Jualin deposit to reserves.

The maiden reserve estimate for Jualin, reported by Coeur last year, outlined 157,600 tons of ore averaging 14.6 g/t (74,100 oz) gold. Supplementing mill feed with this higher grade ore is expected to increase Kensington gold output over the coming years.

The company anticipates mining 100 tons per day from Jualin in 2019 and more than 180 tons per day in 2020.

This year's exploration drilling at the Southeast Alaska operation focused on the Kensington Mine side of the property.

During the second quarter, Coeur had three underground core drill rigs focused primarily on resource expansion and infill drilling at Lower Raven and Elmira zones.

The company also had one surface rig that began drilling in late June on the Comet Vein, which lies directly above the Kensington Mine access tunnel.

Coeur uses a success-based strategy when it comes to allotting exploration budgets – adjusting the budget to focus on projects within its portfolio that are doing the best job of adding resources and reserves. At mid-2019, Kensington and Silvertip were at the top of Coeur's exploration list.

"We ... continued to invest in our success-based exploration program, with encouraging near-mine resource expansion drill results at Kensington and Silvertip," Coeur Mining President and CEO Mitchell Krebs said in August.

Coeur Mining also holds a 9.6 percent stake in Rockhaven Resources Ltd., a junior exploring the Klaza gold project in southern Yukon. Klaza currently hosts 4.46 metric tons of indicated resource averaging 4.8 g/t (686,000 oz) gold and 98 g/t (14.1 million oz) silver; and 5.71 million metric tons of inferred resource averaging 2.8 g/t (507,000 oz) gold and 76 g/t (13.9 million oz) silver.

CHAIRMAN: Robert Mellor
PRESIDENT AND CEO: Mitchell Krebs
VP, EXPLORATION: Hans Rasmussen

CASH AND CASH EQUIVALENT: US\$37.9 million (June 30, 2019)
WORKING CAPITAL: US\$9.6 million (June 30, 2019)
MARKET CAPITALIZATION: US\$1.37 billion (Sept. 23, 2019)

104 S. Michigan Ave. Suite 900
Chicago, Illinois 60603
312-489-5800
www.coeur.com

Looking out over Coeur's Kensington gold mine in Southeast Alaska.



COEUR MINING INC.

ALASKA-BC

Hecla Mining Co. ● ● ● ●

NYSE: HL 

Drills expand Greens Creek beyond 2030

Hecla Mining Company's Greens Creek Mine in Southeast Alaska has enough reserves to keep the high-grade underground silver mine in operation until 2030.

The Greens Creek Mine now has 9.23 million tons of proven and probable reserves averaging 11.5 oz/t (107.1 million oz) silver; 0.09 oz/t (840,000 oz) gold; 7.6 percent (706,470 tons) zinc; and 2.8 percent (227,740 tons) lead.

This marks the highest silver reserves for Greens Creek since Hecla bought full ownership of the underground mine in 2008.

An updated NI 43-101 technical report completed this year for Greens Creek details an optimized mine plan that accelerates access to higher-grade ore, which will allow some of the highest-margin reserves to be extracted in the earlier years of the mine plan, which is now estimated to extend out to 2030.

This major increase in reserves comes on top of replacing the 845,398 tons of ore containing 10.3 million oz of silver, 79,087 oz of gold, 63,116 tons of zinc and 23,656 tons of lead that was processed through the Greens Creek mill last year.

What is equally as impressive is the property hosts roughly as much material in resources, which can potentially be elevated to reserves and further extend the life of the mine.

Going into 2019, Greens Creek hosted 7.47 million tons of measured and indicated resources averaging 13 oz/t (97.4 million oz) silver; 0.1 oz/t (726,000 oz) gold; 8.2 percent (609,350 tons) zinc; and 3.1 percent (227,740 tons) lead.

This is a 66.1 million oz (211 percent) jump in the amount of silver and 467,700 oz (181 percent) rise in the amount of gold reporting to measured and indicated resources since the beginning of 2018. This rise comes from bringing the West, Southwest, 9A, and 200 South zones into the measured and indicated resources category – partially offset by losses from elevating resources in the Gallagher and East zones to reserves.

Despite the amount of resources being elevated to higher confidence categories, the amount of silver in inferred resources increased by 3.3 million oz, while the gold in this lowest resource category decreased by 3,200 oz.

Hecla's 2019 exploration at Greens Creek continues to focus on expanding and upgrading resources.

"At Greens Creek we could see reserve increases again this year as the resources are upgraded," said Hecla President and CEO Phillips Baker, Jr.

Toward this objective, definition drilling



A drill tests Kinskuch, a large silver-zinc-lead project southeast of Stewart, British Columbia.

HECLA MINING COMPANY

during 2019 is targeting the East Ore, NWW, 9A and 200 South zones.

Exploration drilling this year is testing extensions of 200 South Zone and the Deep Southwest.

Hecla is also exploring Kinskuch, a large silver project southeast of Stewart, British Columbia. Drilling completed by Hecla last year defined silver-enriched, base metal mineralization over a three-mile-long stretch of the Illiance Valley at Kinskuch.

Historical rock chip and grab samples collected from several occurrences along the Illiance River trend returned values of up to 3,761 g/t silver, 17 percent zinc and 7.6 percent lead.

Trenching and channel sampling completed in 2011 include a 2.2-meter-wide interval averaging 530 g/t silver, 4.52 percent zinc and 5.5 percent lead; and a 1.9-meter interval averaging 373 g/t silver, 10.4 percent zinc and 16 percent lead.

Four core holes were drilled in 2011 tested the depth extensions of the surface trenching. Hole KN11-02, drilled in the southern portion of the trend, cut 2.8 meters averaging 318 g/t silver, 6.5 percent zinc, 2.2 percent lead and 0.4 g/t gold.

KN11-03, drilled 500 meters to the south, cut 3.9 meters averaging 268 g/t silver, 6.5 per-

cent zinc, 1.3 percent lead and 0.20 g/t gold. KN11-04, drilled from the same pad as hole KN11-03 but angled a bit further south, cut 9.7 meters averaging 77 g/t silver, 3.9 percent zinc and 1.4 percent lead.

While Hecla has not published results from its 2018 drilling at Kinskuch, the Idaho-based miner said the high-grade zones identified in the Illiance Valley appear to have continuity and may represent two parallel mineralized structures or two limbs of a folded body. A preliminary resource model is being prepared for Kinskuch.

CHAIRMAN: Ted Crumley
PRESIDENT AND CEO: Phillips S. Baker, Jr.
SENIOR VP, EXPLORATION: Dean McDonald

CASH AND SHORT-TERM DEPOSITS: US\$239.7 million (June 30, 2018)
WORKING CAPITAL: US\$247 million (June 30, 2018)
MARKET CAPITALIZATION: US\$1.01 billion (Sept. 23, 2019)

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ALASKA-YUKON

Kinross Gold Corp. ●

NYSE: KGC / TSX: K.TO 

Kinross finding more gold across Fort Knox property

Kinross Gold Corp. focuses its in-house exploration on high-quality brownfield projects and the discovery of new resources within the existing footprint of several of its mine properties, including extensions of known mineralization, as well as looking at other properties in surrounding districts.



The Fort Knox Mine in Interior Alaska is an example of the Toronto-based gold miner's brownfield success. In its 23rd year of operation, this open-pit mine a few miles north of Fairbanks is now 15 years past the original mine plan and still has enough gold in reserves to last until 2030.

Going into to 2019, Fort Knox had 267.6 million metric tons of proven and probable reserves averaging 0.4 g/t (3.04 million oz) gold. These 11 years of reserves are largely found at Gilmore, an expansion project immediately west of the open pit currently being mined at Fort Knox.

The initial phase of expansion into the



KINROSS GOLD CORP.

Kinross has outlined enough reserves at its Fort Knox Mine in Alaska to keep these trucks hauling ore until at least 2027 and the company continues to add to resources around the pit and across the wider property.

Gilmore project area is expected to extend mining at Fort Knox to 2027 and gold recovery from heap leaching to 2030.

With Kinross continuing to find new stores of gold on the property, including extensions of Gilmore, there are good indications that Fort Knox will remain an Interior Alaska gold producer beyond 2030.

During 2018, the company completed roughly 11,000 meters of drilling on the Fort Knox property.

Much of this drilling targeted East Wall, an expansion area on the opposite side of the pit from Gilmore.

All 20 holes drilled in the East Wall area last

year tapped grades similar to those currently being processed through the mill or stacked on the heap leach pad at Fort Knox. One intercept, however, stands out amongst the rest. At a depth of 399.3 meters, hole FFC18-1768 cut 33.5 meters of 2.18 g/t gold.

Western extensions of Gilmore and the bottom of the pit were other targets drilled last year.

Kinross is continuing to explore the East Wall target and western extension of Gilmore in 2019.

The company also continues to have drills turning at Gil-Sourdough, a satellite deposit about seven miles northeast of the mill.

According to the most recent calculation published by Kinross, Gil-Sourdough hosts 29.5 million metric tons of indicated resource averaging 0.56 g/t (533,000 oz) of gold.

Kinross said it is evaluating potential synergies between Gil and ongoing operations at Fort Knox.

Another facet of Kinross' exploration strategy is to maximize its exposure to promising greenfield opportunities through mutually beneficial partnerships with high-quality junior exploration companies.

Through this investment in juniors, the Toronto-based major owns a 6.5 percent stake in Victoria Gold Corp., owner of the newest large-scale gold mine in the Yukon. This mine, Eagle Gold, is modelled largely after the heap leach portion of Fort Knox.

Kinross also owns a 19.9 percent interest in White Gold Corp., a company that owns nearly 1 million acres of gold prospective lands in Yukon's famed White Gold District.

Kinross also owns a 9.9 percent stake in Nighthawk Gold Corp., a company exploring the district-scale Indin Lake gold property in Northwest Territories.

CHAIRMAN: Catherine McLeod-Seltzer
PRESIDENT AND CEO: J. Paul Rollinson
SENIOR VP, GEOLOGY: John Sims

CASH AND SHORT-TERM DEPOSITS:
US\$475.4 million (June 30, 2019)

WORKING CAPITAL: US\$1.09 billion (June 30, 2019)

MARKET CAPITALIZATION:
US\$6.68 billion (Sept. 23, 2019)

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Crews load ore from the Eagle Gold deposit bound for the heap-leach pad at Victoria Gold's newly completed mine in the Yukon.

Yukon Exploration 2019

Mineral riches lure explorers to Yukon

Government, industry focus on First Nation relations, roads

By ROSE RAGSDALE
For Mining News

Though mineral exploration in Yukon Territory this year lagged the pace seen in 2018, mine development projects advanced at a steady clip in 2019, while several past-producing mines moved toward resuming output.

Yukon ranked fourth in Canada for projected spending on mineral exploration and deposit evaluation for 2018, according to statistics distributed by Natural Resources Canada. Spending for mineral exploration and deposit evaluations totaled C\$249.4 million, made up of C\$142.6 million for exploration and C\$106.8 million for deposit evaluations.

Projected spending for 2019, however, is sharply down from year-ago levels.

So far in 2019, the territory has attracted exploration expenditures totaling C\$112 million, with only 61 active projects, according to the Yukon Geological Survey.

The Yukon government marked the seventh consecutive year

of its popular mining exploration incentives program in 2019 by offering C\$1.4 million to applicants with eligible hard rock and placer projects.

Reduced by C\$200,000 from C\$1.6 million a year earlier, the program helped numerous juniors and prospectors carry out small exploration campaigns, including several explorers seeking vanadium and tin, according to Scott Casselman, head of YGS' Mineral Services.

The C\$200,000 cut from the incentives program also enabled the YGS to hire a mineral assessment geologist to assist with new projects, including development of the Beaver River Land Use Plan, which is needed for construction of an access road to connect Yukon's existing highway system with ATAC Resources Inc.'s Tiger project.

In 2019, outreach initiatives aimed at improving understanding and awareness of First Nations with traditional territories and rights within the northern territory took center stage.

The Yukon Chamber of Mines, for example, recognized im-

continued on page 42

YUKON EXPLORATION *continued from page 41*

portant contributions to Yukon mining made by the First Nations and their individual members, dating back to the Klondike Gold Rush of the 1890s.

In January, Kate Carmack was inducted into the Canadian Mining Hall of Fame, joining the so-called “Klondike Discoverers” – Skookum Jim Mason, Dawson Charlie, George Carmack and Robert Henderson – who received the honor together in 1999 for the discovery that led to the Klondike Gold Rush.

“As a First Nation woman, Kate considered herself equal to any man. Having her recognized as a mining icon after years of obscurity, is one step towards reconciling all First Nation roles in historical events and the contribution women have made in mining,” Zena McLean, one of Carmack’s descendants, told a Toronto audience as she accepted the award.

Yukon First Nations have believed, for generations, that Kate Carmack found that first gold nugget in 1896. As a result, an article written by Eileen Vance-Duchesne in the summer of 1999 highlighted the earlier induction oversight.

“For a lot of us, it feels like a past wrong being righted,” commented Yukon Chamber Mike Burke at the ceremony. “It’s probably the most meaningful and significant piece of reconciliation the Yukon Chamber of Mines has been associated with.”

Burke said the Yukon mining industry is committed to working with Yukon First Nations and women to ensure the industry is more inclusive and representative. “If there is to be a future for mining in the Yukon, it can only be achieved through respect and meaningful collaboration with Yukon’s First Nations,” he added.

A few weeks later, the chamber unveiled an online reference guide for mineral explorers and others in the mining industry on requirements and expectations in Yukon Territory for engagement and consultation with the territory’s First Nations.

Titled, “Yukon First Nations Engagement & Consultation Tool Website and Mobile App for the Mineral Exploration Industry,” the guide not only provides information about all 14 Yukon First Nations and three indigenous groups centered outside Yukon with interests in the territory, it also provides a comprehensive information base across all traditional territories in Yukon with a summary of engagement and consultation best practices designed to encourage mutually beneficial partnerships. Available via print, website and mobile app, the guide gives a brief history of Yukon, mining success stories that emphasize mutually beneficial relationships with First Nations and other important information otherwise difficult to find in one place.

2020 outlook brighter for Yukon

Yukon mining activity slowed dramatically in 2019 and economic growth in the territory is expected to follow suit before rebounding in 2020, according to the Conference Board of Canada.

New mines coming online will drive economic growth in Yukon next year, said economists in the Conference Board’s “Summer 2019” report.



YUKON ARCHIVES

“Territorial economies are being positively impacted by new mines that are propelling growth in the next few years,” said Marie-Christine Bernard, director of provincial and territorial forecast at the Conference Board. “However, some of the countervailing winds are the slower Canadian economy compounded by higher geopolitical risk (i.e. Brexit) and weaker growth in the global economy.”

Yukon’s annual unemployment rate is expected to remain well below 4 percent during the next several years, and labor shortages will become a problem in the territory.

Yukon wages, however, will grow at an average annual pace of 3 percent between now and 2025, which is “much faster than inflation,” the economist said.



TRIUMPH GOLD CORP.

Mt. Freegold Road provides access to several copper-gold projects in the Yukon.

Major road projects advance

Yukon’s government, meanwhile, focused on road and infrastructure improvements in the territory. The Canadian government, Yukon government and private industry agreed in 2017 to spend C\$469 million on about 650 kilometers (524 miles) of upgrades of existing roads in the Dawson and Nahanni ranges – two key areas of high mineral potential and active mining in Yukon.

In April, Yukon and the Little Salmon Carmacks First Nation reported reaching an agreement to proceed with construction of a proposed bypass road around the community of Carmacks, located about 70 kilometers (46 miles) southeast of the Freegold Mountain project. The bypass, part of the Yukon Resource Gateway Project, will significantly reduce traffic flow through the community by redirecting industrial traffic, such as large ore-hauling trucks, around Carmacks on a new north-south thoroughfare.

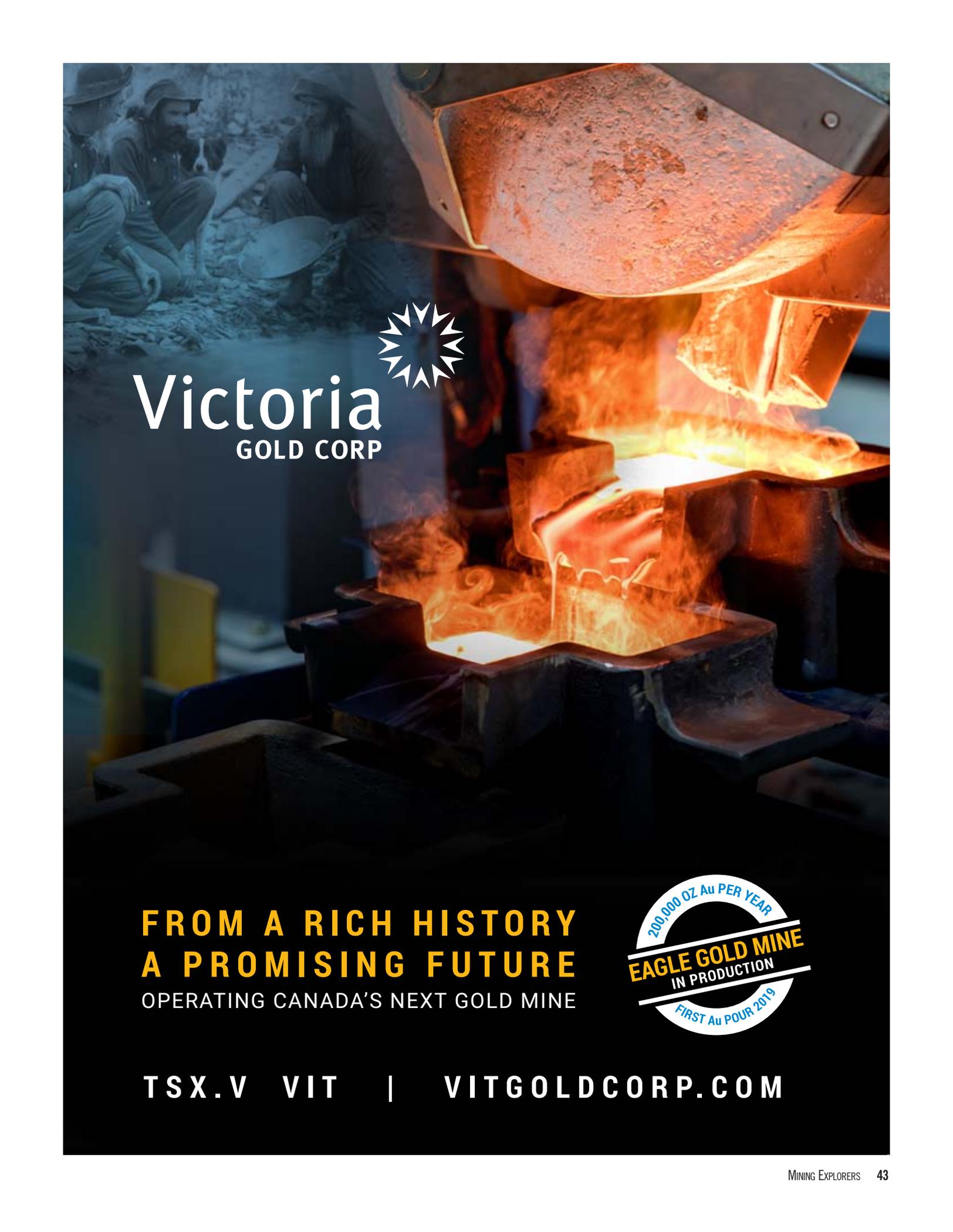
The bypass pact is the first project agreement for the Gateway Project, which is also funding an upgrade to 82 kilometers (51 miles) of the existing Freegold Road, which provides access to all portions of the Freegold Mountain property and to other mineral-rich properties.

“This agreement is one of a series of project agreements we are hoping to finalize with affected First Nations,” said Yukon Minister of Energy, Mines and Resources Ranj Pillai in announcing the agreement. “This new road, along with the other new and improved roads related to the Yukon Resource Gateway Project will help enhance the development of Yukon’s mineral resource sector.”

The Carmacks bypass also will improve access to the Mount Nansen site and assist the territory’s remediation efforts, Pillai added.

In addition to the bypass project, upgrades to the Casino

continued on page 44



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YUKON EXPLORATION *continued from page 42*

Road and new road construction between the Casino and Coffee terminus points are planned. The Nahanni Range component of the Gateway Project involves upgrades to the existing Nahanni Range Road from its junction with the Campbell Highway to the Northwest Territories border.

In July, the Yukon officials also reported approval of C\$157 million in federal and territorial funding for reconstruction and rehabilitation of critical portions of the North Klondike Highway between Carmacks and the Dempster Highway cutoff. The project, scheduled to start in 2020 and be completed in 2027, is designed to increase safety, help grow Yukon's mineral resource sector, and reduce the costs of highway maintenance.

Mines on the cusp

Yukon has at least a half-dozen mine projects nearing production, including three mines that ceased output within the past decade.

The Minto copper-gold mine, about 240 kilometers (145 miles) northwest of Whitehorse, shut down last fall after owner Capstone Mining Corp. failed to complete a sale of the operation to UK-based Pembridge Resources Ltd. This spring Pembridge agreed to pay up to US\$20 million for the mine to Capstone in staged payments that hinge on the mine going back into production and the price of copper. The buyer aims to return Minto to production by year's end and mount new exploration to extend its current four-year mine life.

Alexco Resource Corp. shut down the Bellekeno Mine in 2013 due to low silver and base metal prices. The company has continued to explore its property in the Keno Hill silver district to build resources in hopes of re-starting silver output when prices rebound. Alexco is currently advancing its Birmingham and Flame & Moth deposits toward production.

This spring the explorer began a surface exploration program near the Birmingham deposit with at least 7,500 meters of drilling. Alexco also reported an indicated resource (including reserves) for Birmingham, totaling 32.9 million ounces silver averaging 930 grams per metric ton. The deposit remains open to the northeast and at depth.

The Wolverine Mine, a volcanogenic massive sulfide operation that began production in 2011, is on care and maintenance after being shut down and flooded by owner Yukon Zinc Corp. in 2015 due to



low metals prices. In October 2018, the Yukon government said the mine had been sold to a new owner that is working to resume production.

At the historic Brewery Creek gold mine near Dawson, owner Golden Predator Mining Corp. is also working to resume production.

Golden Predator gave the Yukon government formal notice Aug. 25 that it is moving the mine into the production phase from temporary closure status. The notice formally advises Yukon of the commencement of development/production activities on the Brewery Creek site and has been accepted by Yukon officials.

A licensed brownfields heap leach gold mine that Viceroy Minerals Corp. operated from 1996 to 2002, Brewery Creek was closed in 2002 following a collapse of the gold price to less than US\$300/oz.

Golden Predator commenced work on restarting the mine project in 2009.

Exploration near new mine

At the new Eagle Gold Mine, Victoria Gold Corp. reported 95 percent completion of construction in June and poured its first gold on Sept. 17. Eagle is expected to produce about 200,000 oz gold annually over a 12-year mine life.

Victoria is also continuing exploration of the Dublin Gulch property where the Eagle mine is located. Work in 2019 focused on the Nugget zone about 12 kilometers (7.5 miles) east of the Eagle deposit. A diamond drill program planned at Raven for 2019 will test a coincident gold, arsenic and bismuth in soils anomaly defined from the 2018 soils geochemical program. Victoria said the 2019 program also will test other targets identified in 2018 exploration.

Western Copper and Gold Corp. reported progress in developing an open pit

copper-gold mine at the porphyry copper-gold-molybdenum Casino property as a conventional flotation mill and gold heap leach mine. The project boasts 965 million metric tons mill ore and 157 million metric tons heap leach material in proven and probable reserves, containing 4.5 billion pounds copper and 8.9 million oz gold, plus additional resources.

Currently in the adequacy stage of permitting for production beginning in 2021, the explorer conducted a C\$3.3 million drill campaign at Casino in 2019 aimed at converting inferred mineralization to the indicated category. With 6,000 meters completed by July, Western Copper said successful exploration would extend the project's estimated 22-year mine life.

Goldcorp Inc., which completed a merger with Newmont Mining Corp. in April to become Newmont Goldcorp Corp., one of the largest gold miners in the world, hopes to develop a gold mine at the Coffee project in central Yukon.

Prior to the merger, Goldcorp aimed to develop Coffee, as an open pit, heap leach mine by 2021 and produce about 2 million oz gold from the deposit located in the White Gold district of the Dawson Range.

The project stalled in 2017 due to consultation issues with local First Nations. The project is currently being reviewed by the Yukon Environmental and Socio-economic Assessment Board.

Explorers return to Yukon

Yukon attracted a score of other explorers with 2019 programs targeting a variety of projects, from very early stage prospecting to follow-up drilling. Prominent among this group are:

ATAC Resources Ltd., which continued work at its extensive Rackla Gold project in northcentral Yukon. The western part of the property, the Rau Trend, includes

A drill tests Raven, a target that is beginning to look like another future source of gold-rich ore on the Dublin Gulch property, home to Victoria Gold's Eagle Gold Mine in the Yukon.



the Tiger carbonate replacement gold deposit (5.68 million metric tons of measured and indicated resources averaging 2.66 g/t (485,700 oz) gold). YESAB recommended construction of an access road to the site, but final approval for the artery is pending.

The 2019 program focused on follow-up exploration at the Rau project near the newly discovered Bobcat gold-copper skarn target where gold, copper, silver and tin anomalies were identified in 2018. By July, the explorer had expanded the gold-copper target and begun diamond drilling in the area.

ATAC optioned the central part of the Rackla Gold property (Orion) to Barrick Gold Corp. in 2017, but the major terminated the option at the end of 2018 after completing a 7,410-meter (16 holes) diamond drill program that intersected high-grade gold in four step-out holes along the Anubis fault.

ATAC Resources' eastern portion of the Rackla belt is the Osiris project, which hosts the Conrad, Osiris, Sunrise and Ibis Carlin-style gold zones.

Triumph Gold followed up in 2019 on aggressive exploration of the Freegold Mountain copper-gold project in recent years in hopes of identifying the causative intrusion at depth that delivered rich and varied mineral deposits across the 202 square kilometers (78 square miles) of contiguous claims. The explorer planned to drill a minimum of 5,000 meters in five holes that targeted high-grade, gold-rich, copper-gold porphyry-style mineralization identified in 2018, including a 1,600-meter hole in the Blue Sky Zone – the deepest hole ever drilled by mineral explorers in the Yukon – as well as 1,000-meter holes to test other targets on the property.

White Gold Corp. also continued to explore its large portfolio
continued on page 46

Ahtna

OUR STRENGTH



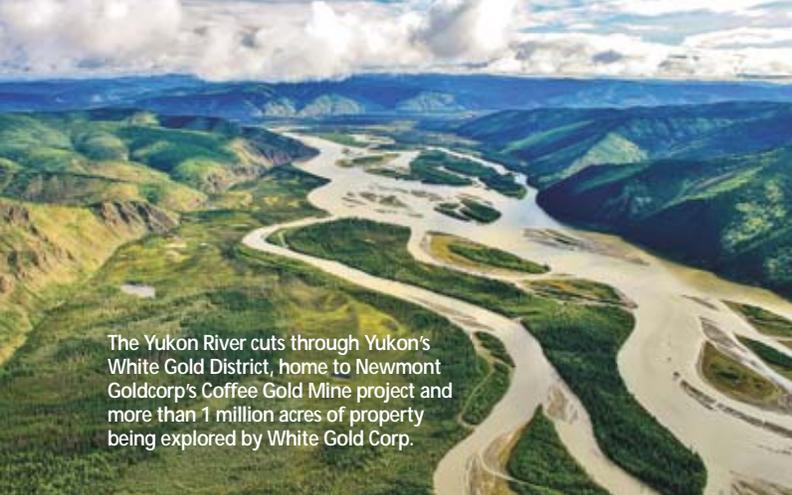
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An Alaska Native Corporation

ahtna-inc.com



SHANE LASLEY

The Yukon River cuts through Yukon's White Gold District, home to Newmont Goldcorp's Coffee Gold Mine project and more than 1 million acres of property being explored by White Gold Corp.

YUKON EXPLORATION *continued from page 45*

lio of properties in western Yukon in 2019 with a C\$13 million campaign designed to follow up on the Vertigo discovery at its JP Ross property; expand the Golden Saddle and Arc resources on the White Gold property with diamond drilling on the GS West discovery and other nearby targets; and increase the 230,000 oz VG resource (4.4 million metric tons grading 1.65 g/t gold inferred resource at a cut-off of 0.5 g/t gold) on the QV property that it acquired from Comstock Metals Ltd.

Klondike Gold Corp. mounted a C\$2 million exploration program in 2019 at its 576-square-kilometer (about 222 square miles) Klondike District Property south of Dawson City. The explorer targeted prospective areas of high-grade gold mineralization near 2018 drilling successes at the Gay Gulch and Nugget zones, as well as Lone Star Zone expansion targets. In early August, Klondike reported drilling 913 meters in 12 holes in the Nugget Zone, intersecting intervals of high-grade gold and discovering a new parallel zone of high-grade mineralization. Klondike is also testing other high-priority gold targets at the Bonanza, Nugget and Eldorado Fault areas with soil sampling, GT-Probe deep overburden drilling and Lidar surveys.

Other Yukon explorers seeking precious metals in 2019 include: Luckystrike Resources Ltd. returning to its Lucky Strike

property in the White Gold district; Stratabound Minerals Corp. exploring its Golden Culvert Project in Southeast Yukon; Banyan Gold Corp. exploring the Aurex-McQuesten Project near Keno in central Yukon; Strategic Metals Ltd. exploring three properties in southwestern Yukon – Meloy (copper-molybdenum-gold-silver), Sixty Mile (porphyry copper-silver-gold-molybdenum) and Hartless Joe (gold-silver), and several others; Aben Resources Ltd. exploring its Justin Gold project in southeastern Yukon; Strikepoint Gold Inc. exploring its Golden-Oly and PDM projects near the North Canol road in eastern Yukon; and Metallic Minerals Corp. followed up in 2019 on early-stage exploration of its Keno Silver project located near Alexco Resource's silver project in the Keno Hills silver district. Newmont Mining terminated an option it took on Goldstrike Resources Ltd.'s Plateau property at year's end 2018, after drilling 7,753 meters in 26 holes, collecting soil samples and ground geophysical surveys.

Base metals exploration heats up

Fireweed Zinc Ltd. continued exploration of the historical Tom and Jason sedimentary exhalative lead-zinc deposits on its MacMillan Pass property in eastern Yukon. The junior carried out drilling, ground gravity and airborne Lidar surveys, geological mapping, sampling, and prospecting this year.

Cantex Mine Development Corp. mounted an exploration program in 2019 to follow up its 2018 discovery of massive sulfide mineralization containing galena and sphalerite at its 14,077-hectare (34,784 acres) North Rackla property in central Yukon. The explorer planned to drill 17,000 meters in the Massive Sulphide Zone this year and conduct geophysical and geochemical surveys on the property.

Nickel Creek Platinum Corp. said in August it will conduct a modest geophysics and sampling program at its Nickel Shaw project in southwestern Yukon that is designed primarily to test the Quill exploration target area, which lies along trend about 1,700 meters to the southeast of the 2,800-meter main Wellgreen deposit. Last year, the company reported an updated measured and indicated resource of 323 million metric tons containing 1.9



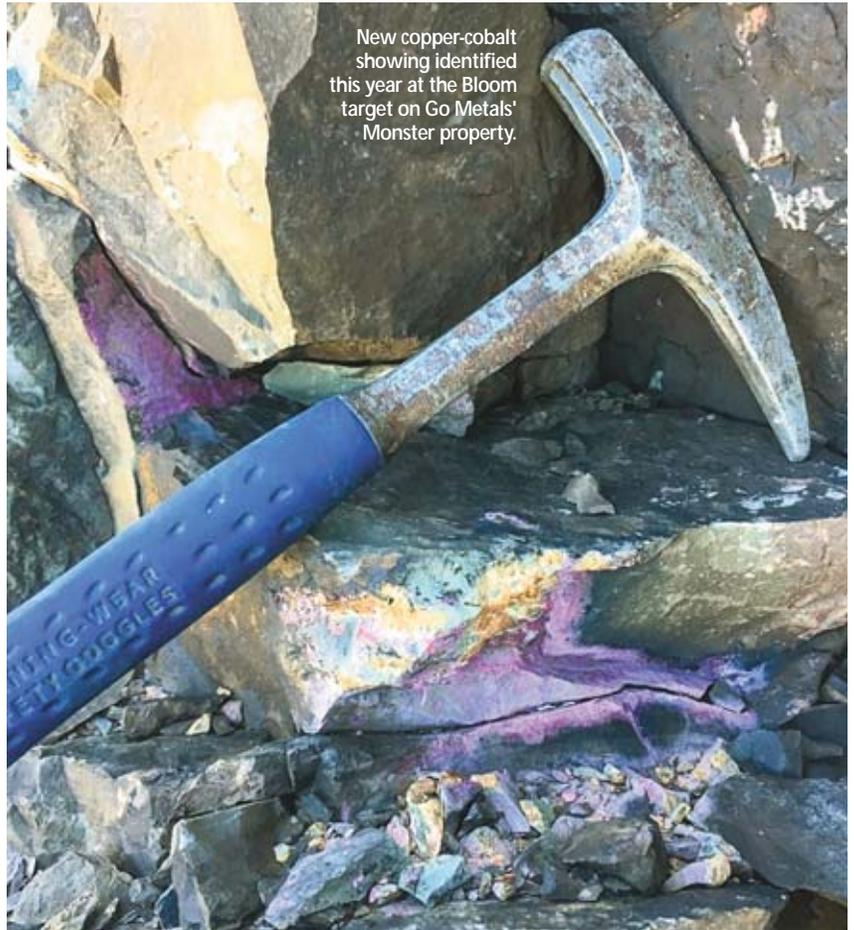
A rig sets up for 2019 drilling on Banyan Gold's Aurex-McQuesten property about six miles south of Victoria Gold's Eagle Gold Mine.

BANYAN GOLD CORP.

billion pounds nickel, 1.1 billion lb copper, 107 million lb cobalt and 5.8 million oz of combined platinum group-metals and gold. The new resource was recalculated after metallurgical tests demonstrated a strong correlation between higher total sulfide content and higher nickel recovery.

Alianza Minerals Ltd. returned to Haldane, a high-grade silver property in the historic Keno Hill Silver District where it identified two new soil anomalies and expanded two known soil anomalies a year earlier. In phase 1 of the junior's 2019 exploration program, the explorer said it will take soil geochemical samples, and conduct mapping and trenching designed to refine targets for drilling, planned for August. The 8,579-hectare (21,199 acres) Haldane property is located 25 kilometers (16 miles) west of Keno City, in the western portion of the Keno Hill Silver District.

At least one company was exploring for cobalt in Yukon. Go Cobalt Mining Corp., which changed its name in mid-2019 to Go Metals Corp., reported completion of a 2019 exploration program at its Monster copper-cobalt Monster project and plans for a late summer follow-up program, including trenching and soil work over the Bloom target. The junior identified multiple new copper-cobalt mineralized outcrops with results pending from spring and early summer exploration. Go Metals also said alteration mapping and sampling confirms potential for a large iron oxide copper-gold (IOCG) system at Monster. ●



New copper-cobalt showing identified this year at the Bloom target on Go Metals' Monster property.

GO METALS MINING CORP.





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White Gold's 2019 drilling encountered multiple gold bearing structures at the Vertigo target on the JP Ross property in Yukon's White Gold District..

Explorer seeks Yukon gold

White Gold tackles multiple projects with C\$13 million exploration program

WHITE GOLD CORP

TSX.V: WGO  

CEO: David D'Onofrio
 CHIEF TECHNICAL OFFICER: Shawn Ryan
 VP, EXPLORATION: Jodie Gibson

CASH AND CASH EQUIVALENTS: C\$14.9 million (June 30, 2019)

WORKING CAPITAL: C\$11.9 million (June 30, 2019)

MARKET CAPITALIZATION: C\$121 million (Sept. 30, 2019)

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By ROSE RAGSDALE
 For Mining News

With diamond drills turning at three different properties in west-central Yukon this field season, along with rotary air blast drilling, soil sampling and other activities, White Gold Corp. is one of the busiest mineral explorers in the region, if not the entire territory.

The Toronto-based junior, backed by partners Agnico Eagle Mines Ltd. and Kinross Gold Corp. – each owning 20 percent of the company – said it would spend C\$13 million in 2019 exploring a huge land package, which covers 22,040 mining claims across 35 properties totaling more than 439,000 hectares (1.085 million acres) or 40 percent, of the White Gold District.

Going into the 2019 field season, Shawn Ryan, White Gold's chief technical advisor, said the company's goal is to reach 2 million



SHAWN RYAN



DAVE D'ONOFRIO

ounces of gold in Golden Saddle-style ore with grades topping 3 g/t on the White Gold property.

In late July, the explorer reported outlining a 25 percent increase in the White Gold project's mineral resource estimate to 1.039 million oz indicated resource averaging 2.26 g/t gold within 14.33 million metric tons and 508,700 oz inferred gold at 1.48 g/t gold within 10.7 million metric tons at the Golden Saddle and Arc deposits. The new estimate reflects an 8 percent increase in indicated resources and an 80 percent increase in inferred resources.

"I figure over the next two years, the company will hit that 2-million-ounce mark at the project," Ryan predicted.

Results from drilling program

White Gold's 2019 program includes diamond drilling 10,000 meters on its JP Ross

property, 6,000 meters on the flagship White Gold project and 1,000 meters at the QV project, which it acquired in March from Comstock Metals Ltd.

“The goal of this diamond drill program is threefold: To continue to expand Golden Saddle-Arc’s established resources, to follow up on JP Ross’ exciting high-grade Vertigo discovery last season; and to grow the recently acquired and under-explored VG deposit,” said White Gold’s CEO David D’Onofrio.

JP Ross is a road-accessible property located about 60 kilometers (37 miles) southeast of Dawson City, Yukon.

At 10,000 meters, the bulk of White Gold’s 2019 core drilling targeted Vertigo, a 2018 discovery on the JP Ross property. The Vertigo discovery hole cut 3.05 meters of 56.25 grams per metric ton gold from a depth of 3.05 meters, part of a 10.67-meter intercept averaging 17.34 g/t gold.

Follow-up RAB and reverse circulation drilling confirmed and expanded the discovery, with the best intercept of this work yielding 82.3 meters grading 3.21 g/t gold, including 1.52 meters of 103.9 g/t gold and 400 g/t silver from surface in hole JPRVERRC18-006.

In all, White Gold identified at least 12 mineralized structures in 2018 at Vertigo across a 2,200-meter by 650-meter trend.

While drilling at Vertigo focused on evaluating the geometry as well as the lateral and vertical continuity of the high-grade mineralized structures in the discovery, another 6,000 meters of core drilling at White Gold targeted previously underexplored portions of the Golden Saddle deposit and surrounding area.

High-grade structures

At Vertigo, all diamond drill holes completed by early August intersected gold mineralization and identified a minimum of six high-grade mineralized structures. Each structure displays strong continuity from surface to more than 250 meters down-dip and remains open in all directions, the explorer reported.

Among the best results at Vertigo:

Hole JPRVER19D0015 returned 0.42 meters of 141 g/t gold within a broader envelope of mineralization that averaged 11.64 g/t gold over 5.34 meters from 3 meters depth and 18.46 g/t gold over 2.48 meters from 92 meters depth;

Hole JPRVER19D0005 returned 9.61 g/t gold over 4.15 meters from 20 meters depth, including 94.2 g/t gold over 0.32 meters

“The goal of this diamond drill program is threefold: To continue to expand Golden Saddle-Arc’s established resources, to follow up on JP Ross’ exciting high-grade Vertigo discovery last season; and to grow the recently acquired and under-explored VG deposit.”

–David D’Onofrio, CEO, White Gold Corp.

from 21 meters depth; and,

Hole JPRVER19D006 cut 6.89 g/t gold over 1.22 meters from 4.66 depth, and 20.15 g/t gold over 1.75 meters from 104.5 meters depth.

Down-dip extension

At Golden Saddle, White Gold said the drilling extended the GS Main Zone 205 meters down dip from historic drilling, roughly doubling the down-dip extension in the area, which previously only extended to 165 meters; added additional mineralization above the previously modeled ore body; and infilled several strategic gaps in the resource model. Diamond drilling on the GS West Zone proved continuity of the deposit both along strike and down dip, expanding the modeled mineralization beyond the envelope included in the company’s 2019 mineral resource estimate.

Drilling highlights include hole WHTGS19D0198, which returned 3.59 g/t gold over 68.0 meters from 73 meters depth, including 8.11 g/t gold over 13.6 meters from 77 meters depth, and 2.31 g/t gold over 10.56 meters at 179 meters depth; and hole WHTGS19D0212, which cut 4.85 g/t gold over 27.5 meters from 38 meters depth, including 6.58 g/t gold over 9.0 meters from 51 meters depth.

“At the Vertigo, we have confirmed the existence of multiple structures with high-grade gold mineralization that display strong continuity along strike and at depth. These results are very encouraging for an initial diamond drill program and validate our current interpretation for the Vertigo,” said Jodie Gibson, White Gold’s vice president of exploration. “The initial results at Golden Saddle are among the best holes drilled to date and significantly expand the high-grade mineralization within and be-

continued on page 50



OUR ENVIRONMENT

More than twenty years ago, Fort Knox gold mine began production just outside Fairbanks. With hard work and a dedicated staff, Fort Knox has become one of Alaska’s most successful mines.

Fort Knox’s work to voluntarily restore the nearby Fish Creek Valley is a testament to the mine’s commitment to the natural environment. The area’s water quality had been damaged a century ago, but today the area supports moose, wolves, birds and an Arctic Grayling fishery.

KINROSS Fort Knox

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WHITE GOLD *continued from page 49*

yond the current Golden Saddle resource boundary. This is all alongside our regional exploration program, which continues to generate a strong pipeline of exciting new targets further demonstrating the district scale opportunity across our unique portfolio of assets.”

Focus on strike extensions

At the QV project, which is contiguous with the White Gold property across the Yukon River, the company hopes to increase a 230,000 oz inferred mineral resource through 1,000 meters of diamond drilling, along with other activities. Exploration at QV, which covers 16,335 hectares (40,000 acres), is focused on testing strike extensions of the historically underexplored VG deposit.

White Gold said large portions of the QV property remain unexplored, which leaves a strong potential for the discovery of additional zones of structurally-controlled and intrusion-related mineralization in several targets with similar characteristics to Golden Saddle and Vertigo. Some 4,300 meters of diamond drilling over 23 holes had been completed on VG by August. Of these, only 17 holes formed the basis of the 2014 maiden resource estimate of 230,000 oz gold within 4.4 million metric tons grading 1.65 g/t gold in the inferred category at a cut-off grade of 0.5 g/t gold.

The VG resource is open along strike and at depth, and has similar mineralization and structural control to nearby Golden Saddle.

White Gold is also carrying soil sampling, prospecting, GT Probe sampling, trenching and RAB/RC drilling this field season at the White Gold, JP Ross, QV and multiple other regional properties.

New targets from soils

White Gold Corp. also conducted extensive soil sampling on JP Ross, White Gold and other regional properties. A total of 17,100 soil samples had been collected across the JP Ross and White Gold properties in the 2019 exploration program, the company reported

Aug. 22. The soil samples are interpreted as being in-place and representative of the bedrock below due to the unglaciated nature of the area, indicating high-priority targets for upcoming follow-up activity, including probe, trenching and RAB/RC drilling, the explorer said.

White Gold collected 12,540 soil samples at Vertigo across 10 gold targets, including seven samples assaying greater than 1,000 parts-per-billion gold, 31 samples with higher than 500 ppb gold and 299 samples with more than 100 ppb gold.

“JP Ross property now has at least four recognized gold trends over a 15-kilometer-by-15-kilometer area, including the Vertigo, Stage Fright, Sabotage and Frenzy Trends, as well as additional emerging targets on underexplored portions of the property,” White Gold said.

At the White Gold project, the company said it collected 4,560 soil samples across seven targets, including six samples assaying more than 1,000 ppb gold, 14 samples of greater than 500 ppb gold, and 201 samples with more than 100 ppb gold.

“The White Gold property trend is now identified to be a 12-kilometer by up to 4.5-kilometer northwest trend of anomalous gold in soils with at least 11 distinct target areas; including the Golden Saddle and Arc deposits,” Gibson said.

“This year’s soil sampling program was designed to pin down anomalous structures on both the JP Ross and the White Gold properties. ... The results were even better than expected with some beautiful linear soil anomalies 20-30 meters wide, (and) some running up to 750 meters long showing up, where previous 50-meter space soil sampling barely gave us any indications. ... The gold soil anomalies produced from these detail and mini grids will be followed up by GT Probe lines and trenching, with the intent to RAB drill up to 35 holes on the JP Ross and up to 25 holes on the White. I look forward to the next round of drilling as we will be targeting the highest probability areas of our newly defined gold anomalies,” Gibson explained. ●



WHITE GOLD CORP.

This core from one of the 2019 holes at Vertigo includes a 1.1-meter intercept from a depth of 24.9 meters that averages 9.58 grams per metric ton gold.

YUKON TERRITORY

Golden Predator Mining Corp. ●

TSX.V: GPY 

Golden Predator eyes gold mine restart

Golden Predator Mining Corp. is advancing two gold properties in the Yukon – the Brewery Creek Mine project about 55 kilometers (34 miles) east of Dawson City and the 3 Aces high-grade gold exploration project in the southeastern part of the territory.

This year, the company's primary focus is on Brewery Creek, the site of a former mine where Viceroy Resource Corp. produced 280,000 ounces of gold from 1996 to 2002. This operation used heap leaching – a method of gold recovery that involves stacking ore in a lined facility and using cyanide to separate the gold from the rock – to recover gold mined from seven near-surface deposits on the property.

With gold prices averaging around US\$310/oz in 2002, Viceroy opted to wind down operations and put Brewery Creek on care and maintenance.

Since acquiring Brewery Creek roughly a decade ago, Golden Predator has been carrying out exploration and studies aimed at resuming operations at the past producing mine.

A 2014 preliminary economic assessment outlined plans for a heap-leach operation that would produce an estimated 372,000 oz of gold over eight years. This includes mining 10.2 million metric tons of open-pit material from eight deposits averaging 1.35 g/t gold and reprocessing material located on the former heap leach pad.

In August, Golden Predator formerly informed the Yukon government of its plans to resume operations at Brewery Creek. With the territory's acceptance of this notice, the junior mining company has the permits and authorizations needed to begin development.

This move has the support of Tr'ondëk Hwëch'in, which passed a formal council resolution in support of resumed mining and processing at the Brewery Creek Mine under the existing licenses.

"With gold prices picking up, a low capex and short timeline to production combined with the support of the Tr'ondëk Hwëch'in and Yukon Government, Golden Predator will accelerate its activities and advance the timelines at the Brewery Creek Mine," said Golden Predator Mining CEO Janet Lee-Sheriff.

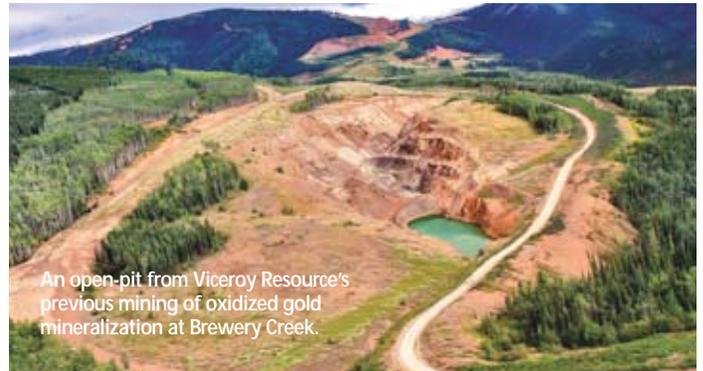
This plan has strong support from the investment community, including noted mining investor Eric Sprott, who participated in a C\$9.3 million Golden Predator financing that closed in July. While advancing Brewery Creek toward production, Golden Predator is carrying out more than 6,000 meters of drilling to expand and upgrade the resource.

According to a 2014 estimate, Brewery Creek hosts 14.15 million metric tons of indicated oxide resource averaging 1.27 g/t (577,000 oz) gold, 9.31 million metric tons of inferred oxide resource averaging 0.93 g/t (279,000 oz) gold; plus 3.46 million metric tons of indicated sulfide resource averaging 1.28 g/t (142,000 oz) gold, and 12.41 million metric tons of inferred sulfide resource averaging 1.37 g/t (546,000 oz) gold. Out of this overall resource only about half of the oxide gold mineralization is considered in the PEA. The rest is outside of the current permitted area and will be part of the longer term mine plan and amended mining permits.

While getting Brewery Creek ready for operations, Golden Predator is recovering a little gold at 3 Aces.

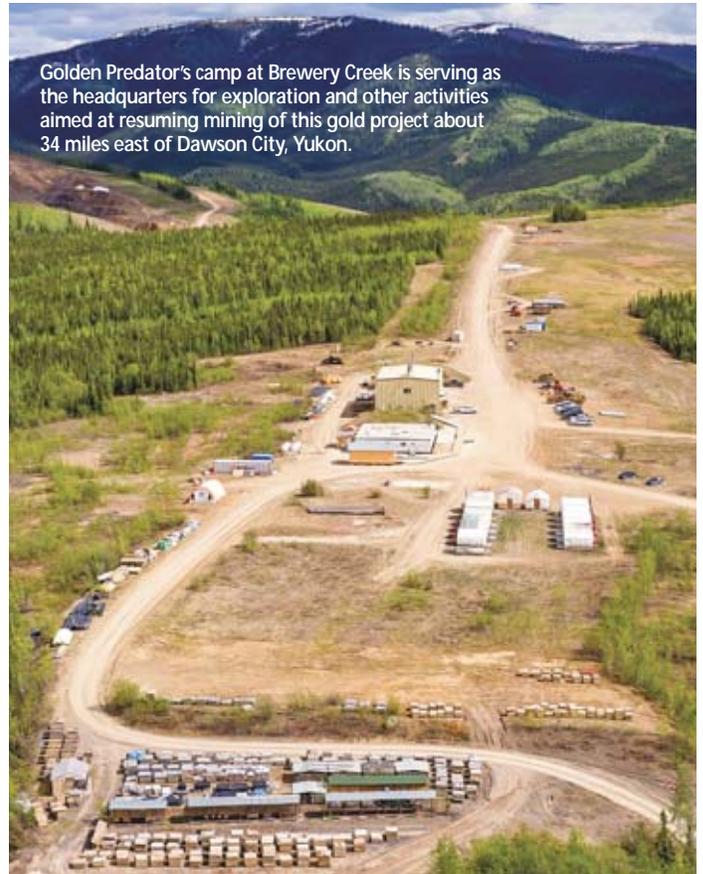
In February, the company reported the recovery of 365 troy oz of gold and 34 oz of silver from roughly 600 metric tons of bulk sample material collected from this high-grade project in southeast Yukon. This sampling, completed at the end of 2018, represents about 6 percent of the 9,800 metric tons of bulk sample material stockpiled last year. This material was excavated from a series of two-meter benches at Spades, one of the high-grade gold zones identified within the central core area of the 3 Aces project.

Though Golden Predator has completed tightly spaced drilling at the Spades zone, the company says bulk sampling has exposed previously un-



An open-pit from Viceroy Resource's previous mining of oxidized gold mineralization at Brewery Creek.

SHANE LASLEY



Golden Predator's camp at Brewery Creek is serving as the headquarters for exploration and other activities aimed at resuming mining of this gold project about 34 miles east of Dawson City, Yukon.

GOLDEN PREDATOR MINING CORP.

known vein orientations and veining, resulting in new geological information from the early stages of the bulk sampling.

The company resumed processing bulk sample material from the 2018 stockpile in April. This sampling is being carried out with a small gravity recovery operation at the project.

An additional bulk sample of up to 10,000 metric tons of the high-grade gold vein material at 3 Aces is expected to get underway before the end of 2019.

CASH AND SHORT-TERM DEPOSITS: C\$109,722 (June 30, 2019)

WORKING CAPITAL: C\$1.5 million deficit (June 30, 2019; closed C\$9.3 million financing on July 25, 2019)

MARKET CAPITALIZATION: C\$56.5 million (Sept. 23, 2019)

EXECUTIVE CHAIRMAN: William Sheriff

CEO: Janet Lee-Sheriff

CFO: Greg Hayes

Suite 250 – 200 Burrard St., Vancouver, BC V6C 3L6

Tel: 604-260-0289 • jel@goldenpredator.com

www.goldenpredator.com

YUKON TERRITORY

Victoria Gold Corp. ●

TSX.V: VIT 



Victoria pours Eagle gold, explores Raven

While ramping up operations at its Eagle Gold Mine in the Yukon, Victoria Gold Corp. continued to explore the larger Dublin Gulch property where this newest large scale mine in the Yukon is located.

"Victoria remains focused on Eagle Gold Mine construction, however the company believes the prospective nature of the greater Dublin Gulch claim block will ultimately develop into a truly rare gold camp along the Potato Hills trend through continued exploration efforts," said Victoria Gold President and CEO John McConnell.



JOHN MCCONNELL

For 2019, these efforts focused largely on testing Raven, which was discovered last year at the Nugget zone about 6.5 kilometers (four miles) east of the Eagle deposit currently being mined. Nugget hosts the second largest known intrusive body on the Dublin Gulch property – the Dublin Gulch stock that hosts the Eagle Gold deposit is the largest.

One hole drilled at Raven last year, NG18-006C, cut 101.5 meters averaging 0.57 grams per metric ton gold from a depth of 3.4 meters. This long intercept included 33 meters of 1.03 g/t gold from 61.8 meters.

All nine holes drilled this year at Raven encountered consistent and persistent gold veining across the Raven target.

Highlights from this drilling include 88.1 meters of 0.6 g/t gold from a depth of 28.8 meters in NG19-011C, including 2.8 meters of 7.72 g/t gold from 28.8 meter; 166.4 meters of 0.46 g/t gold from 29.4 meters in NG19-12C, including 5.9 meters of 4.48 g/t gold from 65.9 meters; and 142.6 meters of 0.45 g/t gold from 33.9 meters in NG19-016C, including 14.8 meters of 2.05 g/t gold from 161.6 meters.

In addition to drilling, crews dug 5,400 meters of trenches across Nugget and completed detailed soil sampling across the emerging deposit on the Dublin Gulch property.

"Raven, Bluto, Olive-Popeye, and Falcon all have potential to add ounces across the Dublin Gulch property while we begin to mine and generate cash flow from Eagle," said McConnell.

The exploration at Raven is being conducted from a 25-person exploration camp established at Nugget zone last year. This allows the exploration to be carried out separately from the important work of ramping up production at the Eagle Gold Mine.

As drills were turning at Raven, Victoria Gold was wrapping up construction on the Eagle Mine.

The mineral exploration turned gold producing company broke ground on pre-development activities at Eagle in 2017 and began earnest development of the open-pit, heap-leach pad and recovery facilities in 2018.

By July of this year crews were stacking ore on the heap-leach pad.

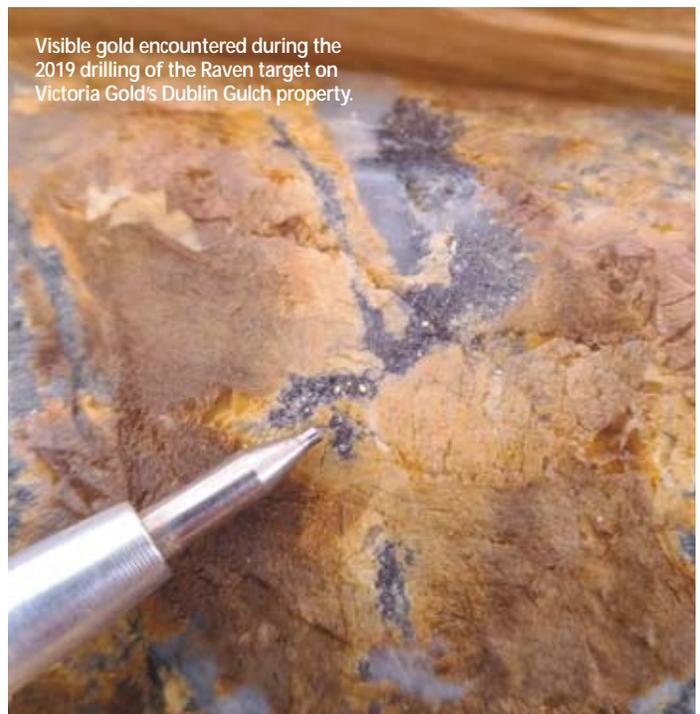
Running about a month ahead of schedule, Victoria poured the first gold at Eagle in mid-September.

Eagle is expected to produce 200,000 oz of gold annually over an initial 10-year mine life. This plan is based on 123 million metric tons of reserves averaging 0.67 g/t (2.66 million oz) gold, according to a feasibility study completed in 2016.

These reserves are found at Eagle Gold, the original deposit, and Olive, a satellite deposit about 3,000 meters to the northeast. At the time of the feasibility study these deposits hosted 180.72 million metric tons of measured and indicated resource averaging 0.63 g/t (3.63 million oz) gold.

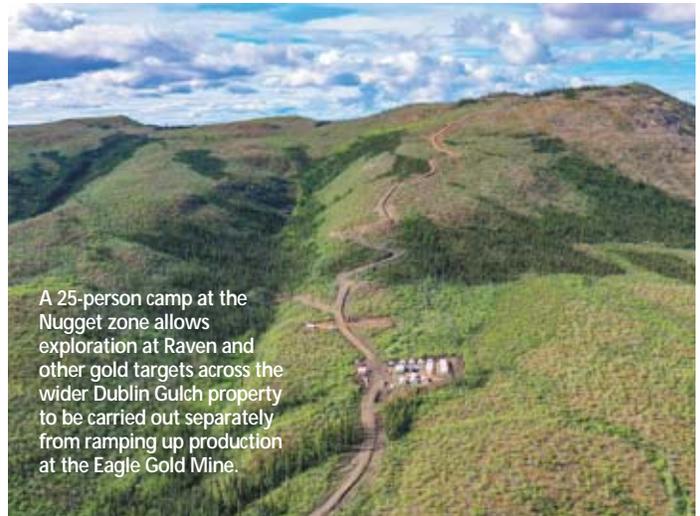
The 2016 reserves are the portion of these measured and indicated resources that are included in the Eagle Gold mine plan. Future mine plans could elevate more resources to reserve status, which would add years of production to Eagle.

With drilling since the completion of the feasibility study growing the resources, such mine extensions seem likely.



Visible gold encountered during the 2019 drilling of the Raven target on Victoria Gold's Dublin Gulch property.

VICTORIA GOLD CORP.



A 25-person camp at the Nugget zone allows exploration at Raven and other gold targets across the wider Dublin Gulch property to be carried out separately from ramping up production at the Eagle Gold Mine.

VICTORIA GOLD CORP.

According to a resource calculation completed at the end of 2018, Eagle hosts 198.72 million metric tons of measured and indicated resources averaging 0.64 g/t (4.08 million oz) gold.

The updated resource is for the immediate Eagle Mine area only and does not include the 9.5 million metric tons of measured and indicated resource averaging 1.08 g/t (329,000 oz) gold in the Olive-Shamrock area.

Now it appears that the Raven target and the larger Nugget zone could add further resources across the larger Dublin Gulch property.

CHAIRMAN: T. Sean Harvey
PRESIDENT AND CEO: John McConnell
VP, EXPLORATION: Paul Gray

CASH AND CASH-EQUIVALENTS: C\$68 million (May 31, 2019)
WORKING CAPITAL: C\$12.9 million (May 31, 2019)
MARKET CAPITALIZATION: C\$476.5 million (Sept. 23, 2019)

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YUKON TERRITORY

Klondike Gold Corp.

TSX-V: KG 

Klondike hits bonanza gold above Eldorado

Klondike Gold Corp. continues to tap veins of high-grade gold on its Klondike District property, a 576-square-kilometer (222 square miles) land package that covers the hills above the legendary Yukon creeks that produced more than 20 million ounces of placer gold since 1896.

This year's C\$2 million program included roughly 6,000 meters of drilling at the Lone Star, Gay Gulch and Nugget zones; soil sampling in areas above the legendary Eldorado and Bonanza creeks; GT Probe bedrock sampling to test extensions of the Lone Star zone; and an airborne Lidar (light detection and ranging) survey to help identify the surface position of potentially gold mineralized faults.



In August, Klondike Gold reported that this summer's drilling tapped a bonanza grade gold and silver intercept at Nugget Zone. Lying west of Lone Star and north of Gay Gulch – two other exciting zones on the Klondike property – Nugget Zone is associated with a prominent, 8,000-meter-long magnetic low known as the Nugget fault. A 2,500-meter stretch of this fault hosts gold-bearing veins at Glacier Gulch, Nugget East and Upper Eldorado, as well as several circa-1900 lode mine workings and outcrops.

All these zones lie between the legendary Eldorado and Bonanza Creeks of Klondike Gold Rush fame.

Highlights from Klondike Gold's previous drilling at Nugget include nine meters of 9.5 grams per metric ton gold; 14 meters of 5.1 g/t gold; 45.2 meters of 1.55 g/t gold; and 1.5 meters of 31.9 g/t gold.

Drill testing along 200 meters at Nugget this year continues to cut gold mineralization and discovered a new parallel zone of high-grade gold.

Hole EC19-267 cut 2.5 meters averaging 404 g/t gold and 415 g/t silver from a depth of 104 meters, including one meter of 1,009 g/t gold with 1,035 g/t silver. Klondike Gold said this new discovery is 25 meters below the known Nugget zone.

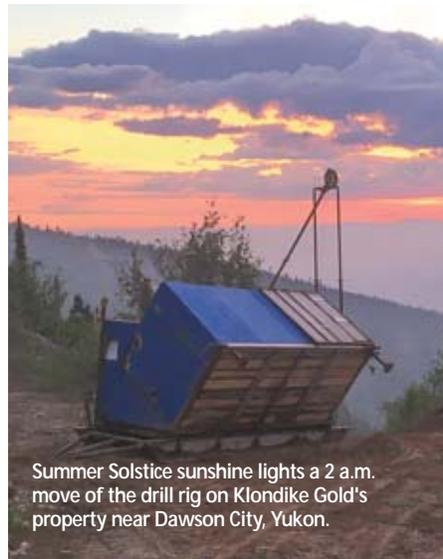
With the goal of building a resource, Klondike Gold completed 36 holes at Nugget and expansion target known as Nugget East this year.

Glacier Gulch, another zone along the Nugget fault, was tested with four holes.

Another seven holes were drilled at Gay Gulch along the Eldorado fault.

One hole drilled at Gay Gulch in 2015 cut a 2.8-meter zone averaging 75.6 g/t gold. This intercept is 250 meters upstream from where a 72-ounce nugget was recovered from Eldorado Creek.

Drilling at Lone Star, which got underway in July, focused on expanding a wider zone of dissemi-



Summer Solstice sunshine lights a 2 a.m. move of the drill rig on Klondike Gold's property near Dawson City, Yukon.

nated gold mineralization along strike of this gold zone that lies above the confluence of the celebrated Bonanza and Eldorado creeks.

Intercepts such as the 65.05 meters of 1.4 g/t gold and 26.2 meters of 1.33 g/t gold drilled last year are examples of the widths and grades being targeted at Lone Star.

With the goal of doubling the drilled strike at Lone Star, this year's drilling targeted a 1,000-meter eastern expansion area.

In addition to drilling, Klondike Gold utilized

Dawson City-based GroundTruth Exploration's consistent methodology to collect 1,622 soil and 66 rock samples along high priority trends above Bonanza and Eldorado Creeks.

A GroundTruth GT Probe was also used to collect bedrock samples at the eastern extension of Lone Star.

Infield XRF (x-ray fluorescence) testing of the samples for pathfinder minerals such as bismuth allowed Klondike Gold to expeditiously locate the Lone Star zone horizon at a 450-meter step-out without the necessity of drilling a fence of multiple drill holes, thereby saving time and money.

Klondike Gold is also recognizing a gold-silver association that may be used as an exploration tool to target the highest gold grades, using the company's evolving structural knowledge from mapping and oriented core measurements.

PRESIDENT AND CEO: Peter Tallman
VP, EXPLORATION: Ian Perry
DIRECTOR: Gordon Keep

CASH AND CASH EQUIVALENTS: C\$2.9 million (May 31, 2019)

WORKING CAPITAL: C\$2.9 million (May 31, 2019)

MARKET CAPITALIZATION: C\$31.5 million (Sept. 23, 2019)

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Alianza Minerals' exploration camp at Haldane, a high-grade silver property in Yukon's historic Keno Hill Mining District.

ALIANZA MINERALS LTD.

YUKON TERRITORY

Alianza Minerals Ltd. ●●●

TSX.V: FWZ 

Alianza explores Yukon high-grade silver

Alianza Minerals Ltd. focused its 2019 exploration on two high-grade silver projects in the Yukon – Tim, a road-accessible property near Coeur Mining Inc.'s Silvertip Mine, and Haldane, a Keno Hill Mining District property that has long been recognized for its high-grade silver potential.

In June, Coeur Explorations Inc, a wholly owned subsidiary of Coeur Mining, signed a letter of intent to explore Tim, an early staged exploration property with high-grade silver-lead-zinc mineralization similar to Coeur's Silvertip, a northern British Columbia mine about 7.5 miles (12 kilometers) to the south.

"Tim looks to be a Silvertip analog and the Coeur team is an obvious choice to move the project forward. It will be a great advantage to have Coeur's geological expertise applied to the project," said Alianza Minerals President and CEO Jason Weber.

Under the agreement, Coeur can earn a 51 percent interest in Tim by funding C\$3.5 million in exploration over five years and paying Alianza C\$275,000 in staged payments. Coeur will then have the option to earn 80 percent in the property by funding a positive feasibility study in the following three years and making annual payments of C\$100,000.

Historical chip sampling from a trench cut across a zone of carbonate replacement mineralization at Tim returned 352 grams per metric ton silver and 9.12 percent lead across four meters. Similar mineralization was also reported in adjacent trenches 180 and 250 meters on either side of the central trench.

Resampling of the central trench in 2013 returned 365 g/t silver and 7.5 percent lead across a 3.7-meter channel sample.

Seeking high-grade silver-lead-zinc carbonate replacement mineralization reminiscent of Silvertip, Coeur's 2019 exploration at Tim included mapping, soil geochemical surveys and reopening the historic trenches.

At the same time, Alianza geologists were refining drill targets at Haldane, which is about 16 miles (25 kilometers) west of Keno City.

Underground mining that began at Haldane in 1918 produced roughly 24.7 metric tons of hand-sorted ore averaging 3,102 g/t (99.7 oz/t) silver and 59 percent lead on the south side of Bighorn Creek veins. From 1926 and 1927, a vein on the north side of Bighorn Creek produced 2.1 metric tons of hand-sorted ore averaging 4,602 g/t (148 oz/t) silver and 57.9 percent lead.

Despite this historical production, very little modern exploration has been carried out at Haldane.

Work carried out by Alianza in 2018 expanded a soil anomaly known as Ross, which is about 1,250 meters south of the historic mining. This anomaly may reflect multiple buried veins that are part of the Mount Haldane Vein System, which include the historically mined veins.

Two other anomalies – Bighorn and North Star – were discovered by Alianza last year.

The Bighorn anomaly lies 2,800 meters northwest of Mount Haldane Vein System and may represent a new set of veins in an untested area of the property.

North Star is a more than 1,000-meter-long soil anomaly situated about 1,000 meters east of Mount Haldane Vein System.

The 2019 phase I program included four trenches at the Bighorn and Mount Haldane Vein System areas.

Mineralized faults mapped at the Bighorn target were strongly weathered at surface but returned anomalous lead and silver values. Continuous chip samples in trench BH02 returned 10.9 meters of 9.6 g/t silver, which included fault and heavily fractured and oxidized host rocks. Similar results were returned from trench BH01, 60 meters south.

Soil samples collected 300 meters south of BH01 and on strike from the trenches returned 63 g/t silver and greater than 1 percent lead. Alianza said this suggests the potential presence of high-grade silver mineralization.

The company began testing this potential with a roughly 1,300-meter drill program that got underway in August.

"The phase II program is the first drill test of these new targets and their potential to host high-grade silver veins as seen elsewhere in the Keno District," said Weber.

After testing Ross and Bighorn, the drill targeted the modelled plunge of high-grade shoots in historic workings of the Middlecoff zone at the Mount Haldane Vein System.

Alianza Minerals also investigated its KRL gold property in B.C.'s Golden Triangle with a late season program of prospecting, mapping and sampling. One of the key goals of this exploration is to determine the potential to expand the area of known high-grade mineralization at KRL, which would make it more attractive to potential earn-in partners.

EXECUTIVE CHAIRMAN: Mark Brown

PRESIDENT & CEO: Jason Weber

DIRECTOR: Marc Blythe

CASH AND CASH EQUIVALENTS: C\$651,010 (June 30, 2019)

WORKING CAPITAL: C\$158,502 (June 30, 2019)

MARKET CAPITALIZATION: C\$5.3 million (Sept. 23, 2019)

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Tel: 604-687-3520 • Email: info@alianzaminerals.com

www.alianzaminerals.com



JASON WEBER

YUKON TERRITORY

Alexco Resource Corp.

TSX: AXR / NYSE-MKT: AXU



ALEXCO

Alexco explores restart of Keno Hill Mine

With a pre-feasibility study that details a small but financially robust mine at its Keno Hill Silver District project in the Yukon, Alexco Resource Corp. focused its summer 2019 work on building infrastructure to support the mine plan and exploration focused on Bermingham, the first deposit to go into production.

"After filing the positive PFS for Keno Hill last month, we have turned our attention to our 2019 exploration campaign while we wait for authorization of the final amendment of our Water Use License for ore production from the Bermingham deposit," Alexco Resource Chairman and CEO Clynt Nauman said in June.

At an average rate of about 430 metric tons per day, the mill at the revamped Keno Hill Mine is expected to produce a total of 27.2 million ounces of silver, 67.2 million pounds of zinc, 65.4 million lb of lead over an eight-year mine life.

These payable metals will be recovered from 1.18 million metric tons of reserves averaging 804 grams per metric ton silver, 4.13 percent zinc, 2.98 percent lead and 0.34 g/t gold.

Most of these reserves – 704,211 metric tons averaging 672 g/t silver, 5.73 percent zinc, 2.71 percent lead and 0.49 g/t gold – are found in the Flame & Moth deposit.

While this represents the lowest grades of the four deposits to be mined, a consistent orebody and portal adjacent to the mill makes Flame & Moth the centerpiece of the initial eight-year plan.

At any one time, however, the company plans to have two deposits delivering ore to the mill. As a result, higher grade ore from Bellekeno, Bermingham and Lucky Queen will supplement the ore from Flame & Moth.

The higher grade Bellekeno, which hosts 40,109 metric tons of these reserves at an average grade of 843 g/t silver, 11.79 percent lead and 6.31 percent zinc, will be the first deposit mined.

And, a more than 7,500-meter drill program that got underway in June is looking for more of the high-grade ore at Bellekeno.

Roughly half of the 20 surface holes slated for this program targeted extensions of the shallower Northeast Zone, as well as systematically testing the continuity and tenor of the high-grade Bermingham mineralization at depth. Other holes will test other promising targets in the immediate area.

In addition to the priority drilling at Bermingham, Alexco tested blind mineralized structures, with signatures similar to that of Bermingham, that extend under shallow cover as identified by the detailed aerial geophysical survey conducted in late 2018. These high-priority exploration targets are located on the northern slopes of Galena Hill, an area where 137 million ounces of silver has been historically produced from the Hector-Calumet, Elsa-Dixie, No Cash, Bermingham and Ruby mines. This does not count the 32.9 million oz of indicated silver resource at Bermingham.

Infrastructure projects carried out this year focused on what needs to be completed for ore production from Bermingham. This includes the installation of a portal cover at the entrance of Bermingham; construc-

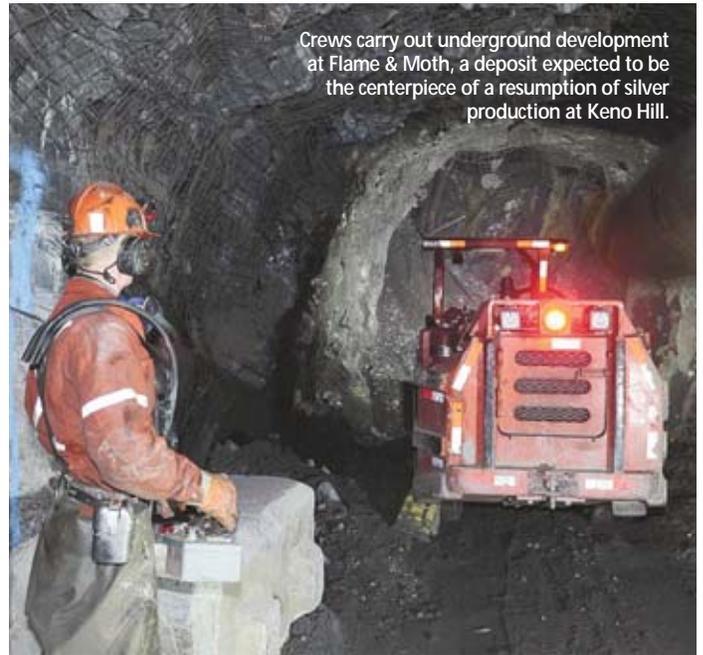
At an average rate of about 430 metric tons per day, the mill at the revamped Keno Hill Mine is expected to produce a total of 27.2 million ounces of silver, 67.2 million pounds of zinc, 65.4 million lb of lead over an eight-year mine life.



CLYNTON NAUMAN



ALAN MCONIE



Crews carry out underground development at Flame & Moth, a deposit expected to be the centerpiece of a resumption of silver production at Keno Hill.

ALEXCO RESOURCE CORP.

tion of a coarse ore storage pad and facility; and a lined pond for a future water treatment plant; preparation for building the Bermingham maintenance shop; completion of a haul road from Bermingham to the Keno District mill; and establishing additional camp bunkhouse facilities. These projects are included in the PFS and completion of these improvements in 2019 will further de-risk the project in anticipation of the receipt of an amended water license for Keno Hill, which is key to Alexco's decision to resume mining in this historic high-grade silver district.

"As promised, we are continuing our measured and disciplined approach toward a final production decision pending completion of the permitting process," said Nauman.

The Yukon Water Board is expected to complete the final Keno Hill license amendment by the end of 2019.

CHAIRMAN AND CEO: Clynt Nauman
PRESIDENT: Brad Thrall
VP, EXPLORATION: Alan McOnie

CASH AND CASH EQUIVALENTS: C\$11.8 million (June 30, 2019)
WORKING CAPITAL: C\$15.5 million (June 30, 2019)
MARKET CAPITALIZATION: C\$272.6 million (Sept. 23, 2019)

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Fireweed Zinc Ltd. ●●●

TSX.V: FWZ 

Fireweed drills zinc deposit extensions

Fireweed Zinc Ltd. focused its 2019 exploration on continuing to add high-grade resources at Macmillan Pass, a 544-square-kilometer (210 square miles) zinc-lead-silver project in eastern Yukon.

Two deposits at Macmillan Pass – Tom and Jason – host 11.21 million metric tons of indicated resource averaging 6.59 percent (1.63 billion pounds) zinc, 2.48 percent (610 million lb) lead and 21.33 grams per metric ton (7.7 million ounces) silver; plus 39.47 million metric tons of inferred resource averaging 5.84 percent (5.08 billion lb) zinc, 3.14 percent (2.73 billion lb) lead and 38.15 g/t (48.4 million oz) silver.

Based on this resource, a preliminary economic assessment completed in 2018 outlined a 4,900-metric-ton-per-day mill that would produce 3.4 billion lb of zinc, 1.9 billion lb of lead and 37.2 million oz of silver over an 18-year mine life.

The PEA points to the potential of expanding high-grade mineralization below and adjacent to the known deposits.

This year's program at MacMillan Pass included 2,357 meters of core drilling testing targets in the immediate resource areas and outlying targets; geophysical and geochemical surveys; and an airborne Lidar topographic survey over the entire property.

Tom West, which hosts the bulk of the resource in the Tom deposit, and Tom North, an expansion area not included in the resource estimate were primary targets

Historical drilling at Tom North returned assays up to 5.05 percent zinc and 1.8 percent lead over 19.9 meters.

Fireweed said this year's drilling confirmed that mineralization extends to depth and begins to outline a near-surface zone of zinc-lead mineralization that is potentially amenable to open-pit mining.

TS19-001 cut 7.3 meters averaging 6.19 percent zinc and 0.51 lead; and TS19-002 cut nine meters of 6.36 percent zinc and 0.65 percent lead; TS19-005 cut 22.5 meters of 6.04 percent zinc and 0.94 percent lead; and TS19-006 cut 22.5 meters of 6.13 percent zinc and 0.95 percent lead.

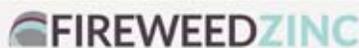
"So far, Tom North is showing potential open-pit results and it is noteworthy that holes TS19-005 and TS19-006 reported much higher grades over wider intervals than the 1952 hole they twinned due to better recoveries using modern drilling techniques," said Fireweed Zinc CEO Brandon Macdonald.

After Tom North, the core drill tested the depth extension of Tom East, one of the highest-grade zones identified so far on the property. The deepest hole drilled at Tom East during 2018 cut a 16.4-meter interval averaging 21.14 percent zinc, 13.55 percent lead and 243 g/t silver. Jason North, Boundary and two exploration targets on the MacMillan Pass property were also tested with drilling this year.

EXECUTIVE CHAIRMAN: John Robins
CEO: Brandon Macdonald
VP, EXPLORATION: Gilles Dessureau

CASH AND CASH EQUIVALENTS: C\$4.5 million (June 30, 2019)
WORKING CAPITAL: C\$4.5 million (June 30, 2019)
MARKET CAPITALIZATION: C\$17.7 million (Sept. 23, 2019)

Suite 1020, 800 Pender St., Vancouver, BC, V6C 2V6
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www.fireweedzinc.com



An ATV at Fireweed Zinc's MacMillan Pass zinc project in eastern Yukon.

FIREWEED ZINC LTD.

YUKON TERRITORY

Cantex Mine Development Corp. ●●●

TSX.V: CD 

Cantex expands spectacular North Rackla

Cantex Mine Development Corp. is focused on expanding massive sulfide zones on its North Rackla property in the Yukon that are rich in zinc, lead, manganese and silver.

Located about 20 kilometers (12.5 miles) north of ATAC Resources Ltd.'s Rackla Gold property, North Rackla is a relatively new discovery. Prospecting, sampling and trenching from 2014-16 showed the potential of the Discovery zone at North Rackla but the real excitement began with the spectacular mineralization tapped during the 2018 drilling into a new zone known as Extension.

Highlights from this drilling include: 9.19 meters averaging 18.04 percent zinc, 8.09 percent lead, 3.67 percent manganese and 150.6 g/t silver; 7.1 meters of 23.12 percent zinc, 6.04 percent lead, 1.58 percent manganese and 158 g/t silver; and 9.3 meters of 10.97 percent zinc, 7.33 percent lead, 4.7 percent manganese and 122.6 g/t silver.

Following the outstanding success of the 2018 drill program, Cantex raised C\$15 million to fund 2019 exploration at North Rackla. This included roughly 17,000 meters of drilling primarily focused on Massive Sulphide, a 2,400-meter-long zone that encompasses the Discovery and Extension subzones.

In a step toward the company's goal of defining a world-class zinc-lead-silver deposit, much of this drilling focused on testing a 1,000-meter section of this zone to a depth of up to 550 meters.

In order to determine the exact location of the massive sulfide mineralization, Cantex completed ground-based geophysics – gravity, electromagnetic, resistivity and magnetic – over the Massive Sulphide zone prior to drilling.

The company also completed an airborne geophysical survey over the area during the summer months.

The results from these surveys were used to fine tune the drill program, especially in the glacial till covered area between Discovery and Extension, as well as test areas at the extremities of the mineralized zone.

With three drills turning, Cantex tested Massive Sulphide with around 75 holes. Elsewhere on the North Rackla property, drills tested a zone of anomalous soil and rock samples parallel to the Massive Sulphide zone and recently discovered gold mineralization at the north end of the claim block.

Highlights from initial 2019 results include:

- 28.3 meters (14.2 meters true-width) averaging 12.37 percent zinc, 9.34 percent lead, 3.05 percent manganese and 113.96 g/t silver, including three meters of 41.43 percent zinc, 10.73 percent lead, 1.41 percent manganese and 213.33 g/t silver; and
- 22.6 meters (8.5 meters true-width) averaging 4.9 percent zinc, 8.2 percent lead, 3.2 percent manganese and 48.2 g/t silver, including 1.1 meters of 3.72 percent zinc, 49.3 percent lead, 1.99 percent manganese and 235.4 g/t silver.

Cantex' exploration at North Rackla continues to draw strong investor interest, witnessed by an oversubscribed C\$12 million private placement financing in August that included the issuance of 1.08 million charity flow-through shares at C\$6.53 per share and 824,000 flow-through shares at C\$6 per share.

CHAIRMAN: Charles Fipke
PRESIDENT & CEO: Chad Ulansky
CHIEF OPERATING OFFICER: Keiven Bauer

CASH AND CASH EQUIVALENTS: C\$14.9 million (April 30, 2019)
WORKING CAPITAL: C\$9.2 million (April 30, 2019)
MARKET CAPITALIZATION: C\$213.8 million (Sept. 23, 2019)

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Newmont Goldcorp's Coffee Gold exploration camp lies along the Yukon River in the White Gold District.

Mega Mergers

Are mega-gold-mergers good for North?

Newmont Goldcorp expands, Barrick left with one Alaska project

By SHANE LASLEY
Mining News

The two mega-mergers that hit the gold mining sector early in 2019 – Barrick Gold Corp. combining with Randgold Resources Ltd. and Newmont Mining Corp. acquiring Goldcorp Inc. – is forever changing the gold mining landscape around the world.

While the two largest gold mining companies Newmont Goldcorp (No. 1) and Barrick (No. 2) are still in the process of shedding assets following the mega-mergers, it seems that Newmont Goldcorp will emerge with a much stronger foothold in Alaska, British Columbia and Canada's North than Barrick.

Both Newmont and Barrick dropped options on potentially sizeable gold exploration projects in the Yukon around the time of the mergers, raising questions as to whether they would pull out of the North completely in favor of more southern jurisdictions where they are better established.

For example, shortly after their individual mergers, Barrick and Newmont formed a joint venture alliance on their opera-



MARK
BRISTOW

tions and other mining assets in northeastern Nevada, a business combination that encompasses 22 mines that produced 4.1 million ounces of gold during 2018.

Barrick owns 61.5 percent of Nevada Gold Mines LLC and Newmont Goldcorp owns the remaining 38.5 percent of this JV established on July 1

Barrick President and CEO Mark Bristow, who is also chairman of Nevada Gold Mines, says the establishment of the JV gold mining company was designed to combine arguably the industry's best assets and people in order to deliver the best value to stakeholders of both companies.

"Its creation was driven by a compelling logic which had long been evident to all but had been elusive for two decades until we finally achieved a breakthrough this year," Bristow said.

With only a few scattered exploration and development assets across the North, these two mega-gold-miners may not be driven by the same compelling logic to establish such synergies in Alaska, British Columbia or the Canadian territories.

Newmont sips Coffee in the Yukon

Newmont Goldcorp, which emerged from its early-2019

merger as the largest gold miner on Earth, has gold projects across the North. These range from a grassroots gold property near the Pogo Mine in Alaska to an equity position in the owner of a gold operation in Nunavut.

In between these geographical and mining stage extremes lies Newmont Goldcorp's Coffee Gold Mine project in the Yukon.

Acquired by Goldcorp in 2016, Coffee is an advanced staged gold project in Yukon's White Gold District.

A feasibility study completed for Coffee just before Goldcorp's acquisition details an open-pit, heap-leach gold operation capable of producing 184,000 ounces of gold annually over a 10-year mine life at all-in sustaining costs of US\$550/oz.

At the time, this project hosted 63.7 million metric tons of indicated resources averaging 1.45 g/t (2.97 million oz) gold and 52.4 million metric tons of inferred resources averaging 1.31 g/t (2.1 million oz) gold.

Since buying Coffee, Goldcorp has invested in expansion of the resource and exploration of other targets across the 60,000-hectare (149,000 acres) property, a program that is continuing under the Newmont Goldcorp banner.

In January, Goldcorp Kaminak Ltd., a subsidiary of Newmont Goldcorp, received approval for extensive exploration drilling, trenching and bulk sampling between now and 2021.

In the meantime, the company continues to advance Coffee through the permitting process.

The Yukon Environmental and Socio-economic Assessment Board has completed a public comment period and has asked Newmont Goldcorp for additional information prior to continuing the review.

While continuing to advance Coffee, Newmont Goldcorp dropped Plateau, another enticing gold property in the Yukon that Newmont had been exploring.

Newmont first became involved in Plateau in 2017, when it cut a C\$53 million deal with Goldstrike Resources Ltd. to earn up to a 75 percent stake in this expansive and gold-rich project.

Newmont invested roughly C\$13 million on exploration focused on understanding and modeling the controls of the high-



Visible gold in a sample collected from the Goldbank target on Goldstrike's Plateau property that averaged 33.4 g/t gold.

GOLDSTRIKE RESOURCES LTD.

grade gold mineralization Goldstrike had previously identified at Plateau.

Goldstrike said the zones of anomalous gold mineralization encountered during Newmont's 2018 program do not explain the abundant gold mineralization that has been identified on the surface at Plateau.

"Although the Plateau project currently may not meet the corporate thresholds at Newmont, the extensive data base indicates this district-scale system remains a highly prospective exploration asset in a top tier jurisdiction," Goldstrike Resources President and CEO Terrence King said in January.

Newmont expands in Golden Triangle

While Newmont Goldcorp dropped its Plateau option, the world's largest gold mining company is expanding its interests in British Columbia's Golden Triangle.

Newmont's B.C. portfolio is anchored by a 50 percent stake in the world-class Galore Creek project in the mineral-rich north-western corner of the province.

Newmont bought this half ownership of Galore from Novagold Resources Inc. in 2018 for US\$275 million.

Following this acquisition, Newmont and Teck Resources Ltd., which owns the other half of Galore Creek, published an updated resource.

continued on page 60

EVIM RESOURCES CORP.

An alliance between Newmont Goldcorp and Evrim Resources has confirmed the gold potential along a six-mile structural corridor at the Astro project in the Northwest Territories.



A rainbow brightens the sky above Triumph Gold's Freegold Mountain project in the Yukon. Newmont Goldcorp has invested in Triumph and holds a roughly 18 percent stake in the junior explorer.



TRIUMPH GOLD CORP.

MEGA MERGERS *continued from page 59*

According to this recalculation, Galore Creek hosts 1.1 billion metric tons of measured and indicated resource averaging 0.47 percent (5.1 million metric tons) copper, 0.26 (9.3 million ounces) g/t gold and 4.2 g/t (150 million oz) silver.

In preparation for an expected 2020 prefeasibility study for developing a mine at this world-class orebody, the Galore Creek partners are carrying out an 18,000-meter drill program this year.

Newmont Goldcorp expanded its Golden Triangle presence this year by investing C\$17.6 million to acquire a 9.9 percent stake in GT Gold Corp., a junior exploring a porphyry gold-copper discovery that is showing promise to be large and with respectable grades.

GT Gold discovered this emerging deposit, Saddle North, on its Tatogga property last summer.

Highlights from drilling at Saddle North into this summer include: 822.2 meters of 0.42 g/t gold, 0.26 percent copper and 0.62 g/t silver; 904.1 meters of 0.51 g/t gold, 0.3 percent copper and 0.93 g/t silver; 1,149.7 meters of 0.62 g/t gold, 0.36 percent copper and 1.17 g/t silver; and 685 meters of 0.7 g/t gold, 0.44 percent copper and 1.09 g/t silver.

In August, former Goldcorp Senior Vice President of Exploration Paul Harbidge was named as GT Gold's new president and CEO.

"We are honored to have attracted a candidate with such impressive experience and credentials, and we look forward to leveraging his technical expertise and project leadership experience as we continue to advance our discoveries and exploration at Tatogga," said GT Gold Executive Chairman Ashwath Mehra.

While Harbidge's appointment was not directly related to the Newmont Goldcorp investment in GT Gold, having a former Goldcorp senior VP as president of the junior is likely not a mere coincidence.



PAUL
HARBIDGE

Investments across North

Both Goldcorp and Newmont brought interests in earlier staged gold projects across the North into the merged gold miner.

Newmont's contribution includes a 28.5 percent stake in the Doris North Mine on the Hope Bay property in Nunavut. This ownership is through an equity interest in TMAC Resources Inc., which acquired Hope Bay from Newmont in 2013.

Going into 2019, the Doris mine hosted 2.04 million metric tons of proven and probable reserves averaging 7.3 g/t (479,000 oz) gold; plus 121,000 metric tons in stockpiles averaging 5.4 g/t (21,000 oz) gold.

The mill at Doris reached commercial production in 2017, but poor gold recoveries has hampered the ability to reach full operating capacity.

TMAC has been working on these issues and has improved both recoveries and mill throughput at Doris. As a result, the 2,000-metric-ton-per-day recovery plant churned out 78,570 oz of gold over the first six months of 2019.

Newmont Goldcorp also owns a roughly 11.8 percent equity interest in Auryn Resources Inc., a junior exploring two very large gold projects in Nunavut and the Homestake Ridge gold-silver property in northwestern B.C.

Back in the Yukon, the world's largest gold miner also owns a roughly 18 percent stake in Triumph Gold Corp., a junior exploring the Freegold Mountain gold-copper project.

The Nucleus deposit hosts 74.74 million metric tons of indicated resource averaging 0.54 grams per metric ton (1.3 million ounces) gold and 0.06 percent (105.3 million pounds) copper; plus 63.79 million metric tons of inferred resource averaging 0.4 g/t (800,000 oz) gold and 0.05 percent (491,800 lb) copper.

The Revenue deposit, located about 3,000 meters east of Nucleus, hosts another 80.8 million metric tons of inferred resource averaging 0.39 g/t (1 million oz) gold and 0.14 percent (241.4 million lb) copper.

Further east, the Tintina Hill deposit hosts an additional 2.16 million metric tons of inferred resource averaging 1.89 g/t (131,000 oz) gold, 54.9 g/t (3.8 million oz) silver, 0.27 percent (13 million lb) copper, 1.41 percent (67.2 million lb) zinc and 0.99 percent (47.1 million lb) lead.

Just across the border in Northwest Territories, Newmont designated Evrim Resources Corp.'s Astro gold exploration project for option.

"The Astro project is the result of a successful two-year, US\$1.8 million generative alliance with Newmont that demonstrates the synergies of Evrim's generative exploration expertise and Newmont's proprietary exploration technologies," said Evrim Resources President and CEO Paddy Nicol.

Under terms of the alliance, Newmont may elect to earn an 80 percent interest in a designated project by making staged cash payments totaling US\$600,000 to Evrim and solely funding exploration until a pre-feasibility study on at least a 2-million-ounce gold resource is completed.

Newmont has also been carrying out generative exploration in Alaska in recent years. This multi-district work turned up Healy, a block of claims a few miles southeast of the high-grade Pogo gold mine in Alaska.

Northway Resources Corp., a new junior, optioned the Healy property from Newmont Goldcorp and is carrying out a maiden drill program on this property in the Goodpaster Mining District this year.

Barrick's stake in Donlin Gold

Before the merger with Randgold, there were signs Barrick might increase its foothold in the North.

In 2017, Barrick cut a deal with ATAC Resources Ltd. to earn up to a 70 percent interest in Orion, a Carlin-type gold project in the Yukon, by investing up to C\$35 million on exploration at the project over five years.

At the end of 2018, and shortly following its merger with Randgold, Barrick decided to drop its Orion option.

As a result, Barrick's only remaining interest across the North is a 50 percent stake in Donlin Gold, a 39-million-ounce gold

project in the Yukon-Kuskokwim region of Southwest Alaska.

While the size of this deposit is definitely world-class and the resource grades, at 2.24 grams per metric ton gold, are fantastic for a deposit of this size, there are questions as to whether the project will meet the high bar set by the new Barrick Gold management.

Novagold Resources President and CEO Greg Lang said the Barrick-Randgold merger puts his company in a win-win situation – either Barrick sees Donlin as a core asset and moves the project forward or sells the world-class gold project to a company eager to realize the potential of this enormous asset.

"There is a reason why our chairman refers to the changes at Barrick as a 'white swan' event!" the Novagold President penned in the company's 2018 year-end financial report.

Reminding shareholders that Novagold has first right of refusal if Barrick does decide to sell Donlin, which gives them a voice in who a new partner would be, Novagold Chairman Thomas Kaplan said either decision by Barrick will raise the profile of Donlin Gold.

"Anything that allows us to have a partner, whether it's Barrick or whomever, will be accretive to us, because we have the best story in the space," Kaplan said.

While the Novagold chairman took the opportunity to address the question, he is not convinced that Barrick would be willing to sell a North American gold asset as well-endowed as Donlin.

"Is there any reason why Barrick should sell it? From my perspective, 'no'," Kaplan said in response to an analyst's question on the topic.

But, he said, the expanded Barrick Gold has a global portfolio of assets to consider and prioritize, and it is ultimately up to that company's merged management team to decide what to do with its half of the Alaskan gold asset.

"The Barricks of the world, the Newmonts of the world, they need to make deals, they need to add reserves," said the Novagold Resources chairman. "They know that they're burning through reserves faster than they can replace them."

Time will tell how much of these gold reserves will come from Alaska and Canada's North. ●

NOVAGOLD RESOURCES INC.



Optimization drilling carried out at the 39-million-oz Donlin Gold project in 2017 cut 130.5 meters of 5.93 g/t gold and 39 meters of 9.34 g/t gold.



Teck's Red Dog Mine in Northwest Alaska has enough high-grade reserves to continue as a global supplier of zinc until 2031.

SHANE LASLEY

ALASKA & BRITISH COLUMBIA

Teck Resources Ltd.



Teck

TCK: NYSE/ TCK.B: TSX



Teck explores Alaska, B.C. for zinc, copper

Teck Resources Ltd.'s northern exploration had two major focal points – ensuring the Red Dog District in Northwest Alaska continues as a significant source of global zinc supply well into the 21st century and a rekindled interest in advancing the Galore Creek copper-gold-silver project in British Columbia's Golden Triangle closer to production.

The renewed and increased activities at Galore Creek follows Newmont Mining's 2018 acquisition of Novagold Resources Inc.'s 50 percent interest in this world-class mine project in northwestern B.C. As a result, Teck and Newmont Goldcorp are now equal partners in Galore Creek Mining Corp., a joint venture formed to advance this world-class copper-gold asset toward development.



DON LINDSAY

In preparation for a new thrust toward this goal, Teck published a new resource for Galore Creek at the end of 2018 that outlines 1.1 billion metric tons of measured and indicated resources averaging 0.47 percent (5.1 million metric tons) copper, 0.26 g/t (9.3 million ounces) gold and 4.2 g/t (150 million oz) silver.

To advance this world-class orebody closer to a mine decision, the Galore Creek JV is carrying out a roughly 18,000-meter drill program this year, as well as continued engineering and baseline environmental studies. "We plan to initiate a prefeasibility study for Galore, with Newmont, early in 2020," Teck Resources Vice President of Business Development informed shareholders in April.

The Vancouver, B.C.-based major also holds a 75 percent stake in Schaft Creek, another porphyry copper-gold deposit about 30 kilometers (19 miles) northeast of Galore Creek.

A 2013 feasibility study outlined a 130,000-metric-ton-per-day operation at Schaft Creek that is expected to produce an average of 105,000 metric tons of copper, 201,000 oz gold, 1.2 million oz silver and 10.2 million lb of molybdenum annually, over a 21-year mine life.

This is based on the open-pit mining of 940.8 million metric tons proven and probable reserves averaging 0.27 percent (5.6 billion lb) copper, 0.19 g/t (5.8 million oz) gold, 1.72 g/t (51.7 million oz) silver and 0.018 percent (10.2 million lb) molybdenum.

Copper Fox Metals Inc., which owns the remaining 25 percent interest in Schaft Creek, said operation size and infrastructure studies completed by the JV has determined that a mine about the size outlined in the feasibility study is the best option.

In addition to large porphyry deposits, Teck is also exploring zinc-rich deposits in northern B.C.

In 2013, a joint venture between Teck and Korea Zinc Co. cut a deal with ZincX Resources Corp. to explore the Pie, Yuen and Cirque East properties. The JV earned a 51 percent interest in these properties in 2017, a stake that can be increased to 70 percent by investing an additional C\$5 million before 2020.

When it comes to zinc, however, Teck's primary exploration focus is

on the Red Dog District in Alaska, where the company continues to find large deposits with fantastically high-grade zinc.

"Red Dog is in a world-class mining district and we have significant potential there," said Teck Resources Vice President of Base Metals Dale Andres.

Based on 57.6 million metric tons of reserves averaging 13.6 percent (13.9 billion pounds) zinc and 3.9 percent (2.5 billion lb) lead, Red Dog has enough ore to continue to be globally significant source of zinc until 2031. And, Teck is building resources in surrounding deposits that could extend this operation much deeper into the 21st century. Two of the most enticing district exploration targets are Aktigirug and Anarraaq, which are located roughly five miles (eight kilometers) northwest of the Red Dog mill.

Among the largest undeveloped zinc deposits on Earth, Aktigirug has the potential to be a source of ore for the Red Dog mill for 25 to 50 years beyond 2031, at current production rates.

While an industry-compliant resource has yet to be defined for this deposit, based on the holes drilled, along with other geological and geophysical evidence, Teck estimates Aktigirug 80 to 150 metric tons of material averaging 16 to 18 percent combined zinc and lead.

Highlights from 2017 drilling at Aktigirug include 25.4 meters of 21.4 percent zinc and 4.1 percent lead in hole DDH 1730; and 54.6 meters of 16.8 percent zinc and 3.6 percent lead in DDH 1737.

While Anarraaq is smaller than Aktigirug, it is more advanced. According to the most recent calculation, Anarraaq hosts 19.4 million metric tons of inferred resource averaging 14.4 percent zinc and 4.2 percent lead.

Andres said Teck continues to advance exploration at these important Red Dog District targets during 2019.

Teck also continues to investigate Lik, a zinc-lead-silver deposit about six miles (10 miles) west of Aktigirug, under a 50-50 joint venture with Solitario Zinc Corp.

Lik hosts 17.3 million metric tons of indicated resource averaging 8 percent zinc, 2.7 percent lead and 51 g/t silver; and 2.9 million metric tons of inferred resource at 8.6 percent zinc, 2.6 percent lead and 37 g/t silver. Managed by Teck, the 2019 exploration at Lik included geologic mapping and geochemical sampling to follow up on an area about 1,500 meters north of Lik that was identified last year.

This year's program will also include multi-element continuous scans of historic core with state-of-the-art X-ray fluorescence (XRF) scanning technology to further define the Lik deposit's geochemical signature and characterize its distal geochemical halo to potentially vector in on new drill targets.

CHAIRMAN: Dominic Barton

PRESIDENT AND CEO: Don Lindsay

SENIOR VP, EXPLORATION: Alex Christopher

CASH AND CASH EQUIVALENTS: C\$1.53 billion (June 30, 2019)

WORKING CAPITAL: C\$3.41 billion (June 30, 2019)

MARKET CAPITALIZATION: C\$12.69 billion (Sept. 23, 2019)

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BRITISH COLUMBIA

GT Gold Corp.

TSX.V: GTT

GT Gold explores its own Golden Triangle

A C\$17.6 million strategic investment by Newmont Goldcorp has provided GT Gold Corp. the capital to accelerate exploration on its Tatogga gold property in northwestern British Columbia.

GT Gold said this investment is a strong endorsement of the potential of the Saddle South and Saddle North discoveries it has made on this property toward the north end of the Golden Triangle.

Highlights from drilling at Saddle South during 2017 and 2018 include: seven meters of 51.53 grams per metric tons gold; 12.2 meters of 14.75 g/t gold; 3.4 meters of 48.85 g/t gold; and 8.3 meters of 20.02 g/t gold.

Despite these intriguing high-grade intercepts, Newmont Goldcorp is likely more interested in the much larger gold potential at Saddle North, the primary target of a 10,000-meter initial phase of 2019 drilling that got underway in June.

The roughly 8,200-meter discovery drill program carried out at Saddle North during 2018 cut very wide zones of gold-copper-silver mineralization.

Highlights from the 10 holes drilled last year at Saddle North include: 904.1 meters of 0.51 g/t gold, 0.3 percent copper and 0.93 g/t silver in TTD093; 323.8 meters of 0.43 g/t gold, 0.32 percent copper and 1.09 g/t silver in TTD108; and 1,149.7 meters averaging 0.62 g/t gold, 0.36 percent copper and 1.17 g/t silver in TTD109.

The first phase of 2019 Saddle North drilling targeted expansion of the mineralization encountered in hole TTD108; and deeper extensions of the higher-grade core mineralization encountered in holes such as TTD093 and TTD109.

GT Gold said two of the early holes, TTD112 and 116, cut excellent and increasing grades existing between the near-surface mineralization through moderate depths to the deeper and generally highest-grade mineralization at Saddle North.

TTD112 cut 685 meters of 0.7 g/t gold, 0.44 percent copper and 1.09 g/t silver from a depth of 21 meters; including 500 meters of 0.91 g/t gold, 0.55 percent copper and 1.34 g/t silver from 206 meters. TTD116 cut 431 meters of 0.46 g/t gold, 0.33 percent copper and 0.91 g/t silver from 17 meters; including 0.61 g/t gold, 0.42 percent copper and 1.09 g/t silver from 150 meters.

"We have shown that high-grade copper-gold mineralization occurs closer to surface than was previously known and have linked these zones with the deep and very high-grade copper-gold mineralization intersected last year in holes TTD093 and 109 with intersections in holes TTD112 and 116," said GT Gold Vice President of Exploration Charles Greig.

In September, the company reported an even longer intersection of robust copper-gold at Saddle North.

TTD126 cut 1,206 meters of 0.57 g/t gold, 0.26 percent copper and 0.96 g/t silver from a depth of 18 meters; including 51 meters of 4.05 g/t gold, 0.31 percent copper and 3.06 g/t silver from a depth of 410 meters. By early September, the 250- to 300-meter thick higher-grade core zone at Saddle North had been traced for nearly 1,500 meters down-plunge and 400 meters along strike. It is contained within a 600- to 700-meter thick mineralized envelope that extends more than 1,500 meters down-plunge and 700 meters along strike. The company said this porphyry copper-



PAUL HARBIDGE



GT Gold Vice President of Exploration Charles Greig.

GT GOLD CORP.



A drill expands the porphyry gold-copper mineralization at the Saddle North discovery on GT Gold's Tatogga property in British Columbia's Golden Triangle.

gold system remains open in most directions.

A 15,000-meter second phase of drilling continued to primarily focus on infill and expansion drilling at Saddle North.

In September, Paul Harbidge, former senior vice president of exploration for Goldcorp Inc., assumed the role of president and CEO of GT Gold.

"We are honored to have attracted a candidate with such impressive experience and credentials, and we look forward to leveraging his technical expertise and project leadership experience as we continue to advance our discoveries and exploration at Tatogga," said GT Gold Executive Chairman Ashwath Mehra.

To make room for Harbidge, Steve Burleton stepped down from his executive posts at GT Gold but continues as a consultant for the company.

"I am pleased that we have accomplished a great deal over the last year," reflected Burleton. "The discovery of Saddle North, with the recent investment by Newmont Goldcorp, means we are well funded to further advance our exciting exploration programs. I firmly believe that Paul's experience will allow GT Gold to achieve our next milestones at this pivotal time in our history."

As a result of the 11.5 million flow-through shares acquired in May, Newmont Goldcorp holds 9.9 percent of GT Gold's outstanding shares.

EXECUTIVE CHAIRMAN: Ashwath Mehra
 PRESIDENT AND CEO: Paul Harbidge
 VP, EXPLORATION: Charles Greig

CASH AND CASH EQUIVALENTS: C\$17.8 million (June 30, 2019)
 WORKING CAPITAL: C\$10.8 million (June 30, 2019)
 MARKET CAPITALIZATION: C\$121.9 million (Sept. 23, 2019)

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The Donlin Gold camp, which remains fully intact after a 2019 wildfire there, houses crews carrying out fieldwork to support optimization and engineering studies at this 39-million-oz gold project in Southwest Alaska.



NOVAGOLD RESOURCES INC.

ALASKA

Novagold Resources Inc. ●

TSX: NG / NYSE-MKT: NG 

Novagold focused on optimizing Donlin

With the 2018 sale of its 50 percent interest in the Galore Creek copper-gold project in British Columbia, Novagold Resources Inc. is singularly focused on advancing the Donlin Gold Mine project in Alaska toward production.

In dichotomy, Barrick Gold Corp., Novagold's equal co-owner of Donlin Gold, significantly expanded its gold project portfolio with the finalization of a merger with Randgold Resources Ltd. at the onset of 2019.

The Barrick-Randgold merger have caused Novagold shareholders and others to question whether Donlin Gold fits into the mega-gold-miner's future plans, especially since Barrick intends to sell non-core assets as it restructures the combined portfolio.

Novagold's largest shareholder and chairman, Thomas Kaplan, does not believe Barrick will be willing to sell a North American gold asset as well-endowed as Donlin.

"Is there any reason why Barrick should sell it? From my perspective, 'no'," he said in response to an analyst's question on the topic earlier this year.

Kaplan believes either decision by the new Barrick management team will be good for Novagold.

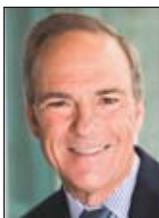
"Anything that allows us to have a partner, whether it's Barrick or whomever, will be accretive to us, because we have the best story in the space," the Novagold chairman said.

What makes the Donlin story so compelling is 39 million ounces of gold in 541 million metric tons of measured and indicated resources that average 2.24 grams per metric ton located in the United States.

A 2011 feasibility study for Donlin Gold envisions a 53,500-metric-ton-per-day operation that would produce an average of roughly 1.1 million oz gold annually over a projected 27-year mine-life. This is more yearly gold than all of the rest of the mines in Alaska currently produce, combined.

The price tag to build this mine in a remote part of western Alaska, however, was calculated at nearly US\$7 billion, which includes a roughly US\$1 billion pipeline to deliver natural gas to the enormous gold project about 300 miles west of Anchorage.

NOVAGOLD



GREG LANG



TOM KAPLAN

Donlin Gold LLC – a joint venture owned equally by Novagold and Barrick – has secured the federal permits needed to build this mine and is working to secure the last of the requisite state permits by the end of 2019.

As the permitting wraps up, the JV is looking into options that would bring down costs and improve returns.

This optimization work includes a 16-hole drill program in 2017 that provides a better understanding of the mineralization and structures within the targeted zones.

Highlights from this program include: 130.5 meters grading 5.93 g/t gold; 39 meters of 9.34 g/t gold; 43.9 meters of 7.6 g/t gold; 64 meters of 5.09 g/t gold; and 30.4 meters of 10.3 g/t gold.

These long intersections of five to 10 g/t gold demonstrate that more selective mining could deliver higher grades.

Novagold and Barrick have indicated the potential that Donlin Gold will start out as a somewhat smaller mine that focuses on higher-grade portions of the deposit, an operation that could be scaled up in the future.

Such a strategy, coupled with incorporating new technologies and other ideas not considered in the 2011 study, would reduce initial capital outlays and would likely improve project economics.

This year, Novagold and Barrick each contributed US\$13 million toward ongoing optimization studies, permitting and community initiatives during 2019.

"With key permitting activities largely complete, our focus is also on integrating scoping-level optimization analyses into a study that should serve as the basis for an updated project development plan," Novagold Resources President and CEO Greg Lang said in July. "In this regard, Novagold is collaborating with Barrick's new management and technical team to advance the project in a financially disciplined manner with a strong focus on furthering our geological understanding, engineering excellence, environmental stewardship and safety."

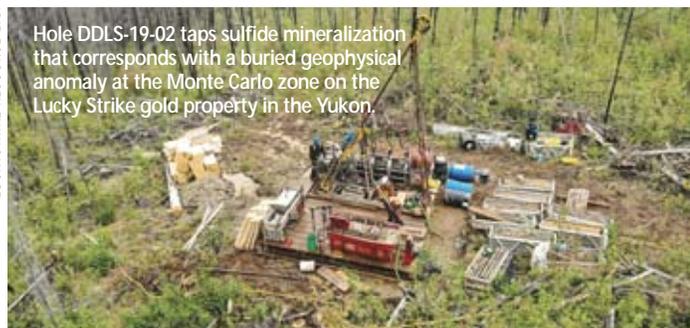
The results of the optimization work are expected to be detailed in an updated feasibility study to be completed once the new Barrick team settles in and has an opportunity to go over the extensive amount of work that has been carried out at this world-class gold project in Southwest Alaska.

CHAIRMAN: Thomas Kaplan
PRESIDENT AND CEO: Gregory Lang
VICE PRESIDENT AND CFO: David Ottewell

CASH AND TERM DEPOSITS: US\$157 million (May 31, 2019)
WORKING CAPITAL: US\$157 million (May 31, 2018)
MARKET CAPITALIZATION: US\$2.15 billion (Sept. 23, 2019)

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LUCKYSTRIKE RESOURCE LTD.



Hole DDLS-19-02 taps sulfide mineralization that corresponds with a buried geophysical anomaly at the Monte Carlo zone on the Lucky Strike gold property in the Yukon.

YUKON TERRITORY

Luckystrike Resources Ltd. ●

TSX.V: LUKY ●

Luckystrike bets on Monte Carlo gold

Since its formation in 2018, Luckystrike Resources Ltd. has been exploring Yukon gold properties spun out of Goldstrike Resources Ltd., with a primary focus on its flagship Lucky Strike gold property in the heart of the White Gold District.

The 2019 drill program at Lucky Strike targeted the expansion of two zones of gold mineralization tapped in DDLS-18-06, a 2018 hole that cut 8.3 meters averaging 1.16 grams per metric ton gold in an oxidized upper zone and 7.6 meters averaging 4.55 g/t gold within a newly discovered lower zone of sulfide mineralization at Monte Carlo.

The lower sulfide zone corresponds with an 1,800-meter-long induced polarization (IP) chargeability anomaly previously identified at Monte Carlo.

"With continued drilling success, the Luckystrike Property is poised to quickly evolve into a significant gold discovery," said Luckystrike Resources President and CEO Bill Chornobay.

To test this significant expansion potential, Luckystrike's 2019 drill program included four holes that tested an 850-meter section of the buried IP chargeability anomaly at Monte Carlo.

In addition to targeting the deeper IP anomaly, two of the 2019 holes also targeted newly discovered mineralization in surface trenches completed in 2018.

Hole DDLS-19-02 was drilled adjacent to trench LSTR-18-02, which encountered 22 meters of 0.90 g/t gold; and DDLS-19-04 was drilled adjacent to trench LSTR-18-01 which encountered 30 meters of 0.94 g/t gold. All four holes intersected sulfide mineralization that corresponds to the IP anomaly that indicates the lower sulfide zone. Assay results were pending at the time this report was written.

Monte Carlo is at the northeast end of a 10-kilometer- (6 miles) corridor running across the Lucky Strike property that hosts five large gold-in-soil anomalies – Monte Carlo, Belmont, Samson, Boss and Maverick.

"The presence of sulfides at depth is very encouraging; positive assay results would greatly expand the strike extent of the gold-rich sulfide zone discovered in 2018. This would extend the zone to 825 meters of strike-length and set the stage for future infill and expansion drilling on Monte Carlo and for exploration drilling on strike along the 10-kilometer (six miles) corridor that remains to be drill tested," said Chornobay. In addition to Lucky Strike, the company's White Gold District portfolio of properties includes Hotspot, Bull's Eye, BRC, Gold Source and King's Ransom.

PRESIDENT AND CEO: Bill Chornobay
CHIEF FINANCIAL OFFICER: Lucy Zhang
DIRECTOR: Ewan Webster

CASH AND CASH EQUIVALENTS: C\$1.3 million (June 30, 2019)
WORKING CAPITAL: C\$1.3 million (June 30, 2019)
MARKET CAPITALIZATION: C\$2 million (Sept. 23, 2019)

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YUKON TERRITORY

Triumph Gold Corp. ●●

TSX.V: TIG ●



Triumph digs deep at Freegold Mountain

Triumph Gold Corp. focused its 2019 drill program on testing buried copper-gold porphyry targets not previously targeted on its Freegold Mountain project in the Yukon.

Over the years, Triumph has identified numerous near-surface porphyry gold-copper targets and deposits over a six-kilometer (3.7 miles) stretch of Freegold Mountain. The two most advanced deposits along this trend are Nucleus and Revenue.

The Nucleus deposit hosts 74.74 million metric tons of indicated resource averaging 0.54 grams per metric ton (1.3 million ounces) gold and 0.06 percent (105.3 million pounds) copper; plus 63.79 million metric tons of inferred resource averaging 0.4 g/t (800,000 oz) gold and 0.05 percent (491,800 lb) copper.

The Revenue deposit, located about 3,000 meters east of Nucleus, hosts another 80.8 million metric tons of inferred resource averaging 0.39 g/t (1 million oz) gold and 0.14 percent (241.4 million lb) copper. Triumph Gold geologists believe the 6,000-meter-long multi-element encompassing these zones and deposits is underlain by a large buried porphyry intrusion that has yet to be tested by drilling.

Geophysical data indicates this deep porphyry target lies at least 400 meters below the Revenue and Nucleus gold-copper deposits and spans the 6,000-meter-long prospective area at Freegold Mountain.

To reach this target the company mobilized "The Big Green Monster", a drill capable of reaching depths of 2,000 meters, to Freegold Mountain.

This power rig began its deep drilling at Blue Sky, a discovery area at the eastern end of the 6,000-meter-long Revenue-Nucleus soil anomaly.

Drilling carried out at this zone over the past two years has confirmed a wide zone of porphyry mineralization at the heart of the Blue Sky zone. One such hole, RVD18-19, cut 316 meters averaging 1.1 g/t gold and 0.27 percent copper.

The deep hole at Blue Sky will test the extension of this porphyry style mineralization to a depth of roughly 1,600 meters. WAu Breccia, a copper-gold-silver-molybdenum-tungsten-bearing target immediately east of the Revenue deposit, was also tested with deep drilling.

Previous drilling at WAu Breccia cut 76.3 meters averaging 1.4 g/t gold, 9.2 g/t silver, 0.21 percent copper and 0.03 percent molybdenum; and 40 meters of 1.18 g/t gold, 8.3 g/t silver, 0.24 percent copper and 0.13 percent molybdenum.

The roughly 6,000-meter drill program also tested Big Red, a 2,800-meter-long intense chargeability anomaly at Revenue West.

"With the technical data to back up this amazing exploration story, Triumph is swinging for the fences this year," said Triumph Gold Executive Chairman John Anderson. "The upside for our investors is the possible discovery of a previously untested buried copper gold porphyry system that by all indications could be world-class in size and grade."

CHAIRMAN: John Anderson
PRESIDENT AND CEO: Paul Reynolds
VP, EXPLORATION: Tony Barresi

CASH AND CASH-EQUIVALENTS: C\$2.6 million (June 30, 2019)
WORKING CAPITAL: C\$2.1 million (June 30, 2019; closed C\$5.1 million financing on July 24, 2019)
MARKET CAPITALIZATION: C\$34.4 million (Sept. 23, 2019)

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TRIUMPH GOLD CORP.



Triumph Gold's exploration camp at the Freegold Mountain gold-copper project in the Yukon.

YUKON TERRITORY

ATAC Resources Ltd. ● ● ● ●

TSX-V: ATC 

ATAC unlocking Rau's rich metal potential

ATAC Resources Ltd.'s 2019 exploration focused primarily on Rau, a 660-square kilometer (255 square miles) property at the western end of the company's 185-kilometer- (115 miles) long Rackla Gold property in the Yukon.

Rau is anchored by Tiger, a carbonate replacement body with 5.68 million metric tons of measured and indicated resources averaging 2.66 g/t (485,700 oz) gold. This project, however, hosts numerous styles of mineralization rich in copper, silver, zinc, lead and tin across a 12.5-mile- (20 kilometers) long trend.

"Mineralization styles vary throughout the Rau project, and demonstrate the potential for not just high-grade gold discoveries, but an entire suite of strategic metals," said ATAC Resources President and CEO Graham Downs

ATAC began its 2019 exploration at Rau with ground-based induced polarization and magnetic geophysical surveys over an area centered on the Rackla Pluton, which is interpreted to be a hydrothermal fluid source that mineralized many of the targets identified at Rau. Designed to follow up on gold, copper, silver and tin anomalies identified last year, this year's work also included prospecting, soil sampling, geologic mapping and drilling.

Initial hand-pitting and prospecting near a strongly anomalous copper-in-soil location returned a sample of oxidized breccia containing 6.39 percent copper. Further prospecting 300 meters west returned a sheared siltstone cut by quartz veins containing 643 g/t silver. Both samples are located proximal to the intersection of two untested faults – defined on surface as prominent linear features – that ATAC geologist believe tapped mineralizing fluids emanating off the nearby Rackla Pluton.

This area of new mineralization is located approximately 800 meters north of the Bobcat gold-copper skarn target. Grab samples from prospecting and hand pitting early in the 2018 program include 6.07 g/t gold with 7.41 percent copper; and 5.08 g/t gold with 3.69 percent copper.

ATAC began diamond drilling to test for the bedrock source of this mineralization at Bobcat in July, as well as obtain stratigraphic and structural information to target future drilling.

Late-2018 soil sampling identified a 1,200- by 1,000-meter silver-lead-tin soil anomaly about 1,000 meters east of Bobcat. The easternmost line of this grid contained a sample grading 14.55 g/t silver.

This area was extended with early 2019 sampling that identified a new 900- by 400-meter gold-in-soil anomaly that overlays a parallel 700- by 500-meter copper-in-soil anomaly.

ATAC says this anomaly demonstrates the robust potential for intrusion-related discoveries in the district.

"Results from the area proximal to the Rackla Pluton continue to expand the mineral potential across an emerging, regional-scale poly-metallic district," Downs said.

Spotlight, a skarn target located 6,500 meters north of Bobcat, is also being investigated further this year.

ATAC discovered Spotlight in 2017. Limited follow-up prospecting work has resulted in the collection of high-grade grab samples, including 7,080 g/t (227.6 ounce per metric ton) silver and 3.27 g/t gold. This year's prospecting also identified large quartz boulders containing 2.87 g/t gold about 2,000 meters south of Spotlight and 4,500 meters north of Bobcat

This target is located on the southern margin of a second interpreted buried intrusion identified at Rau.

In addition to its field work, ATAC received Yukon government and Na-Cho Nyak Dun First Nation approvals to build a 65-kilometer (40 miles) private, all-season road that will connect Rau to the Yukon high-



GRAHAM DOWNS



A pile of copper- and gold-rich rock pulled out of pit dug at the Bobcat target on ATAC Resources' Rau project in the Yukon.

way network.

Beyond supporting exploration and development activities at Rau, this road could provide a staging area for exploration on the Orion and Osiris projects to the east.

While ATAC focused its 2019 exploration at Rau, the Orion and Osiris projects to the east remain high quality assets.

Orion, a 780-square-kilometer (301 square miles) prospect immediately east to Rau, was previously under option to Barrick Gold Corp. After two years of exploration, however, the gold major gave up its option without earning any interest in the property.

Despite Barrick dropping the property as it merged with Randgold Resources, the 7,410-meter drill program at Orion during 2018 tapped some promising results.

Much of this drilling targeted the 5,300-meter-long Anubis Fault corridor, where previous ATAC holes cut 8.5 meters of 19.85 g/t gold in the Anubis zone and 61.3 meters of 2.75 g/t gold in the Orion zone.

Four widely-spaced holes drilled by Barrick last year extended the high-grade gold mineralization along the Anubis Fault corridor.

- BDO-18-017 cut 7.61 meters of 10.5 g/t gold;
- BDO-18-018 cut 10.73 meters of 7.2 g/t gold; and
- BDO-18-019 cut 2.78 meters of 9.5 g/t gold.

Osiris is a 302-square-kilometer (117 square miles) property at the eastern end of the Rackla property where ATAC originally discovered Carlin-type gold mineralization in the Yukon.

In 2018, ATAC announced a maiden inferred resource of 1.69 million oz of gold in 12.4 million metric tons of material averaging 4.23 g/t gold. A successful follow-up expansion drill program completed last year extended mineralization in multiple directions at the Osiris, Conrad and Sunrise zones.

Rotary air blast (RAB) drilling approximately 1,000 meters southwest of Conrad identified a new high-grade gold discovery of 6.1 meters of 3.38 g/t gold from surface.

ATAC Resources is a member of the Strategic Exploration Group, a collection of junior resource companies focused on exploring northwestern Canada. Members of the group enjoy a close working relationship with Archer, Cathro & Associates (1981) Ltd., a geological consulting firm with extensive knowledge and exploration expertise in Yukon and northern British Columbia.

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PRESIDENT AND CEO: Graham Downs

INTERIM VP, EXPLORATION: Robert Carne

CASH AND CASH EQUIVALENTS: C\$13.2 million (June 30, 2019)

WORKING CAPITAL: C\$12 million (June 30, 2019)

MARKET CAPITALIZATION: C\$37.1 million (Sept. 23, 2019)

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Snow reflects the lights from the camp at Silvertip, Coeur Mining's recently acquired high-grade silver mine just south of the Yukon border in northern British Columbia.



British Columbia Exploration 2019

Golden opportunities outweigh BC policy

Northern BC attracts explorers despite regulatory concerns

By **SHANE LASLEY**
Mining News

Whether it be precious metals such as gold and silver, base metals like copper and zinc, or battery metals like nickel and cobalt, northern British Columbia is rich in the type of metal deposits that junior mining companies are hoping to discover and majors are wanting to mine.

Couple this mineral endowment with good infrastructure – especially stacked up against the other jurisdictions in the North of 60 Mining News coverage area – and northern B.C. continues to draw strong exploration spending.

Despite its rich mineral potential and relatively good infrastructure, however, B.C. falls in the bottom half of Canada's provinces and territories when it comes to attracting mining sector investments, according to the Fraser Institute Survey of Mining Companies 2018.

Concerns over environmental regulations, First Nations land claims and questions over what areas will be protected are among the issues weighing on the mining executives that responded to the survey.

"Rules around Indigenous consultation and environmental regulations are unclear, and this deters investment," a mineral exploration company president wrote in response to the Fraser survey.

The provincial government likely did not allay these concerns with its 2019 moratorium on resource development and potential expansion of environmental protected area where at least two exploration companies have identified promising vanadium discoveries in northeastern B.C.

"(U)ntil the uncertainty over these proposals is cleared up, we will be measured appropriately in our activities and expenditures on our Pine Pass and Ursula vanadium projects," said Ethos Gold Corp. CEO Craig Roberts.

Authors of the Fraser Institute mining survey said concerns over environmental regulations and protected areas in B.C. were more prevalent among junior exploration companies than the majors.

"In British Columbia, 69 percent of explorers see regulatory duplication and inconsistencies as a deterrent to investment, compared to 56 percent of producers," the Canada-based think-tank penned in its report.

Major moves in northern B.C.

The divergence of concerns over B.C.'s regulatory system seems to be playing out in the northern half of the province, where an increasing number of major mining companies are investing.

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Mills at Newcrest Mining's newly acquired Red Chris copper-gold mine in British Columbia's Golden Triangle.

BC EXPLORATION *continued from page 67*

Among the newcomers is Newcrest Mining Ltd., which paid US\$806.5 million to acquire a 70 percent stake in Imperial Metals Corp.'s Red Chris gold-copper mine in the province's Golden Triangle region, one of the majors that see northern B.C.'s mineral potential outweighing any regulatory apprehensions.

With acquisition of Red Chris, finalized on Aug. 15, Newcrest has set in motion a two-stage plan to realize the buried potential of this northern B.C. gold-copper mine.

The first stage includes optimizing the mill and open-pit mine at Red Chris.

The open-pit portion of Red Chris includes 847.9 million metric tons of measured and indicated resources averaging 0.31 percent (5.79 billion pounds) copper, 0.27 grams per metric ton (7.36 million ounces) gold and 1.01 g/t (27.53 million oz) silver; plus 397.3 million metric tons of inferred resource averaging 0.24 percent (2.1 billion lb) copper, 0.26 g/t (3.32 million oz) gold and 0.93 g/t (11.88 million oz) silver.

Newcrest said optimizing this near-surface resource and the 11-million-metric-ton-per-year processing plant at Red Chris provide opportunities to get more out of this northern B.C. Mine in the short term.

The real value, however, comes when the Australian company implements block cave mining, which involves starting at the bottom of the orebody and allowing the deposit to progressively collapse under its own weight, during the second phase of its plan.

The underground portion of Red Chris hosts 185.8 million metric tons of measured and indicated resource averaging 0.53 percent (2.17 billion lb) copper, 0.7 g/t (4.18 million oz) gold and 1.72 g/t (10.28 million oz) silver. Plus, 389.8 million metric tons of inferred resource averaging 0.33 percent (2.84 billion lb) copper, 0.38 g/t (4.76 million oz) gold and 1.15 g/t (14.41 million oz) silver.

Newcrest, which has successfully implemented block cave mining in Australia, plans to invest heavily in an accelerated

drill program needed to implement this bulk underground mining technique at its new copper-gold project in B.C.

"We believe we can bring our unique technical capabilities to unlock the full value potential of this orebody in one of the premier gold districts in the world," said Newcrest Managing Director Sandeep Biswas.

Newcrest is not the only major working toward unlocking Golden Triangle's vast mineral potential.

Newmont Goldcorp, which bought a 50 percent stake in the massive Galore Creek copper-gold project in 2018, recently grabbed a foothold in another copper-gold discovery just 15 kilometers (nine miles) west of Red Chris.

In May, Newmont bought C\$17.6 million worth of GT Gold Corp. shares, a strategic investment that provides the world's largest gold mining company a 9.9 percent stake in the junior.

GT Gold is using the funds to expand a large porphyry gold-copper-silver discovery it made at Saddle North on its Tatogga property.

An 8,200-meter discovery drill program in 2018 cut up to 900-meter-thick zones of porphyry copper-gold-silver mineralization at Saddle North. Impressive widths of bulk-minable grades are continuing to be tapped this year at this emerging porphyry deposit.

Newmont's largest 2019 investment in the Golden Triangle, however, is at Galore Creek.

Since buying Novagold Resources Inc.'s 50 percent stake in Galore Creek last year, Newmont and Teck Resources Ltd., its equal partner in the world-class gold-copper project, have stepped up activities there.

This began with an updated calculation that outlines 1.1 billion metric tons of measured and indicated resources averaging 0.47 percent (5.1 million metric tons) copper, 0.26 g/t (9.3 million ounces) gold and 4.2 g/t (150 million oz) silver.

To gain an even better understanding of this world-class ore-

body, Newmont and Teck are carrying out an 18,000-meter drill program this year.

This work, along with engineering and baseline environmental studies, will allow the Galore Creek partners to advance this world-class asset further up the value chain.

"We plan to initiate a prefeasibility study for Galore, with Newmont, early in 2020," said Teck Resources Vice President of Business Development.

Teck also owns a 75 percent interest in Schaft Creek, another porphyry mine project about 30 kilometers (19 miles) northeast of Galore Creek that hosts 940.8 million metric tons proven and probable reserves averaging 0.27 percent (5.6 billion lb) copper, 0.19 g/t (5.8 million oz) gold, 1.72 g/t (51.7 million oz) silver and 0.018 percent (10.2 million lb) molybdenum.

Copper Fox Metals Inc. owns the remaining 25 percent stake in this large copper-gold-silver-molybdenum project.

Gold outweighs junior concerns

For dozens of junior exploration companies, Golden Triangle's prospectivity for gold-rich porphyry projects like KSM outweigh policy concerns in northern B.C.

The largest such project in this land of giant porphyry deposits is KSM, owned by Seabridge Gold Inc.

Four deposits at KSM – Kerr, Mitchell, Sulphurets and Iron Cap – host 2.98 billion metric tons of measured and indicated resources averaging 0.52 g/t (49.7 million oz) gold, 0.21 percent (13.9 billion lb) copper, 2.8 g/t (265.3 million oz) silver and 54 parts per million (312 million lb) molybdenum; plus 4.56 billion metric tons of inferred resource averaging 0.38 g/t (56.3 million oz) gold, 0.32 percent (32 billion lb) copper, 2.4 g/t (348.8 million oz) silver and 32 ppm (295 million lb) molybdenum.

A prefeasibility study completed in 2016 detailed a 53-year mine at KSM that would produce an average of 540,000 oz gold, 156 million lb copper, 2.2 million oz silver, and 1.2 million lb molybdenum annually.

Substantial resource expansion since the PFS, along with the completed federal and provincial permitting, further de-risk this project for any producer looking for a world-class gold-copper in a stable jurisdiction.

"We continue to believe that due to its size, location, economics and permit status, KSM represents one of the most compelling development opportunities on the planet," said Seabridge Gold Chairman and CEO Rudi Fronk.

While majors have shown interest in KSM, as of the writing of this report Seabridge had yet to find a suitable partner.

As Seabridge seeks a major partner at KSM, other explorers are seeking similar large gold-copper deposits in the area.

One such junior, Aben Resources Ltd., is making intriguing discoveries on its Forrest Kerr property about 45 kilometers (28 miles) northwest of KSM.

Much of Aben's recent exploration at Forrest Kerr has focused on near-surface, high-grade gold identified in the Boundary zones – for good reason.

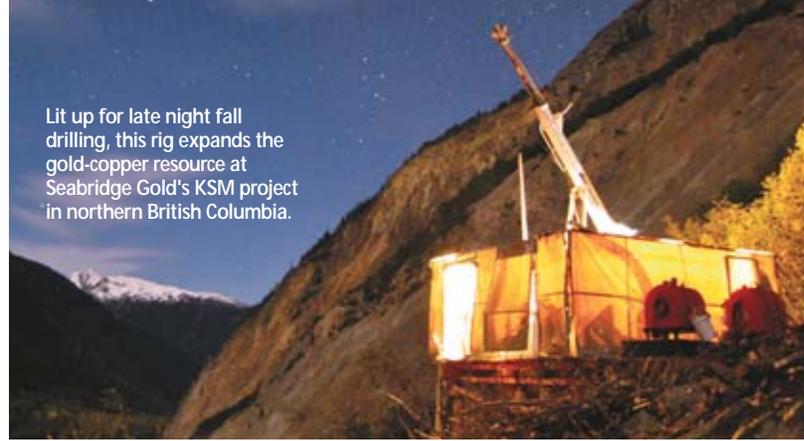
FK18-10, drilled last year, cut 10 meters of 38.7 grams per metric ton (1.12 ounces per metric ton) gold from a depth of 114 meters, including one meter of 331 g/t (9.65 oz/t) gold.

This is very similar to the 326 g/t gold Noranda encountered in RG91-16, a historical hole drilled roughly 200 meters to the south.

While Aben's 2019 program continues to test the high-grade gold here, the company is also targeting the large porphyry-style copper-gold deposit types that are common in northwestern B.C.

Lit up for late night fall drilling, this rig expands the gold-copper resource at Seabridge Gold's KSM project in northern British Columbia.

SEABRIDGE GOLD CORP.



High-grade exploration

While large bulk tonnage projects at KSM are a major target in the Golden Triangle, northern B.C. is also renowned for its high-grade gold.

The best example of this is Pretium Resources Inc.'s Brucejack property immediately southeast of KSM.

Valley of the Kings and West zones at Brucejack host 16 million metric tons of proven and probable reserves averaging 12.6 g/t (6.4 million oz) gold and 59.3 g/t (30.5 million oz) silver.

These reserves provide enough ore for Brucejack to churn out an average of 525,000 oz of gold annually over the next 10 years at all-in sustaining cost of US\$535/oz.

Looking beyond the mine plan, Pretium launched a 70,000-meter underground drill program early in 2019 that is expected to expand Valley of the Kings reserves.

In addition, the company is investigating the property's wider potential, including long holes drilled from the Valley of the Kings that have tapped additional high-grade gold and encountered

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Skeena Resources upgrades and expands the near surface mineralization at its Eskay Creek gold-silver mine project in the Golden Triangle.

SKEENA RESOURCES LTD.

BC EXPLORATION *continued from page 69*

signs of KSM-style porphyry mineralization.

Further afield, a 5,000-meter grassroots program investigated Pretium's Bowser claims south of Brucejack for volcanogenic massive sulfide (VMS) similar to the ore mined at the iconic Eskay Creek project about 25 kilometers (16 miles) to the northwest.

From 1994 to 2008, Barrick Gold Corp. operated an underground mine at Eskay Creek that produced roughly 3.3 million oz of gold and 160 million oz of silver from ore averaging 45 g/t gold and 2,224 g/t silver.

Skeena Resources Ltd., which cut a deal in 2017 to acquire Eskay from Barrick, is exploring the potential of resuming mining there, with an emphasis on portions of the deposits that could be mined from the surface.

According to an early 2019 calculation, Eskay Creek hosts 12.71 million metric tons of surface mineable indicated resource averaging 4.5 g/t (1.82 million ounces) gold and 117 g/t (47.79 million oz) silver; and 13.57 metric tons of surface mineable inferred resource averaging 2.2 g/t (984,000 oz) gold and 42 g/t (18.46 million oz) silver.

This year, Skeena is carrying out a roughly 15,000-meter drill program aimed primarily at upgrading this near-surface resource.

Skeena is also exploring Snip, another past producing gold property it acquired from Barrick.

In the 1990s, an underground mine at Snip produced 1.1 million ounces of gold from 1.25 million metric tons of ore averaging 27.5 g/t gold.

A lot has changed over the two decades since Barrick shuttered operations at Snip, including much higher gold price and improved infrastructure in the Golden Triangle.

Over the past two years, Skeena has expanded high-grade gold Barrick left when gold was only selling for around US\$300/oz.

"The prospects for redeveloping the Snip property have improved dramatically, given today's substantially higher gold prices, subsequent improvements in infrastructure and access, the prospect of remaining high-grade mineralization and exploration upside," the company penned on its website.

Revitalizing Stewart

One of the most compelling northern B.C. exploration stories is efforts to revitalize Stewart, a mining town at the southern gateway of the Golden Triangle.

The Premier gold-silver mine played a key role in Stewart's history and is a main character in the hoped-for revival of this community.

An underground mine at Premier produced 2 million oz of gold and 45 million oz of silver from 1918 to 1952; and an open-pit operation in the 1990s produced another 260,000 oz of gold and 5.1 million oz of silver.

In recent years, Ascot Resources Ltd. has focused on utilizing the infrastructure that remains from the latest iteration of the Premier Mine to restart operations there.

In addition to Premier, Ascot's landholdings in the Stewart area include Dilworth, a property just north of Premier that hosts the Big Missouri mines; Silver Coin, an adjacent property that also provided ore to the mill at Premier; and Red Mountain, another gold-silver asset gained through the acquisition of IDM Mining.

Premier, which still hosts the mill and other infrastructure from past mining, is central to Ascot's plans to resume and start mining at all of these properties around Stewart. As such, this property is a primary focus of the company's activities this year.

While the Premier property has the infrastructure, the Red Mountain mine project about 15 kilometers (nine miles) north-east of Stewart is arguably more advanced in terms of engineering, permitting and social license.

This operation is based on 1.95 million metric tons of reserves, averaging 7.53 g/t (473,000 oz) gold and 21.86 g/t (1.37 million oz) silver.

Prior to Ascot's acquisition, IDM Mining had received the requisite provincial and federal environmental assessment approvals for an underground mine at Red Mountain that is expected to average roughly 78,800 oz of gold and 228,800 oz of silver annually over an initial six-year mine-life.

The issuance of the provincial environmental assessment was heralded by First Nations, municipal and provincial leaders from

the area of northwestern British Columbia where the underground mine is to be developed.

"I am happy with this decision, which will see significant jobs and business opportunities along with appropriate safeguards to protect and support our community," Stewart Mayor Gina McKay said, upon the issuance of provincial permits for Red Mountain.

Ascot is updating the Red Mountain feasibility study to include significant resource expansion drilling completed by IDM prior to Ascot acquiring the property.

StrikePoint Gold Inc. is another company exploring gold and silver properties in the immediate Stewart area. For 2019, this work primarily focused on Willoughby, a property that is very similar to Ascot's Red Mountain about seven kilometers (four miles) to the west.

StrikePoint also owns Porter, a high-grade silver property on a mountain rising above Stewart. Two early 20th century mines on the Porter property produced 2.2 million oz of silver.

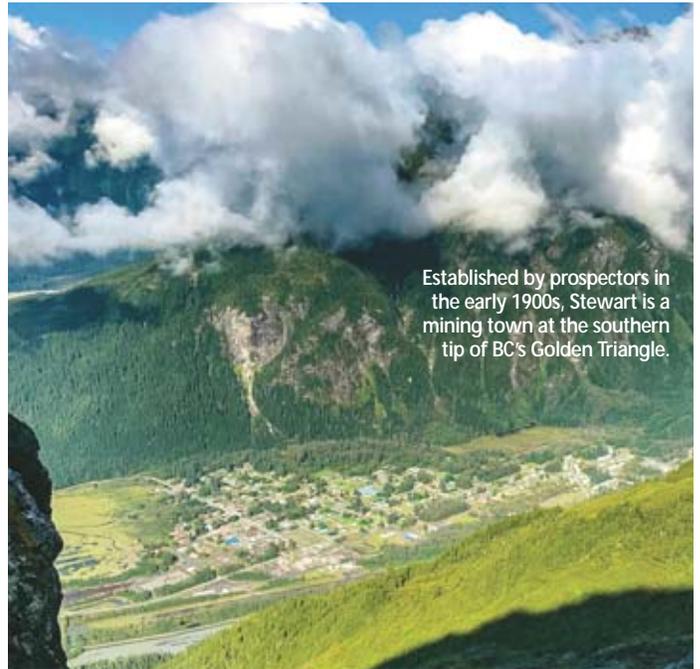
Rich in silver and zinc

Northern B.C. is also rich in silver-zinc-lead deposits, some more richly endowed with precious metal, others with base metals.

Coeur Mining Inc.'s Silvertip Mine in the far northern reaches of the province, which leans toward the precious metal side, is on pace to produce roughly 2 million oz of silver, 32 million lb of zinc and 27 million lb of lead at its Silvertip Mine this year.

While this newly constructed mine came with a high-grade silver resource when Coeur acquired it late in 2017, a technical report and mine plan to elevate them to reserves had yet to be completed.

To rectify this, the Chicago-based miner carried out a rigorous



IDM MINING LTD.

Established by prospectors in the early 1900s, Stewart is a mining town at the southern tip of BC's Golden Triangle.

drill program that converted some 58 percent of the resources that came with Silvertip into enough reserves to feed the mill for about 4.5 years.

According to a calculation completed at the end of 2018, Silvertip hosts 1.6 million tons of proven and probable reserves averaging 289 g/t (14.98 million oz) silver, 8.2 percent (292.71 million pounds) zinc and 5.6 percent (198.66 million lb) lead.

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BC EXPLORATION *continued from page 71*

"We are pleased with the successful conversion of a large portion of the resource to an initial reserve and related mine plan at Silvertip," said Coeur Mining President and CEO Mitchell Krebs.

In addition to reserves, this project went into 2019 with 1.3 million tons of measured and indicated resources averaging 6.47 oz/t (8.4 million oz) silver, 8.6 percent (221.62 million lb) zinc and 4.07 (105.19 million lb) lead; and 583,000 tons of inferred resource averaging 7.91 g/t (4.6 million oz) silver, 9.3 percent (108.62 million lb) zinc and 5.02 percent (58.59 million lb) lead.

The company is focused on resource growth and expansion with drilling carried out at Silvertip this year.

Dolly Varden Silver Corp. is focused on expanding high-grade silver resources at its namesake property south of Stewart, B.C.

The deposits outlined so far at Dolly Varden – Torbrit, Dolly Varden, Wolf and North Star – host 3.42 million metric tons of indicated resource averaging 299.8 g/t (32.93 million oz) silver; plus 1.29 million metric tons of inferred resource averaging 277 g/t (11.48 million oz) silver

These four deposits are associated with historic high-grade silver mines that date back to the early 20th century.

This year, the company is focusing on targets outside the known resource areas. Early results indicate this strategy is paying off.

The first hole reported from Chance, which is about 4,000 meters north of Torbrit cut 26.5 meters averaging 385.4 g/t silver.

The company said this discovery demonstrates Dolly Varden's wider potential.

"In viewing the Dolly Varden Property as a whole, it should be noted that there are multiple silver deposits and high-grade silver targets within a five-kilometer radius," said Dolly Varden Silver President Gary Cope.

ZincX Resources Corp.'s Akie project in the northeastern part of the province leans more towards the base metals side of the equation.

A 2018 preliminary economic assessment contemplates a 4,000-metric ton underground mine at the Cardiac Creek deposit on Akie producing 3.27 billion pounds of zinc and 362 million lb

of lead over an initial 18-year mine life.

This is based on 22.7 million metric tons of indicated resource averaging 8.32 percent (4.16 billion lb) zinc, 1.61 percent (804 million lb) lead and 14.1 grams per metric ton (10.3 million ounces) silver; and 7.5 million metric tons of inferred resource averaging 7.04 percent (1.17 billion lb) zinc; 1.24 percent (205 million lb) lead and 12 g/t (2.9 million oz) silver.

A 2,500-meter drill program being carried out this year aims to increase the confidence in the resource and extend the high-grade core of the deposit to the southeast.

Mixed bag for battery metals

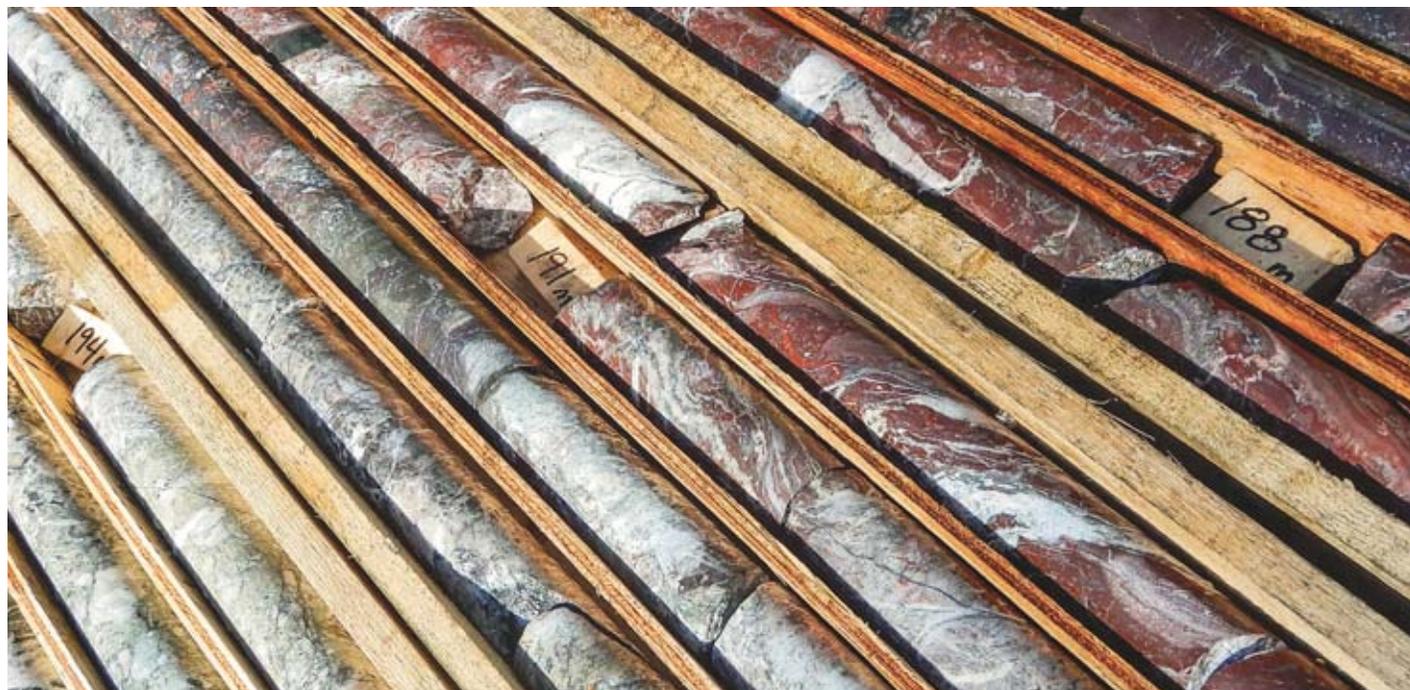
At a time when green energy and electric vehicles are creating huge demand for battery metals, exploration companies are advancing very promising deposits of nickel, cobalt and vanadium in northern B.C. The potential of some of these projects, however, may not be fully realized.

One of the most intriguing new battery metal projects is an extremely high-grade nickel deposit being unveiled by Garibaldi Resources Inc. at its Nickel Mountain property about 18 kilometers (11 miles) southwest of the historic Eskay Creek Mine.

"The project is ideally positioned to leverage the demand from dramatically declining nickel sulfide discoveries and the resulting depletion of high-quality nickel inventories required to fuel the electric vehicle battery revolution," said Peter Lightfoot, a technical advisor to Garibaldi and nickel geology expert.

Since tapping 16.75 meters of 8.3 percent nickel, 4.2 percent copper, 0.19 percent cobalt, 1.96 g/t platinum, 4.5 g/t palladium, 1.1 g/t gold and 11.1 g/t silver in the I&L zone at Nickel Mountain in 2017, Garibaldi has outlined stacked sheets of massive sulfide rich in these metals.

Garibaldi's 2019 drilling at Nickel Mountain is targeting the expansion of the five zones already identified – Lower Discovery, Upper Discovery, Northeast, Central and Northwest – as well as targeting the discovery of new zones of massive sulfide mineralization across a 12-kilometer- (7.5 miles) long area of nickel prospective geology.



DOLLY VARDEN SILVER CORP.

Core from drilling into the Dolly Varden-Torbrit Horizon, a nearly continuous sheet of SEDEX-style silver mineralization on the Dolly Varden property south of Stewart.



Boxes of core from the nearly 80,000 meters of drilling completed at Giga Metals' Turnagain nickel-cobalt project in northern B.C. prior to 2011.

Giga Metals Corp.'s Turnagain property, however, hosts the most advanced battery metals project in northern B.C.

A resource calculated for Turnagain in September outlines 1.07 billion metric tons of measured and indicated resource averaging 0.22 percent (5.21 billion pounds) nickel and 0.13 percent (312.4 million lb) cobalt; plus 1.14 billion metric tons of inferred resources averaging 0.217 percent (5.47 billion lb) nickel and 0.13 percent (327.3 million lb) cobalt.

This is a significant increase in tonnage and nickel grades compared to a resource calculated in conjunction with a 2011 preliminary economic assessment for the project.

In addition to supplying the metals needed for the batteries in electric vehicles, studies under the direction of Greg Dipple, professor at the Bradshaw Research Initiative for Minerals and Mining, University of British Columbia, indicate that tailings from mining at Turnagain could absorb carbon dioxide from the atmosphere.

"More than a decade of research by project lead Dr. Greg Dipple has shown that silicate mineral residue, when exposed to the atmosphere, absorbs CO₂ and converts it to carbonate minerals, and the CO₂ would remain locked in the carbonates over geological time scales," said Giga Metals CEO Mark Jarvis.

Dipple estimates that CO₂ reacting with just 10 percent of the magnesium silicate and hydroxide minerals in a mine's tailings could more than offset the annual carbon emissions of a mining operation.

This carbon offset could be good news for marketing Turnagain nickel and cobalt to lithium ion battery manufacturers.

Explorers of another potential green energy battery metal found in northeastern B.C., however, suffered a setback this year.

Ethos Gold and other exploration companies discovered potentially valuable sources of vanadium, a metal being studied for batteries that could store grid-scale amounts of electricity.

Taking advantage of vanadium's ability to exist in solution in four different oxidation states, the vanadium redox battery uses

vanadium in two of these states as electroactive elements, instead of separate elements for the cathode and anode.

The amount of energy a VRB can store is only limited by the size of the storage tank built to hold the vanadium solutions.

With these batteries that could make renewable electricity more viable on the horizon, exploration companies such as Ethos began revisiting an area of northeastern B.C. known to host vanadium.

This led to the company staking Pine Pass, a vanadium property with a paved highway passing through it.

Vanadium bearing horizons were identified at Pine Pass in 1976 and sampling carried out there found concentrations of up to 0.82 percent vanadium pentoxide within a broad vanadium bearing section with an indicated true thickness of approximately 100 meters.

Rich mineral potential and good infrastructure, northern British Columbia's strong suits, is what drew Ethos to these vanadium properties in the first place.

"These deposit types particularly hard to find in favorable jurisdictions with good access and infrastructure for development," said Ethos Gold CEO Roberts.

A potential environmental protection area laid over this highway accessible vanadium-rich area, however, makes the advantages moot.

Pine Pass and other vanadium exploration properties nearby, however, are found in an area under a development moratorium and is being considered for inclusion in an expanded environmental protected area related to caribou.

The provincial government's handling of the moratorium over the vanadium-rich areas of northeastern B.C. will likely be reflected when mining executives' grade B.C. policies in the future. The rich mineral potential and good infrastructure of northern B.C., however, will likely continue to outweigh any policy concerns of mining companies. ●

The mill from 1990s operations at the Premier Mine provides Ascot Resources a head-start on its plans to restart mining around Stewart.



ASCOT RESOURCES LTD.

Premier Stewart area gold-silver miner

Ascot advances toward development of two Golden Triangle mines

By SHANE LASLEY
Mining News

With the January acquisition of IDM Mining Ltd., Ascot Resources Ltd. adds to its already robust portfolio of high-grade gold-silver mine projects at the southern gateway to British Columbia's Golden Triangle.

"The combination of Ascot and IDM creates a very attractive opportunity in northwest British Columbia's Golden Triangle for our shareholders and stakeholders," said Ascot Resources President and CEO Derek White. "Based near the historic mining town of Stewart, this area has hosted several prominent, profitable, and high-grade gold mines and we see that similar potential going forward."

Ascot's mineral properties in the Stewart area now cover Premier, a 100-square-kilometer (39 square miles) land package that hosts the past producing Premier and Big Missouri mines; Silver Coin, an adjacent property that also provided ore to the mill at Premier; and Red Mountain, a gold-silver asset gained through the acquisition of IDM Mining.

"At this time in the gold sector, scale is important and together with the Red Mountain project, the larger company will hopefully become a prominent gold developer in terms of both

grade and tonnage," said White.

Former IDM Mining President and CEO Rob McLeod, who is a third-generation resident of Stewart, hopes the resulting economies of scale will result in a new generation of mines that will revitalize his hometown at the southern tip of the Golden Triangle.

"(T)his combination provides a critical mass and optionality for development of multiple high-grade gold deposits which will result in significant stakeholder benefits for citizens of the Nisga'a Nation, for my hometown of Stewart and for my friends in the border town of Hyder (Alaska)," said McLeod.

Rapid expansion

Ascot's Premier property has a century of gold and silver production under its belt and already has the basic infrastructure needed to quickly and efficiently resume production.

An underground mine at Premier produced 2 million ounces of gold and 45 million oz of silver from 1918 to 1952; and an open-pit operation in the 1990s produced another 260,000 oz of gold and 5.1 million oz of silver.

The mill, assay lab, crusher, tailing storage area, underground workings and other infrastructure from historical mining provides Ascot with a head start on its plans to restart mining around Stewart.



DEREK
WHITE

"Our principal business objective is to maximize the utilization of the existing infrastructure, specifically with regard to the mill throughput of up to 3,000 tonnes (metric tons) per day," said White.

According to a calculation completed at the end of 2018, Premier hosts 2.78 million metric tons of indicated resources averaging 7.46 g/t (667,000 oz) gold and 26.2 g/t (2.34 million oz) silver; and 6.03 million metric tons of inferred resources averaging 7.18 g/t (1.39 million oz) gold and 24 g/t (4.65 million oz) silver.

This marks a 230 percent increase in the tonnage contained in the higher confidence indicated resources and the inferred resource tonnage has increased by nearly 370 percent, with higher gold grades in both categories, when compared to a resource calculated in May.

The ability to add so much gold to the Premier resources in just six months is the product of an aggressive drill program on the Premier property and the acquisition of Silver Coin, an adjacent property that historically provided ore for the Premier mill.

This Silver Coin property alone contributes 859,000 metric tons of indicated resource averaging 8.01 g/t (221,000 oz) gold and 20.5 g/t (566,000 oz) silver; and 1.16 million metric tons of inferred resource averaging 7.78 g/t (289,000 oz) gold and 22.1 g/t (821,000 oz) silver to the Premier resource calculation.

With the high-grade gold-silver deposit at Silver Coin contributing to the resources, Ascot is quickly building enough gold and silver foundation to consider the re-opening of the Premier Mine.

Aggressive Premier drilling

Toward its goal of resuming mining at Premier, Ascot carried out aggressive drilling again this year, a roughly 46,000-meter program focused primarily on upgrading and expanding the high-grade gold resources across three deposit areas – Northern Lights, Big Missouri Ridge and Silver Coin.

Big Missouri was the target of roughly 20,000 meters of this drilling.

According to the late-2018 resource calculation, Big Missouri hosts 539,000 metric tons of indicated resource averaging 8.19 g/t (142,000 oz) gold and 20.5 g/t (355,000 oz) silver; and 2.25 million metric tons of inferred resource averaging 8.25 g/t (596,000 oz) gold and 18.4 g/t (1.33 million oz) silver.

One hole drilled early in the program, P19-1891, cut three zones of high-grade gold mineralization:

- one meter averaging 66.3 grams per metric ton gold and 23 g/t silver from a depth of 4.3 meters;
- 7.85 meters of 5.05 g/t gold and 4.18 g/t silver at 153.05 meters, including 1.9 meters of 16.2 g/t gold and 11 g/t silver; and
- 13.5 meters of 4.48 g/t gold and 4.61 g/t silver from 181.5 meters, including 1.2 meters of 33.2 g/t gold and 15 g/t silver.

While most of the mineralized intercepts tapped during this year's drilling at Big Missouri returned assays right around resource grade, some tapped very high-grade sections at open-pit mineable depths, including:

- 1.65 meters of 56.8 g/t gold in P19-1911;
- one meter of 320 g/t gold, within five meters of 66.3 g/t

TSX: AOT 

CHAIRMAN: Rick Zimmer
PRESIDENT AND CEO: Derek White
CHIEF OPERATING OFFICER: John Kiernan



PROPERTIES WITH MINERAL(S) EXPLORED: Premier-Dilworth, BC: Gold-Silver
 Silver Coin, BC: Gold-Silver
 Red Mountain, BC: Gold-Silver

CASH AND CASH EQUIVALENTS: C\$22.2 million (June 30, 2019)
WORKING CAPITAL: C\$20.2 million (June 30, 2019)
MARKET CAPITALIZATION: C\$150.9 million (Sept. 23, 2019)

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gold in P19-1949;

- one meter of 48.9 g/t gold within four meters of 12.8 g/t gold in P19-1954; and
- 0.85 meters of 69 g/t gold in P19-1981.

"These drill results continue to confirm our belief in the high-grade nature of the Big Missouri deposit," said White.

Once the Big Missouri drilling was completed, Ascot moved the drills to carry out roughly another 10,500 meters of drilling at Silver Coin and one drill was moved to the Premier deposit to target a gap in the existing resource related to the 602 and Prew zones.

Early results from the Silver Coin drilling include:

- 14.1 meters averaging 5.58 g/t gold and 4.5 g/t silver in hole P19-2024;
- 40.5 meters of 4.34 g/t gold and 18.6 g/t silver in P19-2025; and
- 4.1 meters of 6.45 g/t gold and 39.8 g/t silver in P19-2039.

With the results from its expansive 2019 program, Ascot plans to update the resource estimates for the Premier, Big Missouri and Silver Coin areas in a staggered fashion. These upgraded resources will form the basis for advanced engineering studies towards the end of the year and into the first quarter of 2020.

Ascot plans to use the mine plans detailed in these studies to re-activate permits already in place to resume mining at Premier.

Advancing Red Mountain

While the Premier property has the infrastructure, Red Mountain is arguably more advanced in terms of engineering, permitting and social license.

A 2017 feasibility study details plans for a 1,045-metric-ton-per-day mill to process high-grade ore from the Red Mountain underground mine that is expected to average roughly 78,800 oz of gold and 228,800 oz of silver annually over an initial six-year mine-life.

This operation is based on 1.95 million metric tons of reserves, averaging 7.53 g/t (473,000 oz) gold and 21.86 g/t (1.37 million oz) silver.

Considering the drilling success IDM Mining had from the

continued on page 76



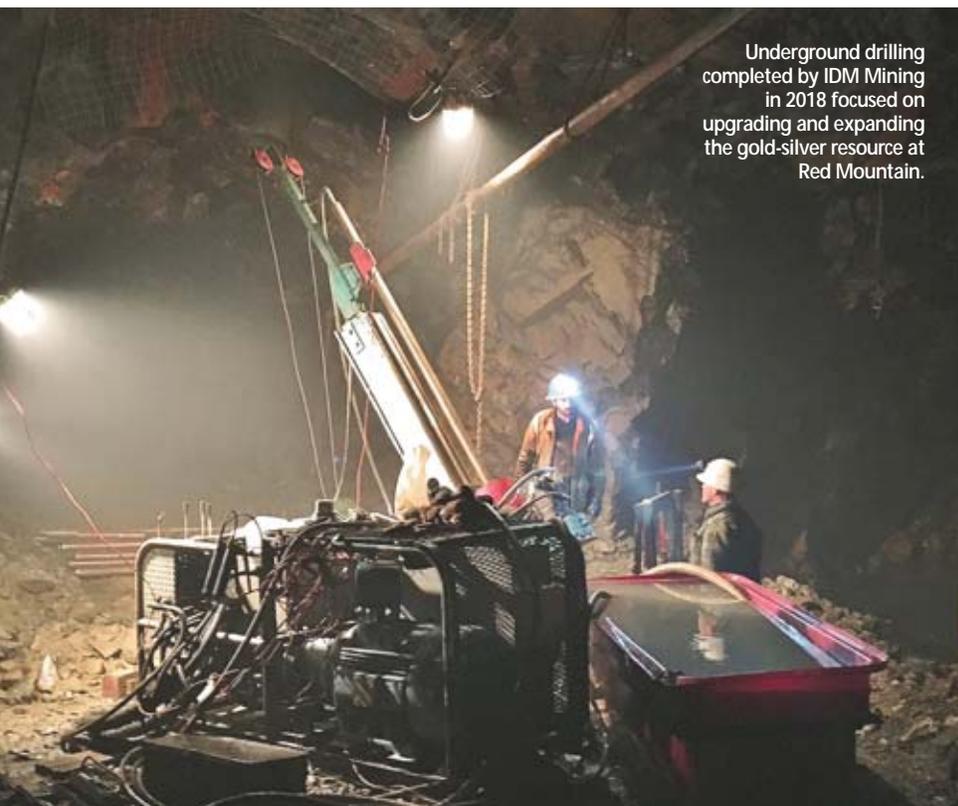
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A view from above the portal at Red Mountain, a gold-silver mine development project Ascot obtained when it acquired IDM Mining.



Underground drilling completed by IDM Mining in 2018 focused on upgrading and expanding the gold-silver resource at Red Mountain.

ASCOT RESOURCES LTD.

ASCOT RESOURCES *continued from page 75*

time the feasibility was completed and the buy-out by Ascot, however, this feasibility study is a bit outdated.

At the time the reserves were calculated for the 2017 feasibility study, Red Mountain hosted 2.07 million metric tons of measured and indicated resource averaging 8.75 g/t (583,700 oz) gold and 25 g/t (1.66 million oz) silver.

A 29,312-meter drill program completed in 2017 increased the overall resource and substantially expanded the gold reporting to the measured resource category, much of which would likely convert to reserves with an updated feasibility study.

By mid-2018, Red Mountain hosted 2.77 million metric tons of measured and indicated resource averaging 7.91 g/t (704,600 ounces) gold and 22.75 g/t (2.77 million oz) silver.

In addition, the underground mine project hosted 316,000 metric tons of inferred resource averaging 6.04 g/t (61,400 oz) gold and 7.6 g/t (77,200 oz) silver. Roughly 82 percent of this inferred resource is found in new zones – Smit, SF, Bray, Chicka and Cambria Zones – indicating the potential for future expansion at Red Mountain.

A 10,000-meter drill program completed in 2018 focused on expanding and upgrading the resources in these areas.

Ascot is finalizing the engineering work to produce an updated feasibility study for Red Mountain.

This high-grade gold-silver project has already received the provincial and federal environmental assessment approvals needed to begin mine development.

The issuance of the provincial environmental assessment was heralded by First Nations, municipal and provincial leaders from the area of northwestern British Columbia where the underground mine is to be developed.

"Nisga'a Treaty lands are rich with natural resources. We are confident that this decision and conditions will provide significant opportunities for our citizens, with strong protection of the land, water and wildlife," said Nisga'a Lisims Government President Eva Clayton.

In the meantime, Ascot Resources is carrying out the advanced engineering studies need to elevate the existing permits for restart of operations at the Premier Mine to active status.

"Ascot has also progressed a significant amount of engineering and environmental studies as we continue to advance our Mines Act Permit Amendment application at Premier and engineering studies both at Red Mountain and Premier," said White. "This is a very busy and exciting year for Ascot, and I look forward to more promising results as we continue to progress the development and exploration of this part of the Golden Triangle." ●

ASCOT RESOURCES LTD.

BRITISH COLUMBIA-YUKON TERRITORY

StrikePoint Gold Inc. ●●●

TSX.V: SKP 

StrikePoint expands Stewart area projects

StrikePoint Gold Inc. focused its 2019 exploration primarily on Willoughby, the Vancouver, British Columbia-based junior's newest gold and silver property in B.C.'s Golden Triangle.

An intrusion related gold-silver project with similarities to Ascot Resources Ltd.'s Red Mountain Mine project about seven kilometers (four miles) to the west, Willoughby is the second Golden Triangle property StrikePoint added to its portfolio in as many years. The other, Porter, is a past producing high-grade silver property on Mount Rainey overlooking the town of Stewart.

StrikePoint acquired Willoughby from ArcWest (formerly Sojourn Exploration Inc.) in March for C\$85,000 in cash and 3 million StrikePoint shares.

"The acquisition of the Willoughby property complements the Porter project and other ground staked in 2018 by strengthening the known mineral inventory and providing significant exploration upside all within a localized and accessible area of British Columbia," said StrikePoint Gold CEO Shawn Khunkhun.

Drilling in the 1990s tapped high-grade gold and silver at in the North and Wilby zones at Willoughby.

Only limited geophysics and prospecting have been carried out at Willoughby since the last hole was drilled at this Golden Triangle property. Over the ensuing 13 years, rapid deglaciation has exposed new prospective ground for exploration, including extensions to the North and Wilby zones.

A 2017 program funded by ArcWest and carried out by Millrock Resources Inc. discovered important new zones of gold and silver in bedrock recently revealed by the retreat of glaciers and snowfields. In July, StrikePoint kicked off a 1,000-meter initial phase of 2019 drilling aimed at expanding and confirming high-grade historical intercepts at North zone.

Highlights from the past drilling at North include 5.5 meters of 53.2 grams per metric ton gold and 211.1 g/t silver; three meters of 113.7 g/t gold and 121.8 g/t silver; 2.9 meters of 352.2 g/t gold and 194.6 g/t silver; and 3.5 meters of 120.3 g/t gold and 2,434.8 g/t silver.

StrikePoint said new mineralized exposure from melting glaciers, coupled with an improved understanding of the structural geological setting helped refine the drill plan.

Once the North zone drilling was complete, the company launched a second phase of drilling targeting Wilby (formerly referred to as Main), a zone about 400 meters to the southeast.

Highlights of historical intercepts from Wilby include: 6.8 meters of 20.45 g/t gold and 42.84 g/t silver; 12 meters of 12.66 g/t gold and 59.43 g/t silver; and 11.7 meters of 7.62 g/t gold and 1.43 g/t silver.

"StrikePoint's goal is to demonstrate that the mineralized system is more extensive than previously indicated," Khunkhun said of the drilling at Wilby.

The company's Porter property hosts historic silver high-grade mines that date back to the dawn of the 20th century.

Roughly 27,123 metric tons of ore averaging 2,542 g/t silver and 1 g/t gold was mined from this vein system between 1929 and 1931, producing roughly 2.2 million ounces of silver.

StrikePoint believes the ore mined from Prosperity-Porter Idaho and Silverado, a smaller high-grade silver mine on the north side of Mount Rainey, could represent opposite ends of a larger mineralized system. Recent glacial retreat has exposed the ground between these past producing mine sites, providing the opportunity to explore for a connection between the deposits.

According to a resource estimate prepared in 2012, Porter hosts 394,700 metric tons of indicated resource averaging 868 g/t silver, 3.37 percent lead and 1.41 percent zinc; and 88,900 metric tons of inferred resources grading 595 g/t (1.7 million oz) silver.



Geologists carry out sampling and mapping at Strikepoint Gold's newly acquired Willoughby gold-silver project.



STRIKEPOINT GOLD INC.

A 25-hole drill program carried out at Porter in 2018 cut high-grade silver mineralization within and beyond the historical resource.

StrikePoint's portfolio also includes three gold and silver properties in the Yukon – Pluto, Mahtin and Golden Oly.

CHIEF EXECUTIVE OFFICER: Shawn Khunkhun

TECHNICAL ADVISOR, QP: Andy Randell

TECHNICAL ADVISOR: Rob McLeod

CASH AND CASH EQUIVALENTS: C\$238,541 million (June 30, 2019)

WORKING CAPITAL: C\$238,390 million (June 30, 2019; closed C\$2.1 million financing in July)

MARKET CAPITALIZATION: C\$7.4 million (Sept. 23, 2019)

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Logging core from 2018 drilling at KSM, a program that added nearly 8 million ounces of gold and 4 billion pounds of copper to the Iron Cap deposit at KSM.

SEABRIDGE GOLD INC.

BRITISH COLUMBIA & NORTHWEST TERRITORIES
Seabridge Gold Corp. ● ● ●

TSX: SEA / NYSE: SA 

Mission accomplished – KSM partner-ready

With the four main deposit at KSM – Kerr, Sulphurets, Mitchell and Iron Cap – advanced to the feasibility stage, Seabridge Gold Inc. shifted the focus of its 2019 exploration on discovery targets beyond the vast copper-gold resources delineated so far across this property in British Columbia’s Golden Triangle.

A prefeasibility study completed in 2016 detailed a mine for KSM that would produce an average of 540,000 oz gold, 156 million lb copper, 2.2 million oz silver, and 1.2 million lb molybdenum annually over a 53-year mine life.

At that time, the potential of Iron Cap was not fully understood, and this deposit wasn’t slated to be mined until about 32 years into the life of a proposed operation for KSM.

Iron Cap, however, is closer to infrastructure than Kerr and Sulphurets and has the right geometry to consider being mined by block caving, a bulk underground mining technique. Due to these advantages, in 2017 and 2018 Seabridge focused on investigating whether the deposit had the size and grade to be considered for mining earlier in the mine plan.

This mission was a success, adding a million ounces of gold and billions of pounds of copper to Iron Cap since the completion of the PFS. According to a resource calculated in March, Iron Cap hosts 423 million metric tons of indicated resource averaging 0.41 grams per metric ton (5.58 million oz) gold, 0.22 percent (2.05 billion lb) copper, 4.6 g/t (62.56 million oz) silver and 41 parts per million (38 million lb) molybdenum; plus 1.9 billion metric tons of inferred resource averaging 0.45 g/t (27.47 million oz) gold, 0.3 percent (12.56 billion lb) copper, 2.6 g/t (158.74 million oz) silver and 30 ppm (126 million lb) molybdenum.

With the Iron Cap expansion, KSM now has 2.98 billion metric tons of measured and indicated resources averaging 0.52 grams per metric ton (49.7 million ounces) gold, 0.21 percent (13.9 billion pounds) copper, 2.8 g/t (265 million oz) silver and 54 parts per million (312 million lb) molybdenum; plus 4.56 billion metric tons of inferred resource averaging 0.38 g/t (56.3 million oz) gold, 0.32 percent (32 billion lb) copper, 2.4 g/t (349 million oz) silver and 32 ppm (295 million lb) molybdenum. With these resources in place, Seabridge has achieved its main KSM objective.

“Our first priority at KSM has been to ensure that the project is ready for final feasibility efforts when a partner is secured,” said Seabridge Gold Chairman and CEO Rudi Fronk. “Now that this objective has been

SEABRIDGE GOLD



RUDI FRONK

accomplished, we are intent on improving our understanding of the entire project and its district-scale potential by addressing the many opportunities that remain, using the extraordinary bank of knowledge we have accumulated over the past decade.”

One such opportunity is high-grade gold occurrences on the margins of the Sulphurets deposit.

One hole drilled in this area last year, S-18-81, included a two-meter intercept averaging 1,580 g/t (50.8 oz/t) gold and 209 g/t silver. The next hole, S-18-82, cut 12.2 meters of 5.83 g/t gold and 7.2 g/t silver, and 3.95 meters of 18.5 g/t gold and 30.6 g/t silver.

These and other intersections are clustered within a northeast trending structure that extends for at least 800 meters along strike. In late August, the company began a 4,000-meter drill program designed to further define this epithermal gold structure.

“Our original plans for this year at KSM were focused on completing geophysical surveys to help refine the limits of the existing four porphyry deposits and look for a fifth” said Seabridge Gold Chairman and CEO Rudi Fronk. “A concept to expand the 1500 g/t intersection drilled last year grew out of these surveys and the target was too compelling to ignore. This new target is within the proposed Sulphurets pit plan, so if the program is successful, we will immediately capture new resources.” Seabridge also continued to advance exploration at Iskut, a gold project about 30 kilometers (19 miles) west of KSM.

The company acquired Iskut and carried out its first drilling there in 2017. While this drilling cut several narrow, discontinuous intervals of high-grade gold it did not hit the mineralization sought. Further investigation revealed that much of the of the Quartz Rise lithocap had been eroded, leaving little opportunity for a sizeable high-grade epithermal occurrence in this area.

This more extensive than expected erosion coupled with geophysical evidence gave rise to another tantalizing possibility – a porphyry system that is much closer to the surface than previously envisioned. This year, the company carried out deep penetrating geophysics to define potential drill targets at this potentially large porphyry target at Iskut.

Seabridge Gold’s portfolio also includes the Courageous Lake gold property in Northwest Territories and Snowstorm gold property in Nevada.

CHAIRMAN AND CEO: Rudi Fronk
PRESIDENT AND COO: Jay Layman
SENIOR VP, EXPLORATION: William Threlkeld

CASH AND SHORT-TERM DEPOSITS: C\$11.9 million (June 30, 2019)
WORKING CAPITAL: C\$11 million (June 30, 2019)
MARKET CAPITALIZATION: C\$1.21 billion (Sept. 23, 2019)

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BRITISH COLUMBIA

Pretium Resources Inc. ●

TSX/NYSE: PVG 

Bonanza gold beyond Valley of the Kings

Pretium Resources Inc. carried out three levels of exploration at its Brucejack gold property in northwestern British Columbia – 70,000 meters drilling to expand and upgrade reserves within the Valley of Kings deposits being mined; a deep underground hole to test for extensions of Valley of the Kings; and grassroots exploration further abroad.

In June, the company reported that two long holes drilled from the underground workings at Brucejack confirmed the presence



of Brucejack-style mineralization extended from the eastern edge of the Valley of the Kings, the high-grade gold deposit currently being mined, to beneath Flow Dome, a gold zone about 1,000 meters east.

Surface drilling encountered bonanza grade gold at Flow Dome in 2015. Highlights from that program include 2.05 meters of 2,100 grams (67.52 ounces) per metric ton gold in hole SU-688.

Holes VU-1785 and VU-1787, each more than 1,500 meters long, tested mineralization continuity between Valley of the Kings and Flow Dome, while assessing the potential for a porphyry source at depth.

Pretium was particularly excited about VU-1787, which cut 107.5 meters averaging 5.56 g/t gold, extending mineralization 240 meters east and below the eastern limit of the Valley of the Kings resource.

Visible gold was observed in the core and a 1.5-meter section of the longer intercept averaged 185.5 g/t gold.

The company also reported that, like two long holes drilled in 2018, this year's deep drilling encountered anomalous copper and molybdenum mineralization indicative of a proximal porphyry system.

Given the success of these holes, Pretium added a third deep hole this year to test both the extent of Brucejack-style mineralization and the porphyry potential directly below the Valley of the Kings deposit. Hole VU-2019, which is planned to reach a length of 2,000 meters, is targeting the center of a low resistivity anomaly approximately 1,400 meters below the Valley of the Kings deposit as identified from a CSMT (controlled source magnetotelluric) geophysical program.

In July, Pretium reported this third deep underground exploration hole continued to indicate that the style of high-grade gold mineralization currently being mined at Brucejack extends below the Valley of the Kings.

As the deep hole program tests resource expansion targets below and to the east of Valley of the Kings, a 70,000-meter underground drill program is expected to better define and expand on the current mineral reserves of this high-grade gold project.

Pretium said there are opportunities to expand the Valley of the King reserves to the west, east, northeast and to depth.

Pretium's 2019 exploration also includes a grassroots program on Bowser, claims immediately south of the Brucejack Mine property. The program, which included at least 5,000 meters of drilling, tested several distinct areas of the Bowser claims that have the potential to host Eskay Creek-style volcanogenic massive sulfide (VMS) deposits and high-grade, epithermal-related gold systems.

This program began with two drills testing high-priority VMS targets on the northern and central parts of the property. A third drill mobilized to site in mid-July tested epithermal targets on the southern part of the property.

In addition to drilling, the grassroots exploration program includes sampling, mapping, prospecting and geophysics.

EXECUTIVE CHAIRMAN: Robert Quartermain (retires Dec. 31, 2019)
PRESIDENT AND CEO: Joseph Ovsenek
CHIEF EXPLORATION OFFICER: Kenneth McNaughton



ROBERT QUARTERMAIN

PRETIUM RESOURCES INC.



A tablet provides workers with real-time data transfer at Pretium's Brucejack gold mine.

CASH AND CASH EQUIVALENTS: US\$34.3 million (June 30, 2019)
WORKING CAPITAL: US\$51.4 million deficit (June 30, 2019)
MARKET CAPITALIZATION: US\$2.3 billion (Sept. 23, 2019)

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BRITISH COLUMBIA & YUKON TERRITORY

Aben Resources Ltd.



TSX.V: ABN

Aben seeks high-grade gold in Yukon, BC

Aben Resources Ltd. had drills turning on two gold-rich properties during 2019 – Justin in southeastern Yukon and Forrest Kerr in the Golden Triangle region of British Columbia.

While Justin is the most northerly of the two projects, the terrain there provides for earlier access, making this property adjacent to Golden Predator Mining Corp.'s 3 Aces project the first target for exploration this year.

The 2019 program at Justin included drilling, prospecting, geologic mapping and surface sampling across the property. A diamond drill rig completed 963 meters of drilling in four holes at POW, a zone that contains gold-bearing vein, breccia and skarn replacement mineralization.

Discovery drilling carried out at POW in 2011 and 2012 cut wide zones of lower grade intrusion-related gold mineralization. Highlights from this drilling include 60 meters of 1.19 g/t gold and 46.4 meters of 1.49 g/t gold.

The four core holes drilled this year at POW evaluated the potential for bulk-tonnage gold mineralization and tested for the continuity of higher-grade skarn mineralization along strike. JN19020 cut 15.4 meters of 1.5 g/t gold; JN19021 cut 3.3 meters of 0.9 g/t gold; JN19031 did not return significant results; and JN19039 cut 9.5 meter of 0.2 g/t gold.

The program got started with 462 meters of rotary air blast (RAB) drilling in 16 holes at the Lost Ace zone, where 2018 trenching encountered up to 20.8 grams per metric ton gold over 4.4 meters, including 88.2 g/t gold over one meter.

Aben said RAB drilling is an efficient method of quickly evaluating this high-grade, near surface gold target that shows many similarities to the orogenic-style gold mineralization being bulk sampled on the neighboring 3 Aces property.

This year's RAB drilling, however, did not tap the high-gold grades turned up in trenching.

While Justin was the first exploration target of 2019, Forrest Kerr continues to be the primary focus of Aben's exploration.

The company kicked off its 2019 Forrest Kerr exploration with a phase-1 program that included more than 5,000 meters of drilling in 10 holes.

This phase-1 program targeted the North Boundary area, where drilling over the previous two seasons have encountered high-grade gold.

One such hole, FK18-10 cut 10 meters of 38.7 grams per metric ton (1.12 ounces per metric ton) gold from a depth of 114 meters, including one meter of 331 g/t (9.65 oz/t) gold.

This is very similar to the 326 g/t gold Noranda encountered in RG91-16, a historical hole drilled roughly 200 meters to the south.



A drill test for continuity of this high-grade gold mineralization previously encountered at Aben Resources' Forrest Kerr property in British Columbia.

ABEN RESOURCES LTD.

FK19-46, a hole drilled this year to test for continuity of this high-grade gold mineralization, encountered multiple mineralized horizons. The entire 500.5-meter length of this hole averaged 0.12 g/t gold, including a one-meter section of 12.4 g/t gold.

Another hole, FK19-50, tested the downward extension of a mineralized horizon discovered in holes FK18-17 and FK18-18 drilled last year. FK18-17 cut 15 meters of 3.18 g/t gold from 232 meters and one meter of 31.4 g/t gold from 261 meters; and FK18-18 cut four meters of 4 g/t gold.

FK19-50 cut 61.7 meters of 0.46 g/t gold. Aben said this longer section includes intermittent higher-grade gold intercepts within broad lower grade envelopes associated with fractures and fault structures. Aben said the mineralized structures correlate very well with magnetic highs that were delineated by an airborne survey flown over the entire Boundary zone in May. Thus far, drilling in this part of the Forrest Kerr Property has only tested a small portion of the potentially mineralized structures defined by the magnetic survey.

FK19-51 drilled roughly 500 meters south of the main mineralized core at North Boundary, cut sporadic gold-silver-copper-zinc-lead within strong alteration.

Gold mineralization in this hole was generally low grade and not as strongly correlated to the repetitive sequences of copper mineralization. Hole FK19-52 was drilled from the same set-up at a steeper angle – assay results pending.

"As we work our way south of the mineralized core of the North Boundary zone, we are looking for potential connectivity with the historic, high-grade gold discovery made by Noranda in 1991," said Aben Resources President and CEO Jim Pettit.

Encouraged by the results, in August Aben announced a phase-2 program that extended drilling into the fall.

CHAIRMAN: Ron Netolitzky
PRESIDENT & CEO: Jim Pettit
VP, EXPLORATION: Cornell McDowell

CASH AND CASH-EQUIVALENTS: C\$4.9 million (June 30, 2019)

WORKING CAPITAL: C\$5.4 million (June 30, 2019)

MARKET CAPITALIZATION: C\$12.3 million (Sept. 23, 2019)

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BRITISH COLUMBIA

Skeena Resources Ltd. ● ●TSX.V: SKE **Skeena expands shallow Eskay Creek gold**

Skeena Resources Ltd. hopes to breathe new life into Eskay Creek and Snip, iconic Golden Triangle gold mines previously operated by Barrick Gold Corp.

Over a 14-year span ending in 2008, an underground mine at Eskay Creek produced roughly 3.3 million ounces of gold and 160 million oz of silver at average grades of 45 grams per metric ton gold and 2,224 g/t silver, which at the time made it the world's highest-grade gold mine and fifth-largest silver mine by volume.



The high-grade gold and silver have made Eskay Creek a model for precious metal-rich volcanogenic massive sulfide deposits.

While large quantities of underground resources remain at Eskay Creek, Skeena has focused on deposits that can be mined from the surface since acquiring the property from Barrick in 2017. Toward this goal, the company drilled 46 holes from the surface during 2018. As a result, Eskay Creek hosts 12.71 million metric tons of surface mineable indicated resource averaging 4.5 g/t (1.82 million oz) gold and 117 g/t (47.79 million oz) silver; and 13.57 metric tons of surface mineable inferred resource averaging 2.2 g/t (984,000 oz) gold and 42 g/t (18.46 million oz) silver.

In August, Skeena launched a 15,000-meter drill program upgrading pit-constrained inferred resources in the 22, 21A, 21E and HW zones at Eskay Creek to the higher confidence indicated resource category. To complete the spacing needed to upgrade the resources, this phase of Eskay Creek drilling is expected to include more than 200 holes drilled to at an average depth of about 75 meters.

In addition to the open-pit resource, Eskay Creek also hosts 819,000 metric tons of underground indicated resource averaging 6.4 g/t (169,000 oz) gold and 139 g/t (3.66 million oz) silver; and 295,000 metric tons of underground inferred resource averaging 7.1 g/t (78,000 oz) gold and 82 g/t (778,000 oz) silver.

Skeena is also continuing to explore Snip with a late-season drill program.

Operated by Barrick in the 1990s, the historic underground mine at Snip produced 1.1 million ounces of gold from 1.25 million metric tons of ore averaging 27.5 g/t gold.

Not only have gold prices increased five-fold from the US\$300/oz since Barrick opted to wind down operations at Snip, but the infrastructure in the Golden Triangle has improved significantly in recent years. These factors, combined with the exploration upside at Snip, bode well for revitalizing this high-grade gold mine.

Twin, the most prolific of the high-grade zone mined by Barrick, produced 709,601 oz of gold from ore that averaged 28.95 g/t gold. A down-plunge expansion area of this high-grade gold target is one of the planned targets for this year's drilling.

CHAIRMAN: Craig Parry
PRESIDENT AND CEO: Walter Coles, Jr.
VP, EXPLORATION: Paul Geddes

CASH AND CASH-EQUIVALENTS: C\$1.2 million (June 30, 2019)
WORKING CAPITAL: C\$574,604 (June 30, 2019; closed a C\$5 million financing on July 31)
MARKET CAPITALIZATION: C\$53.6 million (Sept. 23, 2019)

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WALTER
COLES

BRITISH COLUMBIA

Crystal Lake Mining Corp. ● ● ●TSX.V: CLM **Crystal Lake finds newly uncovered copper**

Crystal Lake Mining Corp. is finding plentiful copper, gold and silver mineralization emerging from the rapidly retreating glaciers on its Newmont Lake project in British Columbia's Golden Triangle.

Situated about 30 kilometers (19 miles) northwest of Skeena Resources' Eskay Creek project and about the same distance southeast of Teck Resources and Newmont Goldcorp's Galore Creek project, Newmont Lake is in an area renowned for world-class deposits rich in copper and gold.



NW Zone, which is related to the northeast trending McLymont fault on the Newmont Lake property, hosts 1.4 million metric tons of historical inferred resource containing 6.79 million pounds of copper, 200,000 oz gold and 291,000 oz silver.

Glacial melt over the 12 years since that resource was calculated, however, is showing that NW Zone is only a small part of a much larger mineralizing system covered by snow and ice.

This year, Crystal Lake focused on expanding the resource and exploring new high-grade gold zones along the McLymont fault that have been revealed by unprecedented glacial retreat.

With the mineral exploration expertise of HEG & Associates Exploration Services, this program included soil and rock sampling; assaying of unsampled historical core; induced polarization (IP) geophysical survey; 4,000 meters of core drilling; mapping; and construction of camp and logistical network at Newmont Lake.

Crystal Lake said this work has delineated major porphyry copper-gold-silver discoveries along the Burgundy Ridge trend; new high-grade gold targets near the historical NW Zone resource; and new targets along the Newmont Lake Gold Corridor, which extends for more than 10 kilometers (six miles).

The company said the 2019 surface exploration at Burgundy Ridge is beginning to outline a porphyry copper-gold-silver trend that extends for 2,300 meters.

Crystal Lake encountered this mineralization with reverse circulation drilling completed late in 2018. The last hole of this program cut 58 meters of 0.31 percent copper and 0.27 g/t gold, followed by 1.5 meters of 2.6 percent copper.

While assays from the 2019 program are still pending, the copper-gold-silver mineralization first is visually evident in the core. Crystal Lake said preliminary interpretations of the 2019 surface exploration and drilling indicate the presence of a large high-grade skarn body adjacent to a porphyry system.

"The vastness of copper with associated gold and silver mineralization of multiple styles starting at surface is really impressive," said HEG President and CEO Cole Evans. "Our team has been tracking ice and snow retreat with a variety of tools. As it retreats, we are consistently being rewarded with new exposures of high-grade mineralization on surface."

PRESIDENT AND CEO: Richard Savage
CHIEF OPERATING OFFICER: Wally Boguski
VP, EXPLORATION: Maurizio Napoli

CASH AND CASH-EQUIVALENTS: C\$492,300 million (June 30, 2019)
WORKING CAPITAL: C\$464,114 (June 30, 2019; closed a C\$1.3 million financing on Aug. 2)
MARKET CAPITALIZATION: C\$22.5 million (Sept. 23, 2019)

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CRYSTAL LAKE MINING CORP.



Copper mineralization tapped in BRDDH19-004, a 2019 hole drilled at Newmont Lake.

BRITISH COLUMBIA

Garibaldi Resources Inc. ●●

TSX.V: GGI 

Garibaldi grows important BC nickel find

At a time when electric vehicles are driving up nickel demand, Garibaldi Resources Inc. is unveiling an extremely high-grade deposit of this battery metal at its Nickel Mountain project about 18 kilometers (11 miles) southwest of the historic Eskay Creek Mine in the heart of British Columbia's Golden Triangle.

"Increasingly, Nickel Mountain represents an important new discovery within the Eskay Rift," said Peter Lightfoot, a technical advisor to Garibaldi and nickel geology expert. "The project is ideally positioned to leverage the demand from dramatically declining nickel sulfide discoveries and the resulting depletion of high-quality nickel inventories required to fuel the electric vehicle battery revolution."

Garibaldi first tapped the nickel- and copper-rich E&L intrusion at Nickel Mountain in 2017. This discovery hole, EL-17-14, cut 16.75 meters averaging 8.3 percent nickel, 4.2 percent copper, 0.19 percent cobalt, 1.96 grams per metric ton platinum, 4.5 g/t palladium, 1.1 g/t gold and 11.1 g/t silver from a depth of 100.4 meters.

Following up on this Golden Triangle discovery, the Vancouver, B.C.-based explorer continued to drill into exceptionally high grades in what is shaping up to be a widespread deposit with multiple layered zones of nickel- and copper-rich massive sulfide mineralization.

In addition to the two massive sulfide zones at E&L tapped in 2017 – Upper and Lower Discovery – Garibaldi's 2018 program tapped a shallower zone known as Northeast.

One of the 2018 holes, EL-18-33, cut all three zones, including a 48.98-meter interval of Northeast Zone averaging 1.34 percent nickel, 0.89 percent copper, 0.04 percent cobalt, 0.23 g/t platinum, 0.34 g/t palladium, 0.23 g/t gold and 3.7 g/t silver from a depth of 37.88 meters. A 4.77-meter section of this hole averaged 7.69 percent nickel, 2.95 percent copper, 0.20 percent cobalt, 0.68 g/t platinum, 0.78 g/t palladium, 0.42 g/t gold and 7.3 g/t silver from a depth of 77.05 meters.

EL-18-30, collared from the same location as EL-18-33 but angled slightly toward the east, also cut the Northeast, Upper and Lower Discovery zones. The best intercept in this hole was 9.68 meters averaging 3.01 percent nickel, 1.61 percent copper, 0.08 percent cobalt, 0.37 g/t platinum, 0.42 g/t palladium, 0.37 g/t gold and 4.3 g/t silver from a depth of 37.88 meters.

Garibaldi said the sheet-like massive sulfides identified in the Lower and Upper Discovery zones, along with the overlying Northeast zone, are indicative of a strong sub-horizontal control on massive sulfide mineralization at the edge of the E&L intrusion.

For the 2019 Nickel Mountain drill program, Garibaldi used advanced heli-portable drill rigs mounted on rotating turntables that

GARIBALDI RESOURCES INC.



Example of new surface mineralization (massive sulphides) exposed by receding icefield

allow for rapid azimuth and dip change. This eliminates the need to use costly helicopters to realign drill rigs when targeting multiple anomalies from the same pad. The drills also feature data logging capabilities, providing drilling metrics on a per shift basis.

These state-of-the-art drills also require less water and fuel than comparable rigs, which results in higher production and lower costs. Initial results from this drilling returned the widest massive sulfide intercepts yet drilled at Nickel Mountain.

The first hole of the 2019 season, EL-19-47, cut 50.57 meters (estimated true width is 40.45 meters) containing 1.5 percent nickel and 0.94 percent copper (plus cobalt, platinum, palladium, gold and silver), including 9.32 meters of 6.1 percent nickel and 2.8 percent copper. Drilled about 64 meters southeast of EL-17-14, this hole expands Lower Discovery Zone (LDZ) at E&L in this direction.

Drill hole EL-19-53 has cut the widest massive sulfide intersection to so far at Nickel Mountain. While the assays were pending at the time of this report, Garibaldi reports this hole cut through 18 meters of massive sulfide featuring a characteristic Nickel Mountain "leopard print texture," within 86 meters (estimated true width is 68.8 meters) of nickel- and copper-rich mineralization from 67 meters to 153 meters. This mineralization in EL-19-53 thickens and extends the robust LDZ along a shallow western plunge on the south flank of

the E&L intrusion.

In addition to successful step outs beyond the known mineralized zones at E&L, objectives of 2019 drilling are to confirm the presence of an olivine gabbro (mafic intrusive igneous rock with significant olivine) chamber beneath the LDZ while also linking the Northwest and Crevasse zones. The company is confident in terms of achieving these objectives and eagerly awaits more assay results.

"Our understanding of the structural controls on mineralization continues to improve, allowing for very productive targeting for infill and step out drilling," said Hanson.

PRESIDENT AND CEO: Steve Regoci
VP EXPLORATION: Jeremy Hanson
TECHNICAL ADVISOR: Peter Lightfoot

CASH AND CASH EQUIVALENTS: C\$12.1 million (April 30, 2019)
WORKING CAPITAL: C\$11.9 million (April 30, 2019)
MARKET CAPITALIZATION: C\$193.5 million (Sept. 23, 2019)

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DOLLY VARDEN SILVER CORP.



The 2019 drilling at Dolly Varden primarily tested targets beyond the resource areas on this high-grade silver property south of Stewart, B.C.

BRITISH COLUMBIA

Dolly Varden Silver Corp.

TSX.V: DV

Dolly Varden makes Chance silver discovery

Dolly Varden Silver Corp. is focused on expanding the high-grade silver resources at its namesake silver property south of Stewart, British Columbia.

The deposits outlined so far at Dolly Varden – Torbrit, Dolly Varden, Wolf and North Star – host 3.42 million metric tons of indicated resource averaging 299.8 grams per metric ton (32.93 million oz) silver; plus 1.29 million metric tons of inferred resource averaging 277 g/t (11.48 million oz) silver, according to an updated calculation completed in May.



These four deposits are associated with historic high-grade silver mines that date back to the early 20th century.

The bulk of the resources are found at Torbrit, which hosts 2.62 million metric tons of the indicated resource averaging 297 g/t (25.03 million oz) silver; and 1.19 million metric tons of the inferred resource averaging 278 g/t (10.59 million oz) silver.

While smaller, the Dolly Varden deposit hosts some of the highest grades on the property – 156,000 metric tons of indicated resource averaging 414 g/t (2.08 million oz) silver; and 86,000 metric tons of inferred resource averaging 272 g/t (754,000 oz) silver.

Dolly Varden said recent drilling has resulted in a reinterpretation of the geological model for the deposits, improving confidence and providing a more robust framework for the study and for future exploration on the high-grade silver property.

Using this framework, the company's 2019 program included at least 10,000 meters of drilling that primarily targeted prospective areas outside of the resource estimate's block models.

One such area is Chance, a target about 4,000 meters north of the Torbrit deposit that was known from shallow surface diamond drilling in the 1960s.

Dolly Varden's first Chance hole, DV19-165, cut 26.5 meters averaging 385.4 g/t silver, along with small amounts of zinc and lead, including five meters of 1,606.5 g/t silver.

DV19-173, another hole drilled at Chance, cut 15.2 meters averaging 488.3 g/t silver, including 5.6 meters of 1,043.8 g/t silver.

DV19-169, which intersected what appears to be a splay of the Chance vein, cut 8.7 meters of 265.2 g/t silver in the north splay and 12.5 meters of 340.7 g/t silver, including three meters of 700 g/t in the main splay of the vein.

"The high-grade silver intercepts in the Chance target area are very

encouraging as they are outside of the current mineral resource estimate," said Dolly Varden Silver President and CEO Gary Cope. "In viewing the Dolly Varden property as a whole, it should be noted that there are multiple silver deposits and high-grade silver targets within a five-kilometer (5,000 meters) radius."

These targets include Ace-Galena, which lies about 1,000 meters northwest of Chance.

PRESIDENT & CEO: Gary Cope
VP, EXPLORATION: Ben Whiting
CHIEF GEOLOGIST: Robert van Egmond

CASH AND CASH-EQUIVALENTS: C\$4.3 million (June 30, 2019)
WORKING CAPITAL: C\$4 million (June 30, 2019)
MARKET CAPITALIZATION: C\$37.1 million (Sept. 23, 2019)

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BRITISH COLUMBIA

ZincX Resources Corp.

TSX.V: ZNX

ZincX targets Cardiac Creek zinc upgrades

Following the 2018 preliminary economic assessment for Cardiac Creek, ZincX Resources Corp. completed a 2,347-meter drill program this year that targeted the initial five years of future mine production proposed in the scoping level study for this zinc deposit on the Akie property in northern British Columbia.

The PEA contemplates a 4,000-metric ton underground mine at Cardiac Creek providing ore for a 3,000-metric-ton-per-day mill that is expected to produce 3.27 billion pounds of zinc and 362 million lb of lead over an initial 18-year mine life.



This is based on 22.7 million metric tons of indicated resource averaging 8.32 percent (4.16 billion lb) zinc, 1.61 percent (804 million lb) lead and 14.1 grams per metric ton (10.3 million ounces) silver; and 7.5 million metric tons of inferred resource averaging 7.04 percent (1.17 billion lb) zinc; 1.24 percent (205 million lb) lead and 12 g/t (2.9 million oz) silver.

"We achieved a very significant milestone for the Akie project in 2018 with the completion and announcement of an economically positive and robust maiden PEA on the Cardiac Creek deposit," said ZincX Resources President and CEO Peeyush Varshney.

This year's drilling focused on increasing the confidence in the resource with additional infill holes, as well as extending the high-grade core of the deposit to the southeast.

In addition to expanding the high-grade core and upgrading the resource, the 2019 drilling collected data to improve the understanding of the rock mass characteristics of the deposit and provide advanced engineering data for future underground mine design and stope dimensions.

CHAIRMAN, PRESIDENT AND CEO: Peeyush Varshney
CHIEF FINANCIAL OFFICER: Praveen Varshney
VP, EXPLORATION: Ken MacDonald

CASH AND SHORT-TERM DEPOSITS: C\$3.7 million (March 31, 2019)
WORKING CAPITAL: C\$3.4 million (March 31, 2019)
MARKET CAPITALIZATION: C\$20.3 million (Sept. 23, 2019)

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Inuit women workers with the first gold bar poured at Agnico Eagle's Meliadine Mine in Nunavut.

Nunavut Exploration 2019

Nunavut takes stock in 20th year

Government, mining industry seek best way forward

By **ROSE RAGSDALE**
For Mining Explorers

Twenty years ago, Canada created the territory of Nunavut, carving out the eastern-most part of the Northwest Territories to form the country's northernmost jurisdiction.

A vast land of lakes and tundra sprawled across the North from the Hudson Bay to the Arctic Ocean and east to Baffin Bay and the coastal waters of Greenland, Nunavut is home to only about 38,000 people, of whom 85 percent are indigenous Inuit who have lived in this frozen land for millennia.

Since 1999, Canada's youngest territory has made significant strides toward building a thriving economy based on the vast mineral resources of an area roughly one and one-half the size of Alaska. Recent development of large commercially viable mines in all three of the territory's major regions and the resulting high-paying jobs and support positions filled by local residents, as well as local spending played a major role in this progress.

Mining is the largest private sector driver in Canada's Arctic,



SEAN BOYD



ALEX BUCHAN

employing about 8,500 people, or one in every six workers, according to The Mining Association of Canada. MAC also cited mining's direct gross domestic product contributions to the three territories' respective economies, including 21 percent for Nunavut in 2016 (most recent statistics available).

In recent years across Canada's Arctic, mining companies have invested or committed to invest more than C\$9 billion.

"While the contribution is great, the potential is even greater given the right policy and investment environment," said Brendan Marshall, MAC's vice president of economic and northern affairs.

As evidence, he cited the value of all mine projects planned and under construction across Canada between 2018 and 2028 dropping by 55 percent since 2014, from C\$160 billion to C\$72 billion.

In Nunavut, indicators have been mixed in recent years. Mineral exploration spending in the territory has dropped 33 percent year-over-year since 2015, from a high of C\$215 million to C\$144

million planned in 2019. Capital investment in mining, on the other hand, has jumped 182 percent since 2016, from C\$344 million to C\$968.5 million in 2018.

Mining's direct contributions to Nunavut's economy are very large when compared with other sources, said Alex Buchan, Nunavut Vice President of the NWT & Nunavut Chamber of Mines.

"Mining's contribution is even larger when you consider benefits to sectors like construction and transportation," Buchan told an audience at the biannual Northern Lights conference in Ottawa in February.

He noted that Nunavut had no mining industry before 2009. Four mines now operate in the territory – Agnico Eagle Mining Ltd.'s Meadowbank and Meliadine gold mines in the Kivalliq region, Baffinland Iron Mines' Mary River Mine in the Qikiqtani region, and TMAC Resources Inc.'s Hope Bay gold mine in the Kitikmeot region, where Buchan is TMAC's director of community relations.

Agnico Eagle President and CEO Sean Boyd echoed these sentiments in July but cautioned that Canada is missing out on developing its rich mineral resources in the North.

If the Canadian government doesn't ramp up investments in its resources at home, foreign entities – which are already circling Agnico's projects – may step in, he warned,

For example, Agnico recently hosted U.S.-based visitors at its Nunavut projects as well as investors representing "large funds from Beijing," he added.

"Other countries have taken a real keen interest in what's going on in Nunavut," he told a reporter.

"There's just easy things that should be done. The federal government is in a situation now where they transfer massive social payments to Nunavut. Why don't you create industry? ... We'll do our part, but we can't do everything."

Boyd said that it's on the mining industry itself to make a better case for the investment possibilities in the Arctic.

"We have to do a better job articulating the benefits of resource development in Canada," he said. "The problem is that there's no vision. There's no strategy. You really don't get the government support you should be getting based on the potential for big payoffs for modest amounts of investment," he added.

The development of three other mine projects in Nunavut, meanwhile, have been advanced to the brink of production

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A bulk sample of Amaruq ore is being loaded into a truck bound for Agnico Eagle's Meadowbank Mine, where it was processed in the mill ahead of commercial production from the satellite gold deposit.

AGNICO EAGLE MINES LTD.

NUNAVUT EXPLORATION *continued from page 85*

– Amaruq, which Agnico is ramping up as a satellite of Meadowbank; Chidliak, a diamond project that De Beers Canada Inc. is advancing toward commercial operation; and Back River, a gold project that Sabina Gold and Silver Corp. hopes to bring on line by 2022.

The chamber's statistics show that since 2009, Nunavut's mines have provided 2,365 person years of mining employment; in 2016, there were 1,946 mine jobs of which 388 (20 percent) were held by Nunavut residents, Buchan said.

Total mine spending since 2007 exceeds C\$4.8 billion, of which C\$2.2 billion was in Nunavut. In 2016, comparable mine spending totaled C\$582 million, of which \$252 million (43 percent) was in Nunavut.

Mining is also generating industry royalty and benefit agreement payments, another way in which Nunavummiut are benefiting from mining.

"Advancing opportunities at Meliadine, Back River, Amaruq, and Chidliak have potential to generate even more employment and business benefits and tax and royalty revenues to government and Inuit organizations," Buchan added.

Still, Canada urgently needs to address falling exploration investment in Nunavut, which industry officials link to major challenges across the North, including a troublesome land use planning process; a huge transportation and infrastructure deficit, including no road system, that inflates exploration and development costs; looming environmental constraints; urgent need for improving food security; education and skills training among Nunavut residents; as well as removing cultural, racial, logistical and economic barriers to successful mining employment.

Officials say addressing these challenges is critical to achieving Canada's goals of addressing climate change, achieving reconciliation with its indigenous population and accomplishing the broader social and economic development priorities of the Arctic.

The Inuit people of Nunavut own 356,000 square kilometers (944 parcels) under terms of the 1999 Nunavut Agreement, the

largest Aboriginal land settlement in Canadian history. The Government of Canada administers sub-surface rights for 98 percent of Nunavut, including prospecting permits, mineral claims, and mineral leases. Inuit also hold fee simple title, including mineral rights to 38,000 square kilometers (150 parcels) of land. Mineral exploration agreements and production leases on this land are negotiated by Nunavut Tunngavik Inc, while access permission and land use licenses are granted by the territory's three regional Inuit associations.

Juniors seek gold in Kitikmeot

The Kitikmeot region has been explored for base metals, uranium, platinum group elements, and diamonds, but 2019 exploration is all about gold.

Four past-producing mines have operated in the region – the Roberts Bay and Ida Bay silver mines, the Lupin gold mine and Jericho diamond mine.

As of November 2018, mining companies held 2.7 million hectares (6.7 million acres) of mineral tenure in the Kitikmeot region, including 808,000 hectares (2 million acres) of mineral claims and 1.64 million hectares (4.05 million acres) of prospecting permits.

Currently, TMAC Resources' Doris North gold mine, located at the northern end of the Hope Bay greenstone belt, roughly 125 kilometers (77 miles) southwest of Cambridge Bay, is the sole operating mine in the region.

TMAC Resources Inc. is one of the most active exploration and development companies in this region. Following the startup of commercial production at the Doris North mine in 2017, the company has focused on improving gold recoveries as well as advancing exploration and permitting for the Madrid and Boston projects and regional exploration.

TMAC also reported encouraging results from winter drilling at Doris and Madrid North as well as 2019 underground exploration of the Doris North BTM Extension, along with more drilling at the Madrid and Boston projects and regional exploration.

Sabina Gold continued development and exploration activities in 2019 at its Back River gold project. Last year, Sabina received the necessary permits and licenses to construct a marine laydown area at Bathurst Inlet that it completed in August in time for three sealift shipments.

Sabina also has continued to drill-test new targets, which resulted in the discovery last fall of gold mineralization at the Nuvuyak target, located roughly 1,000 meters west of the Goose Main deposit. A 6,400-meter exploration program was conducted at three target areas at the Goose property – a discovery area at Nuvuyak-Hook; high-grade opportunities up plunge from the Vault zone at the Umwelt underground; and scoping at the Llama Extension zone. Sabina believes the presence of a significant high-grade core within the Umwelt underground could provide opportunities for early advancement of underground resource extraction that could have positive impacts on the economics of the project.

Blue Star Gold Corp. has undertaken a 2019 exploration program on the Hood gold property north of the historic Lupin Mine.

Blue Star holds an agreement with Nunavut Tunngavik Inc. for the exclusive right to explore the IOL parcel. Priority drill targets within the Hood Property are on strike and north of the Ulu Mining Lease's advanced Flood gold zone and are related to the five-kilometer- (three miles) long Ulu regional fold. The Hood leases are contiguous to the Ulu Property, which hosts an advanced gold project. Between 1989 and 2006, explorers including BHP Billiton, Echo Bay Mines Ltd., and Wolfden Resources Inc., completed significant exploration and development of the Ulu gold property.

In late July, Blue Star exercised an option to acquire 100 per-

cent of the Ulu property in exchange for C\$450,000 in cash and other considerations.

Other mining explorers working in the Kitikmeot region in 2019 include:

Auryn Resources Inc. continues to focus on its Committee Bay gold project located in the eastern Kitikmeot, about 180 kilometers (110 miles) northeast of Agnico Eagle's Meadowbank gold mine.

Auryn reported in February using artificial intelligence to identify 12 new gold targets at Committee Bay, including two targets that overlap Auryn's geologist-derived targets adjacent to the Aiviq and Kalulik discoveries, which are effectively drill ready.

The machine learning technique also identified two important targets that create east and west extensions of the Three Bluffs deposit; multiple targets hidden beneath shallow lakes and glacial-fluvial cover, and a third structure (in addition to the Three Bluffs structure and the Aiviq and Kalulik structure) with 15 kilometers of strike length that offer new opportunities.

In 2018, the junior drilled a 1,500-meter gold-bearing hydrothermal system at the Aiviq target. Auryn said it plans to advance to drill stage the two new targets east and west of Three Bluffs in hopes of significantly expanding that deposit.

Mini-mining boom in Kivalliq

Kivalliq, the central region of Nunavut, saw exploration for both diamonds and gold in 2019, with gold the major focus of explorers.

The Kivalliq has a long history of mining and hosted two of Canada's first major north of 60 mines – North Rankin, a nickel

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BAFFINLAND IRON MINES CORP.

An aerial view of Baffinland's Mary River iron mine in Nunavut.





Baffinland hopes to ship upwards of 12 million metric tons of iron ore annually from its Mary River Mine on Baffin Island.

BAFFINLAND IRON MINES CORP.

NUNAVUT EXPLORATION *continued from page 87*

mine that operated from 1957 to 1962, and Cullaton-Shear Lake, a gold mine that operated in the early 1980s.

Agnico Eagle's Meadowbank gold mine has produced nearly three million ounces of gold since it began production in 2010. Gold production at Meadowbank slowed as the mine approached its end of life in 2019, while the company advanced nearby Amaruq (2.9 million oz in reserves) as a satellite deposit, supplying ore to the existing Meadowbank mill by Sept. 30. Amaruq is expected to produce 165,000 oz gold in 2019.

Agnico Eagle, meanwhile, continued exploration drilling at Amaruq and results show potential for underground mining as well as a planned open pit.

Agnico Eagle also owns the Meliadine Mine, which achieved commercial production ahead of schedule in mid-April and is expected to produce 240,000 oz of gold in 2019.

Meliadine, located near Rankin Inlet in the eastern Kivalliq region, is expected to produce 5.3 million ounces of gold over its 14-year lifespan.

Northquest Ltd., a subsidiary of Nord Gold SE, continues to explore its Pistol Bay gold project near the community of Whale Cove.

Dunnedin Ventures Inc., which carried out an active 2018 program of till sampling at its Kahuna diamond exploration project located 26 kilometers north of Rankin Inlet adjacent to Agnico Eagle's Meliadine Mine. This program defined a three-square-kilometer target area for potential diamond sources at the head of the Josephine Target Area – a trend of abundant high-quality diamond indicator minerals for which no source is yet known. Dunnedin also said its next diamond-focused exploration campaign will be aimed at discovery of kimberlite pipes within this discrete area.

On the heels of an active early stage exploration program in Nunavut in 2018, Silver Range Resources Ltd. is focused this year on project generation and cost-effective early stage exploration, while maintaining sales efforts to option drill-ready prospects in the territory. In June, the junior said it looked forward to receiving news from several of its optioned projects, notably the Hard Cash property in southwestern Nunavut where Canarc Resources Corp. planned a maiden drill program this summer.

Iron, diamonds take center stage

Qikiqtani, the largest of Nunavut's three administrative districts, is primarily comprised of the islands of the Canadian Arc-

tic Archipelago,

In 2018, companies explored the region for iron, diamonds, base metals, and gold.

Mineral claims, prospecting permits, and mining leases covering a total of 1.74 million hectares were held in the region as of November 2018, down from 2.4 million hectares held a year earlier.

Baffinland Iron Mines Corp.'s Mary River iron mine on northern Baffin Island has been in production since 2014.

In 2018, the company produced and shipped a record 5.1 million metric tons of iron ore from the Milne Inlet port to markets in Europe, Japan and Taiwan. Although this amount exceeds the 4.2 million metric tons allowed to be shipped through Milne under the 'early revenue phase' amendment to Baffinland's project certificate, the company received a variance increasing this amount to an annual maximum of 6 million metric tons ore for 2018 and 2019.

Citing concerns about the economic viability of the project and with support from the Qikiqtani Inuit Association and government of Nunavut, Baffinland was granted this variance as a temporary measure while a phase 2 amendment to the company's project certificate is being considered by the Nunavut Impact Review Board. The phase 2 amendment proposes to increase further the shipping limit from Milne Inlet to 12 million metric tons annually, and to construct a rail line from the mine site to allow for more efficient transportation of ore than by the existing tote road.

In April Baffinland signed a memorandum of understanding with the government of Nunavut, pledging to maximize Inuit employment at the Mary River Mine. The MOU focuses on four priority areas for collaboration – reducing barriers to employment; the development of employment and training opportunities; community wellness programs; and infrastructure and transportation.

At the signing ceremony, Economic Development and Transportation Minister David Akeegok said, "The government of Nunavut strives to develop our infrastructure and economy in ways that support a positive future for our people, our communities and our land."

With the purchase of Peregrine Diamonds Ltd. in September 2018, De Beers Canada's took up the challenge of developing a diamond mine at the Chidliak Property located north of Iqaluit, Nunavut's capital, in the Qikiqtani region.

Before the sale, Peregrine had filed an updated inferred resource estimate for the CH-6 kimberlite, the most developed of numerous kimberlites at Chidliak, that jumped 58 percent to 17.96 million carats. The company also released an updated preliminary economic assessment involving a 13-year open pit mining operation that could extract 16.7 million carats of diamonds from the CH-6 and CH-7 kimberlites.

Later in the year, De Beers indicated it is considering alternative mining technologies with smaller footprints for Chidliak.

ValOre Metals, formerly Kivalliq Energy, fulfilled the terms of its option agreement with Commander Resources to gain 100 percent ownership of the Baffin Gold project.

In December, the explorer said it has defined several new, large-scale gold anomalies in till, and the significance of these is enhanced by a greater understanding of the geological setting based on new airborne data collected in 2018, according to ValOre President Jeff Ward. ●

An aerial view of the Doris Mine area on TMAC Resources' Hope Bay gold project in Nunavut.



Explorer executes vision at Hope Bay

TMAC Resources aims to spend \$20 million on property-wide exploration in 2019

By ROSE RAGSDALE
For Mining Explorers

More than halfway through its third year as a gold producer at the Hope Bay Property in Nunavut, TMAC Resources Inc. is also emerging as a top mineral explorer in Canada's northernmost territory.

The Toronto-based company's Doris Mine at Hope Bay is one of only three producing gold mines in Nunavut. Situated in the Kitikmeot Region in northwestern Nunavut, Doris is the first gold deposit brought into commercial-scale production at the remote mining operation.

For more than 30 years, Hope Bay has attracted seasoned gold hunters, including BHP Billiton Ltd., Miramar Mining Corp., Newmont Mining Inc. and most recently TMAC, which acquired the property in 2012. Three decades later, the explorers invested more than C\$1.5 billion in the project for exploration and evaluation, surface infrastructure, and mine and process plant development.

The sustained effort is finally paying off. Since pouring first gold at Doris in early 2017, TMAC has doubled the mine's processing capacity to 2,000 metric tons per day. The company reported record output from Doris of 40,050 ounces for the first quarter of 2019, and despite some processing issues encountered in the second quarter, produced an impressive 78,570 ounces during the first half of the year.

That's a significant improvement over the 19,540 oz in the first quarter of 2018 and nearly 80 percent more than the 43,790 oz produced at Doris during the first six months of 2018.

"Hope Bay is an under-explored Archean gold belt despite more than 30 years of activity, because of the remoteness of the site," said TMAC President and CEO Jason Neal. "The focus historically has understandably been on near-surface drilling on the three outcropping deposits at Doris, Madrid and Boston, which have attracted more than 90 percent of the diamond drill meters."

The arctic property currently has estimated measured and indi-

continued on page 90

cated resources totaling 4.8 million ounces at Doris, Madrid and Boston.

Since the mine's startup at Doris, TMAC has focused on ironing out bugs in processing. This effort delayed the company in turning its attention fully to exploration of the Hope Bay property.

Neal said every previous owner set a goal of establishing a mine at one of the three sizable deposits and using the established year-round production as a foundation on which exploration could be accelerated.

Only TMAC has reached the cusp of executing this vision.

"This year we will take a significant step forward, and on the horizon, there is an opportunity to, in a prudent and disciplined way, further escalate exploration," Neal said earlier this year.

The explorer planned to spend \$20 million on exploration in 2019, including drilling 60,000 meters aimed at further exploring the Doris deposit located near the north end of the Hope Bay belt, the Madrid deposit farther south and the Boston deposit located near the southern tip of the belt as well as regional targets both in the north and the south. The drill campaign will be nearly twice the size of the 34,000-meter exploration plan that TMAC carried out in 2018.

"We now have significant reserves and resources established at these deposits, almost entirely within 350 meters of surface and are open at depth, and a practically inexhaustible inventory of exploration targets," Neal said.

Near-mine exploration

TMAC said its focus at Doris is on growing reserves, especially at Doris BTM, supported by extension of the Doris BTM ramp development to the north to provide access to a further 100 meters of strike length.

"We have a great opportunity to add resources and reserves at Doris with an increased focus on exploration, which has the potential to extend the life of Doris and continue to add operational flexibility to our overall plans," Neal said.

The Doris BTM zone is north of and beneath a diabase dyke in the deposit and is the equivalent of the high-grade Doris North zone hinge structure.

The initial two drill holes intersected the high-grade BTM Extension west limb as planned, returning 330.7 grams of gold per metric ton over 3.4 meters and 146.8 g/t gold over 1 meter in drill hole TMBDE-19-50043 and 16.9 g/t gold over 0.4 meters and 81.2 g/t gold over 1.2 meters in drill hole TMBDE-19-50044.

The BTM Extension zone remained open for expansion to the north and TMAC continued drilling through the third quarter.

In addition to diamond drilling, production development has now accessed the BTM Extension zone on four levels within the southern extent of the zone. Both vein geometry and fold grade continue to show good continuity on each level.

By July, TMAC had reported five holes intersecting the Doris deposit stratigraphy, with mineralized quartz veins that appear to extend at least 375 meters along strike to the north. Highlights from assays received from initial drilling include near-surface drill hole TMRDC19-00004 returning 9 grams per metric ton gold over 8.5 meters, including 15.4 g/t gold over 2.3 meters, and deeper drill hole TMRDC-19-00002 returning 7.7 g/t gold over 7.5 meters, including 11.8 g/t gold over 4.3 meters with visible gold noted.

The recent BTM results, which thus far are largely in areas that will be mined in 2019, show consistent visible gold in high-grade drill hole intercepts.

"We have a great opportunity to add resources and reserves at Doris with an increased focus on exploration, which has the potential to extend the life of Doris and continue to add operational flexibility to our overall plans."

-Jason Neal, president and CEO,
TMAC Resources Inc.

TMAC said additional drilling is required to determine the relationship of this mineralization to the known Doris Deposit, and if it is a continuation of Doris North BTM Extension or a new mineralized zone. The results, however, represent a significant step-out from the currently defined mineral resources and increases TMAC's confidence in the long-term sustainability of its Doris operations, according to the explorer.

Next on deck: Madrid

Madrid North, expected to be TMAC's next ore source, saw 2019 drilling centered on targets that could be advanced towards development and production.

Located roughly 10 kilometers (six miles) south of Doris, Madrid currently has measured and indicated mineral resources totaling 11.4 million metric tons grading 7.5 g/t gold containing 2.84 million oz gold.

In 2018 drilling at Madrid North, the company focused on the core of the Naartok West and Naartok East zones and confirmed the continuity of both grade and width of near-surface mineralization, which has potential to provide significant high-grade ore early in the Madrid mine plan.

Activity in 2019 at the Madrid North deposit initially focused on the Suluk zone, with a winter program designed to define the higher-grade plunges within the indicated mineral resource and upgrade classification of the inferred mineral resources. TMAC also used core from this program for metallurgical tests on the Suluk ore. The Suluk stacked mineralized package remains open to depth and has the potential to significantly increase resources down-plunge of the high-grade trends.

"We are planning on conducting advanced exploration (at Madrid North) in preparation for a development and production decision," Neal said. "The Naartok East results are defining a higher-grade zone near surface. The Suluk results inform planning for potential future bulk sample and underground exploration, which is currently being evaluated."

Regional targets

TMAC also plans to conduct a regional exploration program that is focused on established targets near current and planned infrastructure at Doris and Madrid.

"(W)e have more than 90 identified exploration targets on the belt based on a significant amount of foundational work, and as our vision for development at Hope Bay evolves, we are also able to further screen those targets which are most capable of contributing to our medium-term strategy," Neal explained.

More than 7,000 meters of diamond drilling is budgeted this year to test regional targets in the north portion of the Hope Bay belt.

The northern regional drilling, which got underway in May, focused on high-priority exploration targets identified through historical and current exploration efforts. These targets include several anomalies north of the Naartok deposit, the Qaiqtuq target located 2,000 meters northwest of the Doris mine, and a moderate

gold-till anomaly in the Qaiqtuq valley.

After completion of the regional work on these northern targets, the exploration transitioned to a late-summer drill program out of the Boston camp.

BHP completed more than 2,500 meters of underground development at Boston in the 1990s as part of a bulk sampling program.

After its 2019 surface exploration plan is completed, TMAC said it will consider opening this underground development and continuing year-round exploration of the deposit from underground.

“Boston may be the best of the currently identified deposits at Hope Bay, and we are enthusiastic about getting drills turning again for the first time in nearly two years,” Neal said.

Drilling in the south also focused on high-priority regional targets proximal to Boston, including the Domani trend to the south. The Domani trend is characterized by mineralized quartz veining found within a roughly 6,000-meter-long strongly iron carbonate altered shear zone, up to 40 meters wide extending south from the Boston deposit. Along this trend multiple 10 g/t gold, and up to 200 g/t gold samples have been collected since the mid-1990s. Work on this and other high-priority targets near Boston was scheduled to begin in the third quarter.

TMAC also set a target for updating its pre-feasibility study in

the fourth quarter of 2019 “for disciplined Hope Bay Belt development and optionality, with focus on stakeholder value.”

Royalty deal delivers US\$43 million

In mid-August, TMAC also reported completion of an agreement with Maverix Metals Inc. in which it amended terms of an existing 1 percent net smelter royalty. TMAC will receive gross proceeds of US\$43 million and Maverix will get an additional 1.5 percent NSR, a short-term 0.25 percent NSR until the additional 1.5 percent royalty is registered against the property and small equity interest in TMAC. The royalty amendment also includes negotiated step-down and buyback rights in favor of TMAC.

Neal said the royalty amendment strengthened TMAC’s balance sheet to enable ongoing investment in growth at Hope Bay such as exploration at the Doris, while providing a buffer against operational volatility and funding for the company’s seasonal sealift. One area for such growth is exploration at the Doris mine.

“We determined this royalty transaction to be the most attractive cost of capital, preserves the best participation in strengthening gold prices for our shareholders, and importantly has the benefit of maintaining both financial and strategic flexibility,” Neal added. ●



Early development work began at Madrid North this summer. Located about 10 kilometers (six miles) south of the Doris Mine, Madrid hosts 11.4 million metric tons of measured and indicated mineral resources averaging 7.5 g/t (2.8 million oz) gold.

TMAC RESOURCES INC.

NUNAVUT-BRITISH COLUMBIA

Auryn Resources Inc. ● ●

TSX/NYSE: AUG 



Auryn applies AI to search for Nunavut gold

A technically driven mineral exploration company, Auryn Resources Inc. has become known for applying some of the most advanced technologies in its search for gold in Canada.

This year, Auryn teamed up with Computational Geosciences Inc. (CGI) to use artificial intelligence to assist in identifying the best drill targets at its 390,000-hectare (964,000 acres) Committee Bay gold project in Nunavut.

VNet, a deep learning algorithm developed by CGI that requires expertise in geoscience data processing, data interpretation, and artificial intelligence.

Auryn said the biggest advantage of a data-driven solution is the ability to extract subtle correlations across multiple datasets over a large spatial area, all while reducing human bias. By generating targets with deep learning, and vetting them with an experienced geoscience team, the expertise of the human is still utilized but complemented by the power of the machine.

"The CGI machine learning platform will leverage our highly-disciplined and thorough approach to data collection with the deep knowledge of Auryn's technical team to produce the highest probability targets," said Auryn Resources COO and Chief Geologist Michael Henrichsen.

For machine learning to work, however, accurate geological, geochemical and geophysical inputs are required.

"Simply put, garbage in equals garbage out," said Henrichsen. "However, in Auryn's case, our discipline to collect rigorous high-quality datasets allows for high-quality outputs from the machine learning." Committee Bay is a massive property that covers a gold enriched greenstone belt that extends for roughly 300 kilometers (180 miles) across Nunavut's Kitikmeot region.

At the heart of this belt lies Three Bluffs, where 2.1 million metric tons of indicated resource averaging 7.85 grams per metric ton (524,000 ounces) gold; and 2.9 million metric tons of inferred resource averaging 7.64 g/t (720,000 oz) gold has been outlined.

Over the past couple of years, Auryn has identified two promising targets – Aiviq and Kalulik – along a 20-kilometer- (12.5 miles) long shear zone north of Three Bluffs.



SHAWN WALLACE



IVAN BEBEK

Aiviq, located about 12 kilometers (7.5 miles) north of Three Bluffs, was first drilled by Auryn in 2017. One hole drilled that year, 17RGR003, cut 12.2 meters of 4.7 g/t gold, including 3.1 meters of 18.09 g/t gold. The company drilled another 16 holes at Aiviq during 2018. The best hole of this program cut 13.5 meters of 1.54 g/t gold, including six meters of 3.3 g/t gold. This hole, 18RG012, was drilled toward the south-west end of the 2018 program.

Kalulik, situated about 10 kilometers (six miles) southwest of Aiviq, was also drilled last year. This drilling at Kalulik cut 10- to 20-meter-thick zones of low-grade gold mineralization. Results from this drilling include 21.34 meters at 0.4 g/t gold and 16.76 meters of 0.45 g/t gold.

While this drilling has yet to turn up a deposit with the size and grade Auryn is looking for, there are indications that such a deposit is hidden below the glacial till that masks the underlying geology at Committee Bay.

To help refine drill targets across the "Three Bluffs playing field" – a 1,600-square-kilometer- (620 square miles) area that encompasses Three Bluffs, Aiviq and Kalulik – VNet was "trained" to correlate geological, geochemical and geophysical inputs to gold-rich drill intercepts previously encountered. This training was refined until machine learning could predict 99 percent of the previous drill holes that contain gold mineralization.

The machine learning program generated 12 targets, many of which correlated with targets previously identified by Auryn's technical team. This increased the team's confidence in both the machine learning and their own targeting.

Some of the AI targets lie under lakes and areas where glacial sediments have completely masked any geochemical indications on the surface.

"This provides the technical team with targets that may otherwise have been overlooked and opens up a number of areas for further evaluation," said Auryn's chief geologist.

A 2,700-meter drill program carried out this summer tested two of the AI and other targets in the target area. Assay results had yet to be released as of the writing of this report.

In addition to its cutting-edge work in Nunavut, Auryn identified two new gold-silver targets with more traditional exploration at Homestake Ridge, a high-grade gold property about 20 miles (32 kilometers) southeast of Stewart, British Columbia.

The new targets are roughly six miles (10 kilometers) northeast and 2.2 miles (3.5 kilometers) south of the three main deposits at Homestake Ridge – Homestake, Homestake Silver and South Reef.

Combined, these deposits host 604,000 metric tons of indicated resource averaging 6.4 g/t (124,000 oz) gold, 48.3 g/t (939,000 oz) silver and 0.18 percent (2.4 million pounds) copper; plus 6.77 million metric tons of inferred resource averaging 4.2 g/t (911,000 oz) gold, 93.6 g/t (20.37 million oz) silver and 0.11 percent (16.3 million lb) copper.

Rock samples collected last year from the new northern target, Bria, returned assays of up to 11 g/t gold and 448 g/t silver. Auryn said the results from sampling demonstrates the high-grade prospectivity of this target at the northern end of the Homestake Ridge property.

At the new southern target, Kombi, two separate high-priority areas have been defined from consecutive drainage basins where historical stream sediments were anomalous in gold and silver.

Auryn budgeted C\$700,000 for mapping, rock sampling and ground geophysical survey this year to refine drill targets at these newly identified Homestake Ridge prospects.

EXECUTIVE CHAIRMAN: Ivan Bebek
PRESIDENT AND CEO: Shawn Wallace
CHIEF GEOLOGIST AND COO: Michael Henrichsen

CASH AND SHORT-TERM DEPOSITS: C\$2.1 million (June 30, 2019)
WORKING CAPITAL: C\$1.9 million (June 30, 2019; closed C\$1.9 million financing on July 11)
MARKET CAPITALIZATION: C\$176.1 million (Sept. 23, 2019)

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Drills test AI generated targets on Auryn Resources Committee Bay gold project in Nunavut.



AURYN RESOURCES INC.

NUNAVUT-ALASKA-YUKON

Agnico Eagle Mines Ltd. ●TSX/NYSE: AEM **Agnico's golden Nunavut vision realized**

When Agnico Eagle Mines Ltd. established a foothold in Nunavut roughly a decade ago, the gold mining company saw this northern Canadian Territory as a politically attractive and stable jurisdiction with enormous geological potential. With two new gold mines established in Nunavut this year, this vision is being realized.

"We see tremendous potential there and this is an inflection point and a turning point in the future of Agnico as we are opening up a brand-new area where we see tremendous exploration potential, combined with the ability to do business and build new mines," Agnico Eagle Mines President and CEO Sean Boyd commented on the company's Nunavut platform.

This inflection point comes at a time when Agnico is winding down Meadowbank, its first gold mine in Nunavut, and gearing up operations at Meliadine and Amaruq, two new mines in the territory that are expected to push the company's 2019 gold production to 1.75 million ounces.

Agnico poured the first bar of gold at Meliadine in February and by mid-year this operation had produced 78,694 oz of the precious metal, this includes 47,281 oz of pre-commercial production and 31,413 oz of commercial production from May 14 through the end of June.

In July, Agnico Eagle continued to forecast 230,000 oz of gold production this year at Meliadine.

While ramping up production, Agnico is carrying out roughly 10,000 meters of exploration drilling and 12,500 meters of resource conversion drilling at Meliadine this year.

Going into 2019, Meliadine hosted 16.7 million metric tons of proven and probable mineral reserves averaging 6.97 grams per (3.75 million oz) gold; 26 million metric tons of measured and indicated resources averaging 3.81 g/t (3.18 million oz) gold; and 13.5 million metric tons of inferred resource averaging six g/t (2.6 million oz) gold.

The Meliadine project includes seven gold deposits, six of which are part of the current mine plan. Tiriganiaq, which extends for 3,000 meters along strike and to a depth of at least 750 meters, hosts the bulk of the mineral reserves.

One hole drilled during the second quarter, M19-2524-W2B, cut 4.6 meters averaging 9.2 g/t gold starting at a depth of 812 meters, the deepest reported intercept at Meliadine. Two other intercepts demonstrate the potential for a new parallel zone as exploration continues at depth. Roughly 200 meters to the west, M19-2518-W2A cut 2.8 meters of 6.5 g/t gold at a depth of 675 meters; and about 225 meters to the east, M19-2520 cut 2.8 meters of 5.3 g/t gold at a depth of 705 meters depth.

Agnico said additional drilling is being carried out to define the extent of this discovery, which is expected to contribute to Meliadine inferred resources by year's end.

As Meliadine was hitting its stride, Agnico Eagle ramped up production at Amaruq, a satellite project about 50 kilometers (31 miles) northwest of Meadowbank.

Since reaching commercial production in 2010, Meadowbank has churned out more than 4 million ounces of gold. With crews mopping up the last of the Meadowbank reserves, Agnico will use the 11,000-metric-ton-per-day mill there to process ore trucked down from Amaruq.

Going into 2019, Amaruq has 24.9 million metric tons of proven and probable reserves averaging 3.59 g/t (2.88 million oz) gold. In addition, the Amaruq open-pit hosts 4.2 million metric tons of meas-

ured and indicated resources averaging 3.34 g/t (455,000 oz) gold; and 899,000 metric tons of inferred resource averaging 4.2 g/t (121,000 oz) gold.

Dewatering the Whale Tail pit, which is the source of the first ore from Amaruq, took longer than anticipated. As a result, less ore is being mined from Whale Tail this year than originally forecast.

Despite this slowdown, 2019 production guidance for the Meadowbank mill remains unchanged at 230,000 oz of gold. A larger percentage of these ounces, however, will be recovered from Meadowbank ore. In late June, roughly 39,200 metric tons of low-grade ore from Whale Tail was processed at the Meadowbank mill to test the characteristics of the Amaruq ore. This sample, which met recovery expectations, yielded the first 2,147 oz of pre-commercial production gold from Amaruq.

As Amaruq gold production ramped up, Agnico completed roughly 32,800 meters of exploration drilling, largely in areas around Whale Tail and V Zone, and 20,300 meters of drilling focused on upgrading the resources within the deposits.

Resource conversion drilling carried out this year has cut high grades in several areas of this deposit and identified the extension of high-grade mineralization below the proposed pit outline.

Exploration drilling in the central Whale Tail deposit encountered Whale Tail North Zone, where hole AMQ19-2039 cut 3.3 meters of 11.7 g/t gold starting at 284 meters. The company said this new zone should add to the inferred resources at year-end.

For the second half of 2019, exploration drilling is focused on expanding and upgrading resources in the deposit and parallel Whale Tail North structure.

Drilling also targeted V Zone, which is about 400 meters northeast of Whale Tail that consists of a series of parallel stacked structures striking northeast from near surface to as deep as 707 meters.

Agnico said conversion drilling during the second quarter continued to return positive results along the interpreted V Zone ore shoot that will likely help to upgrade this area to indicated resources.

Two other holes explored the gap between Whale Tail and the V Zone – AMQ19-2043 cut 3.3 meters of 9 g/t gold starting at 328 meters and AMQ19-2040 cut three meters of 7.1 g/t gold at 445 meters.

Agnico said these holes demonstrate a potential to link the potential underground operations of Whale Tail and V Zone.

Agnico is also funding exploration at Aura Silver Resources Inc.'s Greyhound property located 32 kilometers (20 miles) south of Meadowbank. Agnico earned an initial 51 percent interest in a portion of Greyhound in 2017, a stake that can be increased to 70 percent with additional spending. This year's program included drilling zones identified by an induced polarization (IP) geophysical survey conducted in 2018.

Agnico also holds two exploration projects in Alaska – Delta, a volcanogenic massive sulfide project in Interior, and Helm Bay, a high-grade orogenic gold target in Southeast.

Significant historical work at Delta has outlined a historical resource of 15.4 million metric tons averaging 3.8 percent zinc, 1.7 percent lead, 0.6 percent copper, 1.7 g/t gold and 62 g/t silver.

The Helm Bay property covers an area of Cleveland Bay, a few miles north of Ketchikan, where small-scale mining of narrow, high-grade gold veins was carried out at the turn of the 20th century. Agnico staked this property in 2017.

In the Yukon, Agnico Eagle owns a 19.9 percent stake in White Gold Corp., an exploration company with roughly 1 million acres of gold prospective lands in Yukon's White Gold District, and Jennings, a porphyry molybdenum-tungsten project in the southern part of the territory.

VICE CHAIRMAN AND CEO: Sean Boyd**PRESIDENT:** Ammar Al-Joundi**SENIOR VP, EXPLORATION:** Guy Gosselin**CASH AND SHORT-TERM DEPOSITS:** US \$125.6 million (June 30, 2019)**WORKING CAPITAL:** US\$224.7 million (June 30, 2019)**MARKET CAPITALIZATION:** US\$14.14 billion (Sept. 23, 2019)145 King St. East, Ste. 400, Toronto, ON M5C 2Y7
Tel: 416-947-1212 • www.agnicoeagle.com**SEAN BOYD****AMMAR AL-JOUNDI**



A geologist carries out sampling and mapping ahead of the 2019 drill program on Solstice Gold's Nunavut gold project east of Agnico Eagle's Meliadine Mine.

SOLSTICE GOLD CORP.

NUNAVUT

Solstice Gold Corp.  **SOLSTICE**
G O L D

TSX.V: SGC 

Solstice tests targets east of Meliadine

Solstice Gold Corp. completed its inaugural drill program at Nunavut (formerly Kahuna), an early stage gold project that borders the east side of Agnico Eagle Mines Ltd.'s Meliadine property.

"Agnico Eagle's Meliadine mine, which reached commercial production last month, is only seven kilometers (4.4 miles) from Solstice's claims in the Rankin Gold Belt," said Solstice Gold Executive Chairman David Adamson.

Solstice Gold was formed in early-2018, when Dunnedin Ventures Inc. spun out the gold prospective portions of its Kahuna diamond project. The property retained by Dunnedin host more than 40 diamondiferous kimberlite targets.

Following its formation, Solstice carried systematic, gold-focused exploration at Kahuna. This 2018 program included the collection of 2,049 till samples, 2,905 boulder and outcrop samples, as well as 1,675 line-kilometers of ground magnetic surveying. This work turned up three target areas – QEMS (Enterprise), Westeros Fold and Megafold NW.

Sampling of a large boulder field at Qaiqtuq, which is within the QEMS area, returned 66 grams per metric ton gold. Sampling of bedrock outcrop in this same area returned up to 5.74 g/t gold. Many of the gold-bearing boulders at Qaiqtuq are interpreted to be locally derived due to their association with gold-bearing outcrop, large size, angularity and relative abundance.

The Westeros Fold area hosts two gold targets – South Westeros and North Westeros.

South Westeros is a roughly 5,000-meter-long area of highly magnetic units cut by faults. Boulder grab samples from this area returned up to 11.7 g/t gold.

North Westeros is interpreted to be coincident with large, regional fault structures. Grab samples collected here contained as much as 12.7 g/t gold.

Megafold NW is situated on the northwestern limb of a very large regional fold. Out of 60 boulder and 131 outcrop samples collected from this area, 21 contained more than 0.5 g/t gold. The best sample returned 24.4 g/t gold from a one-meter-wide quartz vein-in-iron formation outcrop. Mapping and magnetic data along this 5,000-meter-long target suggest the presence of numerous parallel and likely folded iron formation units.

Solstice's 2019 exploration got started with mapping and sampling at Enterprise, previously referred to as QEMS, an area immediately adjacent to and along strike of Agnico Eagle's Meliadine claim block. Solstice said the late-summer drilling, which got underway in August, is testing 11 land-based targets, leaving highly prospective ice-based targets for winter follow-up.

EXECUTIVE CHAIRMAN: David Adamson • **PRESIDENT:** Marty Tunney
VP, EXPLORATION: Bob Singh

CASH AND CASH EQUIVALENTS: C\$ (June 30, 2019)
WORKING CAPITAL: C\$ (June 30, 2019)
MARKET CAPITALIZATION: C\$10.1 million (Sept. 23, 2019)

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NUNAVUT & NORTHWEST TERRITORIES

North Arrow Minerals Inc. 

TSX.V: NAR 

North Arrow lands diamond plant at Naujaat



North Arrow Minerals Inc. is exploring seven diamond projects in Canada – Naujaat, Mel and Luxx in Nunavut; Lac de Gras (LDG) and Loki in Northwest Territories; Pikoo in Saskatchewan; and Timiskaming in Ontario.

Much of North Arrow's 2019 work focused on Naujaat, the company's most advanced property.

In May, the explorer announced the start of engineering and cost analysis for a small-scale mobile diamond recovery plant to process bulk samples from Q1-4, one of at least eight kimberlites identified at Naujaat.

According to a calculation completed in 2013, the top 205 meters of the Q1-4 kimberlite hosts 48.8 million metric tons of inferred resource with 26.1 million carats of diamonds. Based on limited exploration, it is estimated that another 7.9 to 9.3 million carats are between 205 and 305 meters of Q1-4.

North Arrow is planning to process a 10,000 metric ton bulk sample from the Q1-4 deposit through a small-scale mobile diamond recovery plant to be set up at Naujaat.

This bulk sample will evaluate diamond size distribution and value, with emphasis on a distinct population of high-value, fancy, yellow diamonds found at Q1-4.



Yellow diamonds from sampling the Q1-4 kimberlite at Naujaat.

NORTH ARROW MINERALS LTD.

Q1-4's proximity to marine transportation infrastructure and a proposed new access route from the nearby community of Naujaat improves the viability of setting up a bulk sample diamond recovery plant at the project.

The Municipality of Naujaat is planning to build an access trail that will pass roughly 1,500 meters southeast of Q1-4.

"Locating a small-scale diamond recovery plant at or near the project site will also reduce costs, improve logistics and increase local employment and business opportunities for the residents of Naujaat," said North Arrow Minerals President and CEO Ken Armstrong.

Completion of the access trail is scheduled for summer 2020, which aligns with projected timing for delivery of the diamond recovery plant. In addition to Naujaat, exploration was carried out this year at the LDG and Loki projects.

Dominion Diamond Mines, North Arrow's joint venture partner at LDG, funded a C\$2.8 million exploration program focused on kimberlite discovery in this prospective area immediately south of the Diavik Mine property. This program includes additional geophysics and roughly 1,000 meters of drilling. As a result of Dominion's funding, North Arrow's JV interest in LDG is expected to be diluted to around 21 percent.

North Arrow also carried out a three-week exploration program at Loki, west of LDG and about 19 miles (30 kilometers) southwest of the Ekati diamond mine.

This till sampling and two reverse circulation drill holes at Loki were partially funded by a grant from the Northwest Territories' Mining Incentive Program.

CHAIRMAN: D. Grenville Thomas • **PRESIDENT & CEO:** Kenneth Armstrong
ADVISOR: Eira Thomas

CASH AND CASH EQUIVALENTS: C\$509,085 million (April 30, 2019)
WORKING CAPITAL: C\$152,475
(April 30, 2019; closed C\$1.2 million financing in July)
MARKET CAPITALIZATION: C\$6.1 million (Sept. 23, 2019)

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NUNAVUT & NORTHWEST TERRITORIES

Sabina Gold & Silver Corp. ●

TSX: SBB 



High-grade gold helps de-risk Back River

Sabina Gold & Silver Corp. budgeted C\$41 million towards further de-risking its Back River gold mine project in Nunavut during 2019. A 2015 feasibility study details plans for developing three deposits at Goose, one of seven properties that make up Sabina's larger Back River project. Ore from these deposits would feed a 3,000-metric-ton-per-day mill forecast to produce an average of 198,100 ounces of gold annually over an 11.8-year mine life.

Sabina gained the permits to develop this mine in 2018 and the 2019 program is designed to take measured steps in advancing Goose towards a production decision.

One of the major de-risking projects completed in 2018 was the construction of a port on Bathurst Inlet, north of the Goose Mine site. The ability to access Back River via barge to the Bathurst Inlet port and then a roughly 170-kilometer- (105 miles) long ice road provides more efficient delivery of the equipment, fuel and supplies needed to support exploration and predevelopment activities.

Construction of the first ice road began in April of this year and deliveries of construction equipment; steel and supplies for bulk fuel tanks; and supplies for earthwork activities at the proposed Goose Mine site continued into May.

Delivery of equipment and supplies, along with the on-site predevelopment activities these provisions make possible, are designed to provide greater certainty on capital expenditure (CAPEX) components of the Goose gold mine and de-risk critical logistical elements of the project – creating value and improving the project readiness for when the time is right to make a production decision.

Sabina Gold is also creating value and improving Goose through the drill bit, including a 6,400-meter spring drill program.

The Goose Mine project hosts 12.4 million metric tons of reserves averaging 6.3 grams per metric tons gold in three open-pit deposits – Goose Main, Umwelt and Llama – and one underground – Umwelt UG – across a 7,000-meter long area.

The eight holes drilled during this spring 2019 drilling at Back River targeted three areas at Goose – Nuvuyak, Hook and Umwelt-Vault. Nuvuyak, situated about 1,000 meters down-plunge of Goose Main, was

discovered by Sabina last year.

The Nuvuyak discovery hole, 18GSE545, cut 39.5 meters averaging 11.58 grams per metric ton gold.

Four holes drilled this year expanded the strong gold mineralization at Nuvuyak for 370 meters along strike.

Highlights from this drilling include 3.5 meters of 18.71 g/t gold, 18 meters of 10.04 g/t gold, 6.95 meters of 10.15 g/t gold, 9.25 meters of 14.7 g/t gold and 8.6 meters of 10.52 g/t gold.

"At the Nuvuyak discovery, we believe we have confirmed the potential for a significant new deposit with the elements of high-grade gold in thick packages of iron formation that we see at the other Goose deposits (Umwelt, Goose Main and Llama)," said Sabina Gold President and CEO Bruce McLeod.

Hole 19GSE570 cut 5.35 meters of 2.74 g/t gold and 4.65 meters of 2.11 g/t gold in the Hook target, which lies between Goose Main and Nuvuyak.

Another of the 2019 holes, 19GSE569, cut 21.75 meters of 14.97 g/t gold about 180 meters up-plunge from the Umwelt Vault zone, a particularly robust core of the Umwelt underground deposit.

"The presence of a significant high-grade core within the Umwelt underground could provide opportunities for early advancement of underground resource extraction that could have positive impacts on the economics of the project," said McLeod.

The uncovering of a 50- by 20-meter bedrock exposure at the Goose Main deposit this summer has enabled detailed studies of mineralogy, stratigraphy and structure to further increase confidence in the deposit-scale mineralizing controls.

Sabina said these studies suggest the conditions leading to the abundant gold depositional event are consistent across the Goose and other Back River properties, which underscores the prospective nature of the district. The company plans to use the findings from this work to help refine targets for future exploration across the Back River project.

CHAIRMAN: Walter Segsworth

PRESIDENT AND CEO: Bruce McLeod

VP, EXPLORATION: Angus Campbell

CASH AND SHORT-TERM INVESTMENTS: C\$29 million (June 30, 2019)

WORKING CAPITAL: C\$27.7 million (June 30, 2019)

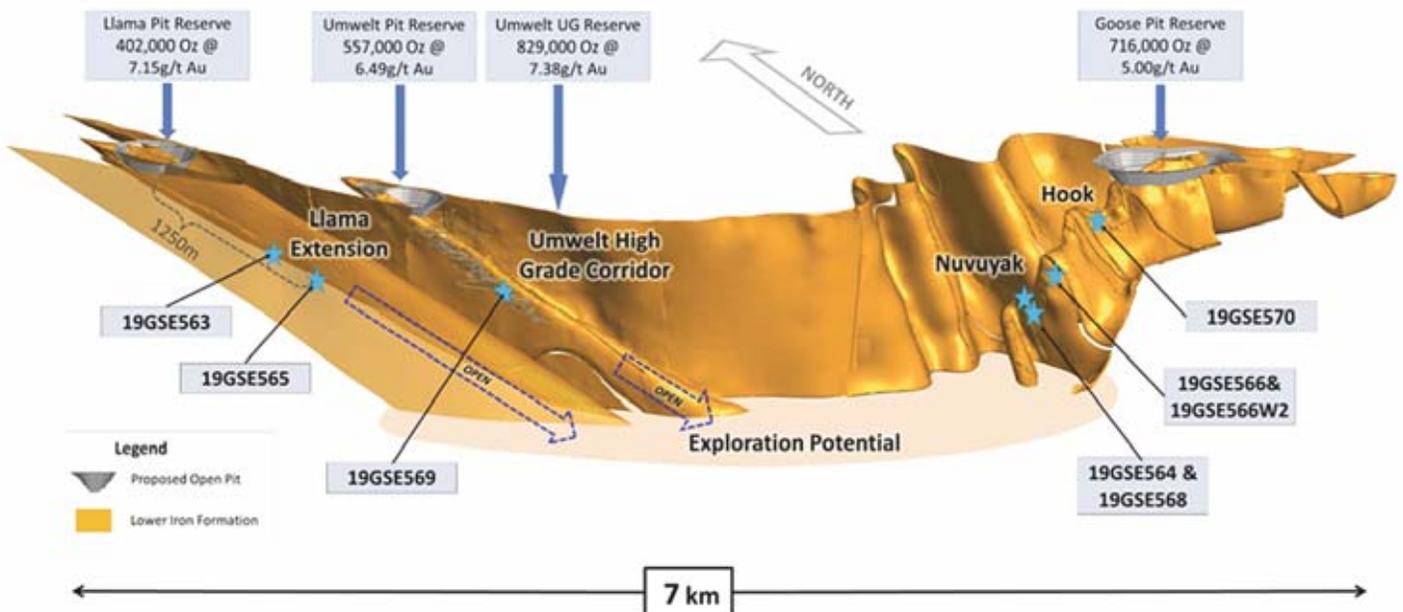
MARKET CAPITALIZATION: C\$598.9 million (Sept. 23, 2019)

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SABINA GOLD & SILVER CORP.





An aerial view of the A154 kimberlite and open-pit at the Diavik diamond mine in Northwest Territories.

Northwest Territories Exploration **2019**

Bumpy ride ahead for NWT mining

Officials warn of dangers of slow economy, poor infrastructure and high costs

By **ROSE RAGSDALE**
For Mining Explorers

While mining activity remained strong in the Northwest Territories in 2019, industry and government officials alike worried that the robust sector, driven largely by production at three diamond mines, has entered a prolonged downward slide.

The near-term economic outlook for the territory, which covers 1.3 million square kilometers in Canada's central Arctic region, continues to be bleak as its diamond mines that have now passed peak production and replacement projects are in short supply, according to a report published in July by the Conference Board of Canada.

Two of the three operating diamond mines in the territory — Diavik and Gahcho Kué — are set to close within the next decade. The third, Ekati, is projected to produce diamonds well into the 2030s, assuming a planned open pit is built.

The focus of NWT mining is expected to shift to other miner-



**BOB
MCLEOD**

als, including zinc, cobalt and rare earth elements, which are typically produced in smaller operations that cannot add as much value to the territorial economy as diamond mines.

Due to the decline in diamond output, economists forecast annual growth of the NWT economy to average two percent during the next two years, before becoming more uneven, with multiple years of negative growth.

They predict the mining downturn will lead to job losses across a number of industries, particularly construction, and put strain on the territorial government's finances.

The gloomy forecast is spurring territorial government and mining industry officials to speak out about the urgent need for federal policymakers to address the Canadian Arctic's needs.

The Northwest Territories is home to 44,000 residents who live in 33 communities spread across a territory slightly smaller than Alaska.

"To put that into perspective, we are a jurisdiction that is approximately 500,000 square miles and our entire population is just a little bit bigger than the Belltown neighborhood here in Seattle," NWT Premier Robert McLeod told participants in the

Arctic Encounter Symposium in April.

"Our gross domestic product today is close to C\$1 billion less than what it was in 2008, while our neighbors to the east and west – Yukon and Nunavut – have increased their GDPs in the hundreds of millions and even billion-dollar ranges during that time," McLeod said.

Between 2007 and 2016, the Northwest Territories economy shrank from \$4.5 billion to \$3.7 billion, he said. During that same time, territorial unemployment rose from 5.7 percent to 7.4 percent, which resulted in 800 fewer jobs in the territory.

"The Northwest Territories remains the only jurisdiction in Canada that has yet to recover from the global financial crisis," McLeod observed.

While many policymakers do not realize the importance of mining and other resource development in the North, the premier said NWT planners have charted a long-term vision and strategy to ensure the territory's future economic well-being.

"These take into account the new realities that we are facing in the NWT, and clearly explain where we, as a territory, want to be by 2030 to our partners, industry, investors and public, he added.

McLeod outlined the NWT's critical need for roads, electrical grids and renewable energy projects that will lower the cost of living for residents and the cost of doing business in the territory.

Observing that most Canadians take such infrastructure for granted, he said, "Closing the public infrastructure gap in Northwest Territories and Canada's Arctic should be one of the greatest strategic priorities of the government of Canada."

Roads, power funding

In February, the territorial government awarded a contract to construct the Tlicho All-Season Road (Tlicho Road), a new 97-kilometer- (60 miles) long, two-lane gravel highway to provide year-round access to the community of Whati from Highway 3.

NWT officials called the contract a significant step in advancing the territory's transportation infrastructure and in benefitting the mineral industry. Construction and ongoing maintenance of the road, funded by a public-private partnership, is expected to be completed in early 2022.

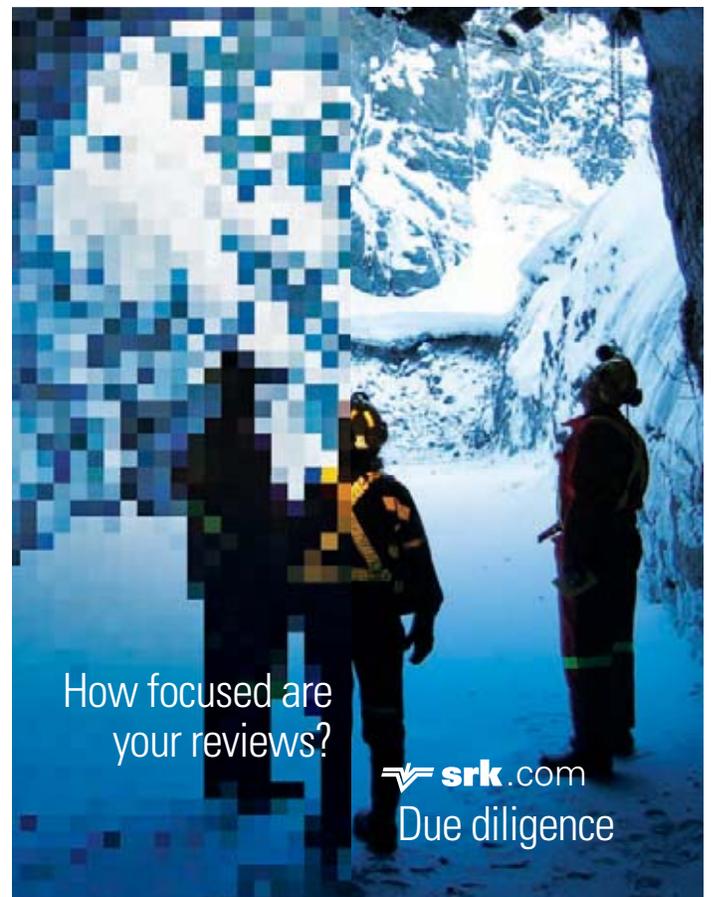
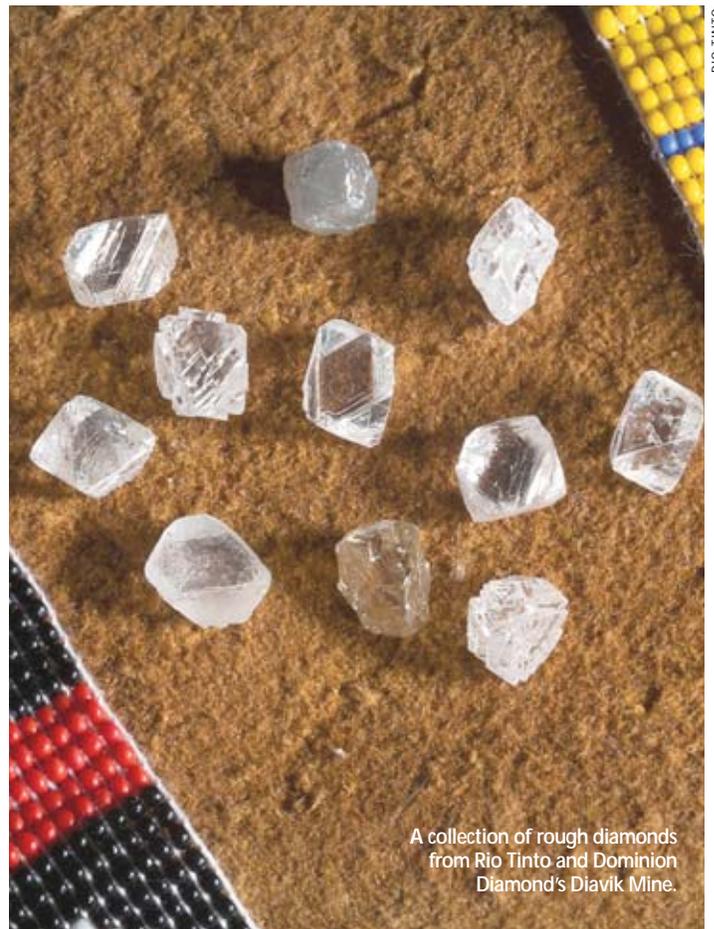
The total contract value of the project is C\$411.8 million over a 28-year period, and local indigenous people hold a 25 percent equity interest in the project.

"This new road, which includes Indigenous participation from the Tlicho Government, is great news for our industry and a positive step forward in addressing the infrastructure deficit in the Northwest Territories," said Gary Vivian, president of the NWT & Nunavut Chamber of Mines. "Improved year-round road access will open up vast areas of prospective geology to lower the cost of exploration, and it will improve the economic viability of the Nico and Indin Lake projects."

All-season road access is a key factor for Fortune Minerals Ltd. to develop its Nico cobalt-gold-bismuth-copper property located 50 kilometers (31 miles) north of Whati. Fortune has already received environment assessment approval for an open-pit mine and concentrator at Nico as well as a spur road from Whati to the mine site. The spur road is a private sector incremental extension of the Tlicho Road that also will improve access into areas with known deposits and mineral potential, Vivian explained.

In addition, the Tlicho Road will improve winter road access for Nighthawk Gold Ltd., which is exploring a large land package in the Indin Lake Belt west of Wekweeti. The project includes

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Evrin Resources and Newmont Goldcorp geologists investigate Astro during a 2018 reconnaissance program carried out at this grassroots gold project in eastern Northwest Territories.



NWT EXPLORATION *continued from page 97*

the former Colomac gold mine that ceased production in 1997 and a number of satellite deposits.

Federal officials, meanwhile, appeared to heed the call in early 2019 for more investment in public infrastructure in the North, having funded several major roads and at least one hydropower project in the past couple of years.

In March, the Canadian government allocated C\$5.1 million in funding for projects that will support ongoing resource development in the Slave Geological Province, the mineral-rich region of the NWT where mining activity historically has flourished.

The money, matched by nearly C\$1 million in territorial funds, will finance early development work on a 413-kilometer (256 miles) gravel road that will provide overland access to the region and other initiatives to spur mineral exploration within the highly prospective 213,000-square-kilometer (82,218 square miles) area.

The historic value of mineral production from mines within the Slave Geological Province exceeds C\$45 billion.

In late January, officials also unveiled plans to expand the Taltson Hydroelectricity system with more than C\$1.2 million in federal and territorial funding.

The proposed Taltson hydroelectricity expansion project will deliver 60 megawatts of energy to the North Slave hydroelectric system, more than doubling the NWT's current hydroelectricity capacity, according to the government. The project will remove up to 240,000 metric tons of polluting emissions from the air each year, stimulate local economies, and provide employment opportunities for indigenous people and all northerners, officials say. Later phases of the expansion will connect the Taltson hydroelectric system with provincial electricity networks, creating a more

integrated energy system that will allow for increased north-south energy trade.

The Taltson River system has 200 MW of electrical generation potential, according to Canadian officials. The run-of-river Taltson hydroelectric project will expand the existing Taltson generating station, which is owned by Northwest Territories Power Corp. and has a capacity of 18 MW.

"The Taltson Hydroelectricity Expansion project is more than a transmission project. It represents a key element in the Government of the Northwest Territories' vision for a lower carbon economy that will increase the availability of clean, renewable energy to help us achieve our mandated commitment of displacing diesel generation, as well as lowering the cost of living for residents, and allowing the territory to meet its commitments to address climate change," said Wally Schumann, the NWT's minister of Industry, Tourism and Investment. "This project also reflects the important role clean energy infrastructure plays in growing and stimulating the economy."

Robust claims staking

Global developments, meanwhile, affected the tempo of mineral exploration in the NWT in 2018 and the first half of 2019.

"Trade negotiations, rising interest rates and newly-implemented trade tariffs made it difficult to gain an impression of the mood of the minerals industry in the Northwest Territories," the NWT Geological Survey said in its annual mineral exploration survey.

One of the most reliable indicators of mineral exploration health – claims staked vs. lapsed – continued an upward trend that began in 2018, according to the geological survey. In 2018, 268 claims covering 184,985 hectares (457,097 acres) were added

and only 70 claims covering 58,876 hectares (145,483 acres) were released, a significant increase in area covered by mineral claims. New staking included large areas in the Mackenzie Mountains, complimented by a re-staking of claims in the Lac de Gras region and an expansion of claims in the Yellowknife area.

Although diamonds remained the only commodity mined in the NWT in 2019, several new projects targeting gold and technology metals emerged or advanced.

For example, Newmont FN Holdings ULC, a subsidiary of Newmont Goldcorp has designated for option Evrim Resources Corp.'s Astro exploration project, a 23,250-square-kilometer (8,975 square miles) land package that parallels the NWT-Yukon border that is prospective for carbonate-style gold. Evrim has identified a 9.5-kilometer- (5.9 miles) long corridor of gold anomalism using surface soil and rock chip sampling of gossans in the area. In March the junior said it planned to spend at least US\$1.2 million this summer on an exploration and drilling program at Astro.

Zinc, lithium, cobalt and REE were among other minerals sought by active explorers.

Demand also remained high in 2019 for the C\$1 million in mineral exploration incentives offered annually for the past five years by the NWT government to qualified explorers.

New frontiers in diamonds

Dominion Diamond Mines reported ongoing production at its Diavik and Ekati diamond mines in the NWT, and exploration advanced at the Lac de Gras property, which the company held in a 55-45 percent joint venture agreement with North Arrow Minerals Inc.

The Lac de Gras property forms a very large, contiguous block within the diamondiferous kimberlite field that also hosts Diavik, located 10 kilometers (six miles) to the north and Ekati less than 40 kilometers (25 miles) to the northwest. The trend line defined by Diavik's kimberlites runs directly through the center of the JV property, while the trend line defined by Ekati's kimberlites crosses the western portion of the field.

North Arrow said it will follow up on the 2018 discovery of kimberlite 465 on the Loki project at Lac de Gras with a C\$2.8 million, three-week summer program of prospecting, till sampling, and ground geophysics to confirm and prioritize targets for further exploration drilling in the winter of 2020. The 2019 program, which continued through July, was fully funded by Dominion and reduced North Arrow's interest in the JV to 21 percent.

Ken Armstrong, president and CEO of North Arrow, observed that kimberlite 465 was the first new kimberlite discovery in the Lac de Gras region in more than five years.

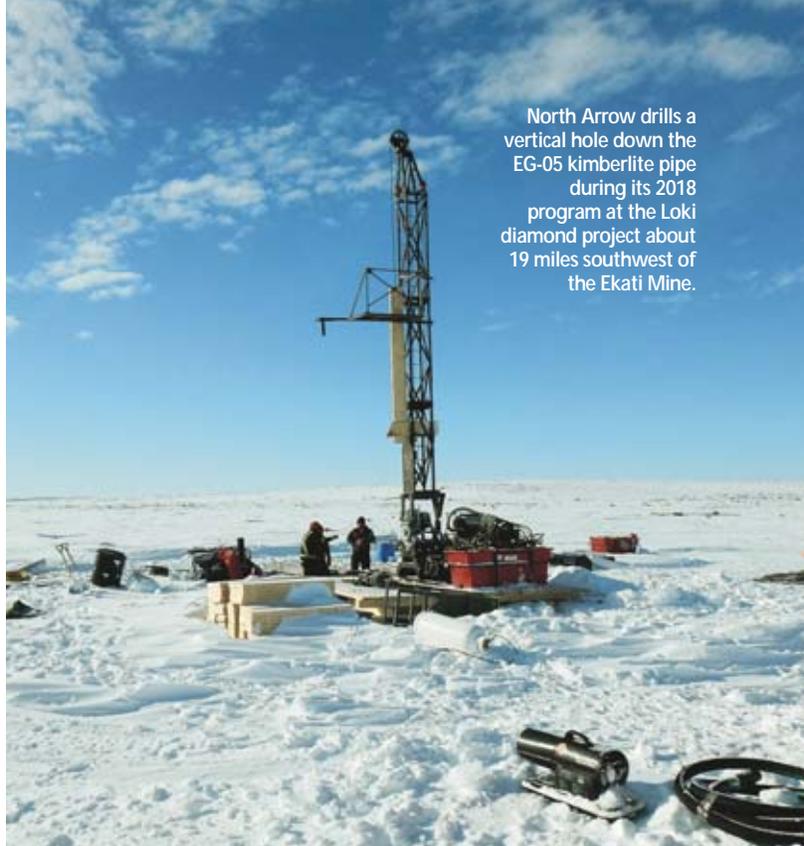
"Since then, the pace of discovery in the region has increased with the reported discovery of at least seven more kimberlites," including one reported July 8 in the first hole of the 2019 drilling program, he said.

At Dominion's Ekati diamond mine, the Koala, Lynx, Misery, Pigeon, and Sable kimberlite pipes were actively mined in 2018. Current surface operations include the Pigeon, Sable and Lynx open pits. The Misery underground project also is underway.

The mine life of Ekati, including the Misery underground and the Jay project, currently extends to 2034 and exploration of other areas, including the Fox Deep project, could extend the mine life of Ekati to 2042.

At the Gahcho Kué Mine, located 280 kilometers (170 miles) northeast of Yellowknife, the recent discovery of the Wilson kimberlite is the latest in a series of finds that have the potential to

North Arrow drills a vertical hole down the EG-05 kimberlite pipe during its 2018 program at the Loki diamond project about 19 miles southwest of the Ekati Mine.



NORTH ARROW MINERALS INC.

extend operations at this diamond mine, according to De Beers Canada Inc.

De Beers shares ownership of Gahcho Kué in a 51-49 percent split with Mountain Province Diamonds Inc. The mine currently has a 12-year mine life. Last year, explorers discovered a smaller kimberlite pipe named Curie that, like Wilson, is located within the mine's Tuzo pit design limits.

At its Kennady North project, Mountain Province reported in February the start of a 2,000-meter winter exploration program. The Kennady project covers 67,164 hectares (165,962 acres) of prospective claims and leases adjacent to the Gahcho Kué mine.

The winter program focused on drill-testing several combined indicator and geophysical targets located west and southwest of Gahcho Kué's Hearne kimberlite.

Explorers seek other minerals

Explorers also undertook gold, base and technology metals projects in the NWT in 2019.

Nighthawk, one of the NWT's most active explorers in 2019, focused on advancing its Colomac Gold Project in the Indin Lake Greenstone Belt located some 200 kilometers (120 miles) north of Yellowknife, as well as advancing other regional gold deposits and showings within a largely underexplored Archean gold camp.

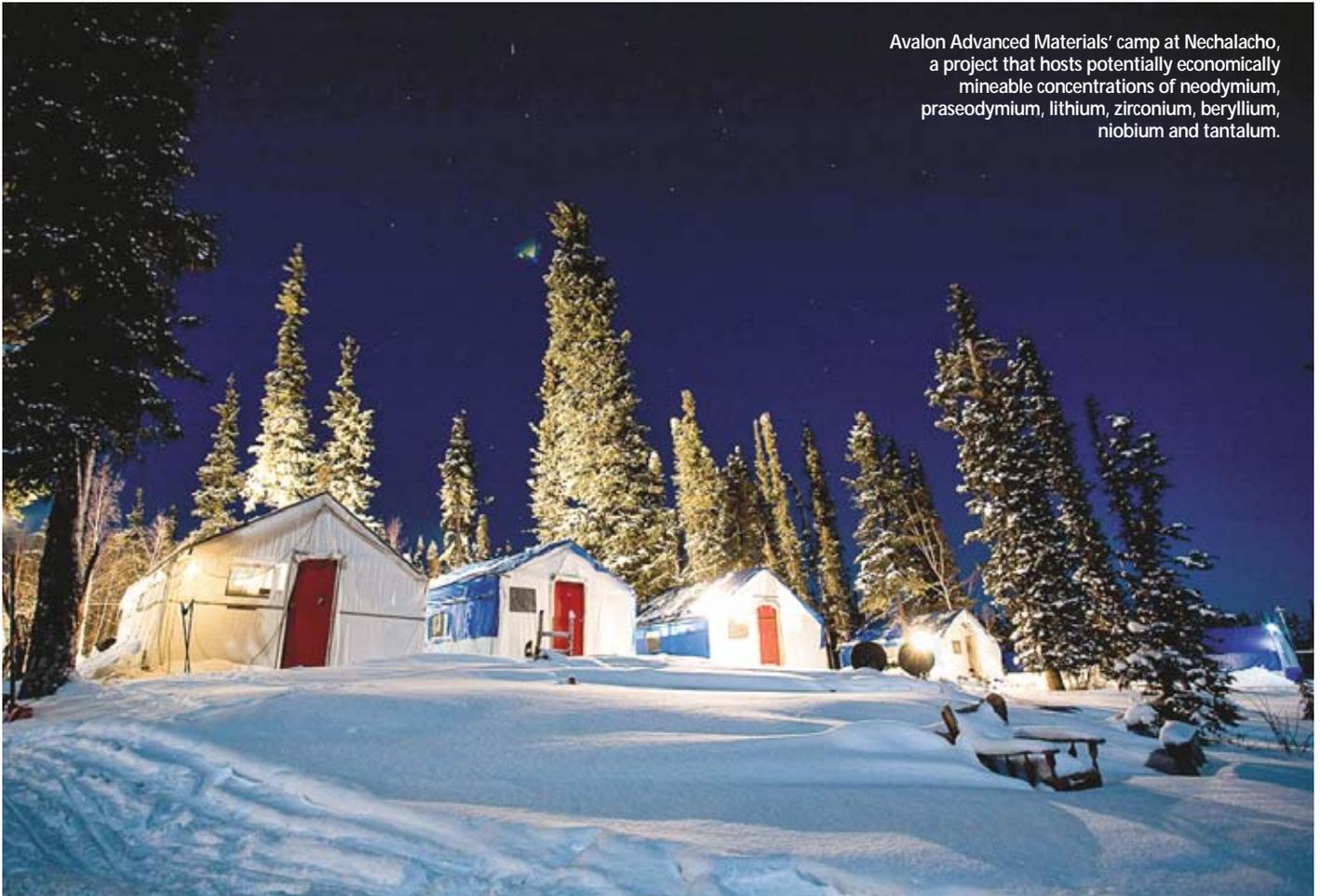
Since its initial drill program at Colomac's Zone 2.0 in 2012, Nighthawk's exploration strategy has evolved to focus on discovery and delineation of higher-grade shoots within the sill. All 38 drill holes reported by July 31 (12,824 meters of a 35,000- to 40,000-meter drill program) intersected mineralization.

In May, Osisko Metals Ltd. said it completed an active program of definition drilling begun in 2018 at its exploration project in the Pine Point Mining Camp, located on the south shore of Great Slave Lake. The project currently hosts an NI 43-101 inferred mineral resource of 38.4 metric tons, grading 4.58 percent zinc and 1.85 percent lead, making it the largest near-surface, pit-

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Avalon Advanced Materials' camp at Nechalacho, a project that hosts potentially economically mineable concentrations of neodymium, praseodymium, lithium, zirconium, beryllium, niobium and tantalum.

AVALON ADVANCED MATERIALS INC.



NWT EXPLORATION *continued from page 99*

constrained zinc deposit in Canada.

Jeff Hussey, president and CEO of Osisko Metals, said drilling results from the initial campaign at Pine Point will be incorporated into the project's next mineral resource estimate, due in the third quarter.

Osisko expects most of the project's existing inferred resources will be upgraded to the indicated category.

The company also planned a brownfield exploration program during the summer at Pine Point, focused on increasing the resource base and making new discoveries.

"We believe the property holds significant exploration upside at depth and along its 65 (kilometers) of strike length," Hussey added.

The objective of the 2018–2019 drill program was to convert the Cominco Ltd. unclassified near-surface historical resources into current mineral resources and to locally extend known zones of mineralization.

Closer to Yellowknife, TerraX continued drilling gold targets in 2019 including the Crestaurum shear and the extension of the Sam Otto zone on its Yellowknife City Gold Project with good results.

In early 2019, TerraX identified four top priority targets. Comprehensive review of the targets including the use of historical data and 2019 assays of historical core, led to a focus on deposit expansion at Crestaurum and Sam Otto, as well as further targeting on the North Giant Extension within the Barney Deformation Corridor. In May, the company confirmed the extension of gold mineralization on structures that hosted the Giant Mine onto TerraX property.

A drill program focused on high-grade deposit expansion will center on the Crestaurum Main zone, the previously undrilled Crestaurum North (Shear 17), and the Crestaurum hanging wall structures, particularly in the favorable yet underexplored area where these zones intersect the Barney Deformation Corridor. Step-out drilling also will target Sam Otto South, which features higher grade gold lenses within a 100-meter wide-bulk tonnage zone.

TerraX said the identification of this through-going structure has provided the possibility to expand the deposit significantly, with potential to extend the 1,000-meter strike to 4,000 meters. The explorer said it also will conduct surface work, including geophysical and geochemical surveys for future drill targeting, and continue a review of historical core data.

Far Resources intersected high-grade lithium concentrations in its maiden drill program in 2018 at the Hidden Lake lithium project, located 45 kilometers (28 miles) east-northeast of Yellowknife in the Yellowknife Pegmatite District. A total of 1,079 meters of core was drilled to target pegmatite with high-grade lithium assays in surface outcrop. In October 2018, the explorer said it planned a program of soil sampling and further drilling for the next phase of work on the property.

Avalon Advanced Materials Inc., reported in June that it finalized a deal with Cheetah Resources Pty Ltd., an Australia-based junior, that could lead to startup of small-scale production of rare earth elements in 2020 at the Nechalacho project, located at Thor Lake in the Mackenzie Mining District of the NWT. Nechalacho hosts a rich polymetallic rare metals resource, with potential for economic recovery of neodymium, praseodymium, lithium, zirconium, beryllium, niobium and tantalum. ●



An aerial view of the Nighthawk Gold's camp at the past producing Colomac gold project on the company's district-scale Indin Lake property in Northwest Territories.

Discoveries spur drilling at Indin Lake

Junior believes Colomac Project is only the beginning of sizable gold camp

By ROSE RAGSDALE
For Mining Explorers

After nearly 10 years of exploring the Colomac Gold project in Northwest Territories, Nighthawk Gold Corp. is making progress toward increasing the project's resource in 2020, while strengthening a long-held theory that the project sits in the middle of a potential gold camp that could rival the legendary Timmins Gold Camp of Ontario.

Anchored by strategic shareholders Kinross Gold Corp. (9.9 percent), Osisko Royalties Ltd. (8.6 percent) and Northfield Capital (19.1 percent), Nighthawk has advanced Colomac from a small, little-known former gold producer to a multimillion-ounce deposit with new high-grade features and the potential to deliver much more.

The explorer calculated an updated resource estimate for the property in June 2018, outlining 50.3 metric tons grading 1.62 g/t gold for 2.6 million ozs of inferred resources.

"We firmly believe that as Colomac grows, so will the credibility of the gold camp that it resides in, and we are strategically positioned to reap the benefits," Nighthawk President and CEO Michael Byron, Ph.D., said recently. "2019 will again see us expand on all exploration fronts, committed to delivering on our vision for developing Canada's next gold camp."

"We firmly believe that as Colomac grows, so will the credibility of the gold camp that it resides in, and we are strategically positioned to reap the benefits. 2019 will again see us expand on all exploration fronts, committed to delivering on our vision for developing Canada's next gold camp."

– Michael Byron, Ph.D., president
and CEO, Nighthawk Gold Corp.

The Colomac Gold project is located within Nighthawk's 899-square-kilometer (200,203 acres) district-scale Indin Lake Gold Property, which has numerous gold deposits and showings, and is situated about 200 kilometers (120 miles) north of Yellowknife, NWT.

Early in its 2019 exploration season, Nighthawk reported results for 16 holes totaling 5,329 meters drilled in specific high-grade targets within the central 3.0-kilometer (two miles) portion of the 9.0-kilometer (six miles) host Colomac Main sill. (A sill is a tabular sheet intrusion, often horizontal, between older layers of sedimentary rock.)

The latest drilling at Colomac spanned zones 1.5, 2.0, 2.5, and
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NIGHTHAWK GOLD
continued from page 101

3.0, with all of the holes intercepting mineralization.

Hole C19-08, drilled in Zone 1.5, returned Nighthawk's best intercept at Colomac of 56.00 meters grading 13.49 grams-per-metric-ton gold, including 30.50 meters of 22.12 g/t gold, and including 16.50 meters of 34.18 g/t gold. Wide zones of strong mineralization also were reported from zones 2.0 and 3.0.

Zone 2.0 is located near the center of the Colomac Main sill. Despite being the site of a former producing open-pit mine, the Colomac Main sill contains the largest portion of the project's current resource and remains unexplored to depth.

10 years of exploration at Colomac

In 2012, Nighthawk drilled its first hole at Colomac into the sill beneath the open pit, where hole C12-001B intersected 128 meters of 1.36 g/t gold, including 71.85 meters of 2.04 g/t gold, 46.15 meters of 2.81 g/t gold, and 8.65 meters of 6.83 g/t gold. The explorer saw these assays as existence of new higher-grade mineralization that was unconstrained and open to depth.

After encountering high-grade gold mineralization in every hole drilled in Zone 2.0 during the first five months of its 2019 exploration campaign and boosting its working capital more than \$22 million, Nighthawk increased its drilling goal for the field season to 35,000-40,000 meters from 25,000 meters originally planned and extended its planned 2019 exploration of Colomac and other targets on the property until late September.

TSX.V: NHK  

CHAIRMAN: Morris Prychindy
PRESIDENT AND CEO:
Michael Byron
VP, CORPORATE DEVELOPMENT:
Suzette Ramcharan



CASH AND CASH EQUIVALENTS: C\$19.4 million (June 30, 2019)
WORKING CAPITAL: C\$17.9 million (June 30, 2019)
MARKET CAPITALIZATION: C\$128.8 million (Sept. 23, 2019)

150 York St., Suite 410 • Toronto, ON, M5H 3S5
Tel: 647-260-1247

"Our three drills have been in operation since early March, and we are on track to meet and/or exceed our 2019 planned meterage. As well, with our field exploration program now in full swing, we are expecting this to be our most productive exploration campaign to date," Byron said in a statement on July 31.

By locating and tracing new areas of higher-grade mineralization along the Colomac Main sill, Nighthawk is validating its thesis that the deposit has the capacity to host separate corridors of elevated

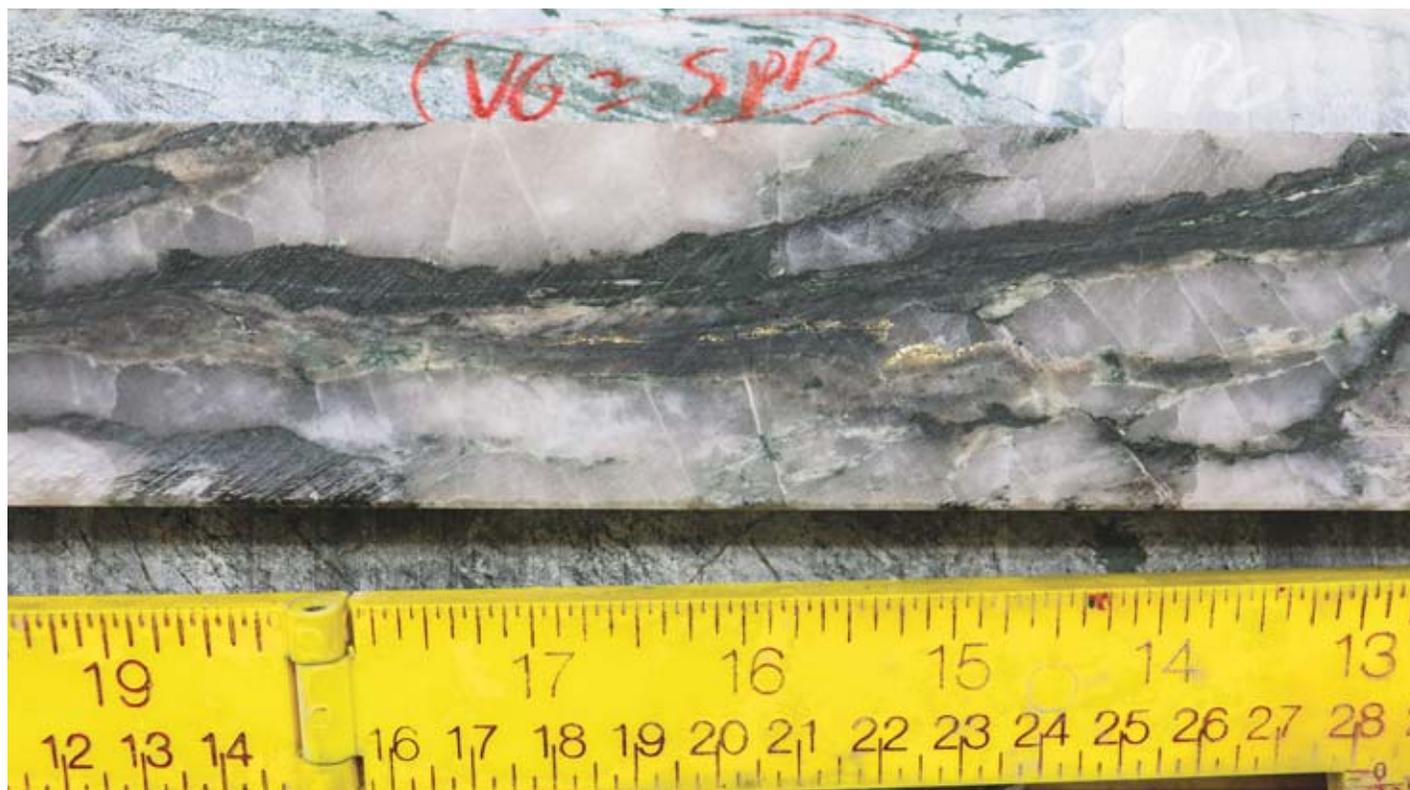
grade (typically significant widths averaging more than 2.0 grams per metric ton with internal higher-grade cores). Some of the corridors are broad domains of contiguous mineralization along strike and to depth that remain largely unexplored.

In addition to 85,178 meters of historical drilling, Nighthawk drilled a total of 56,216 meters between 2012 and 2017 resulting in a June 2018, NI 43-101-compliant updated resource estimate outlining 50.31 million tons at an average grade of 1.62 g/t gold for a total of 2.6 million oz inferred resources.

Recent drilling also followed up on initial successes in Nighthawk's 2018 program within the southern portion of Zone 2.0 by tracing a new broad zone of higher-grade mineralization from near surface to a depth of 350 meters where it remains open.

Since Colomac is a large mineralized system and given that Nighthawk's drilling success rate is greater than 97 percent, the opportunity to continue to grow resources with additional drilling is considered exceptional, the junior said.

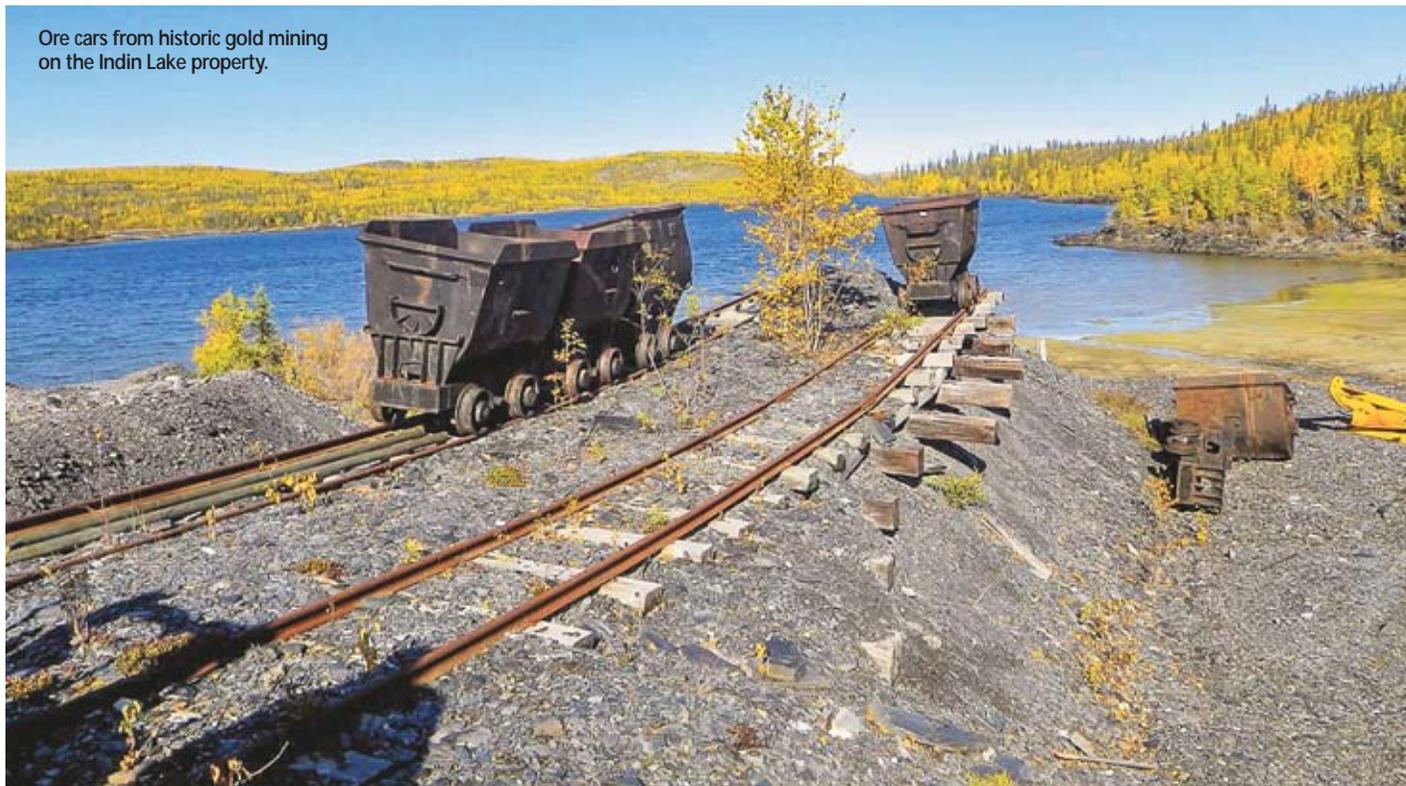
"With these latest results, we have successfully traced a newly



NIGHTHAWK GOLD CORP.

Stringers of visible gold cut in C19-08, a hole that cut 56 meters of 13.49 g/t gold at the Colomac project on Nighthawk Gold's Indin Lake property.

Ore cars from historic gold mining on the Indin Lake property.



discovered continuous higher-grade corridor within the southern part of the zone, to a vertical depth of almost 350 meters, where it remains open in all dimensions. These results are a true testament to the sill's remarkable untapped endowment. Being largely unexplored to depth, we consider this area to be extremely valuable for resource growth opportunities, as well as a strong candidate for hosting additional higher-grade mineralization," Byron said.

At mid-season, Nighthawk had two drills in operation at Colomac with a third active at Treasure Island, which is located 10 kilometers (6.2 miles) to the north.

"This latest drilling followed-up on recent discoveries of higher-grade mineralization in Zones 2.0 and 3.0. Our goal was to extend these known occurrences down-plunge and to test other highly prospective opportunities. Outcomes have been exceptional, resulting in a new discovery in Zone 2.0 and the successful expansion of three previous discoveries," Byron said.

New discoveries in 2019

2019 drill results in Zone 2.0 include:

- Hole C19-19 intersected 60.75 meters of 2.61 g/t gold (47 meters true width), including 13.40 meters of 4.45 g/t gold, and including 7.75 meters of 6.85 g/t gold; a lower interval returned 26.95 meters of 3.20 g/t gold, including 8.15 meters of 5.16 g/t gold in a new area of mineralization;
- Hole C19-12 intersected 55 meters of 2.31 g/t gold (20 meters true width), including 27 meters of 3.10 g/t gold, and including 7.5 meters of 7.31 g/t gold, and 3.75 meters of 13.78 g/t gold; and,
- Hole C19-24 tested the boundary region between high-grade Zone 1.5 and Zone 2.0 to depth and intersected 56.25 meters of 2.76 g/t gold (30 meters true width), including 13 meters of 3.51 g/t gold, and including 4.25 meters of 14.89 g/t gold, extending mineralization to more than 450 meters at depth where it remains open.

The explorer also reported a new discovery southwest of C19-19. Hole C19-18 cut 91.5 meters of 1.33 g/t gold (50 meters true width), including 24.75 meters of 2.95 g/t gold, 14.25 meters of 4.55 g/t gold, and 9.25 meters of 6.44 g/t gold to a depth of 320 meters where it remains open in all directions.

On the same section as C19-19, hole C19-19B intersected 83.7 meters of 1.44 g/t gold (55 meters true width), including 11.45 meters of 3.07 g/t gold, and including 16.9 meters of 2.00 g/t gold, while hole C19-19C, returned 46 meters of 0.72 g/t gold (25 meters true width), including 14.65 meters of 1.05 g/t gold, and including 3.15 meters of 2.55 g/t gold, extending mineralization to depth greater than 350 meters where it remains open.

Zone 3.0 holes C19-25, 25B, and 25C extended mineralization north of the previously reported C19-07 series intersections reported in May, and are highlighted by an intersection in hole C19-25C, which cut 29.5 meters of 2.78 g/t gold (12 meters true width), including 16.2 meters of 4.06 g/t, and 3.8 meters of 6.86 g/t gold; extending mineralization beyond 250 meters depth and remaining open.

"With the discovery of distinct high-grade domains at Colomac, (Nighthawk) has effectively changed the dynamics of the deposit as it could lead to more favorable economics and allow exploitation deeper into the system. The exploration and delineation of additional high-grade zones remains an important focus going forward," the company said.

Nighthawk also identified several high-grade showings and deposits with widespread mineralization in a range of styles across the Indin Lake property. Continued exploration success at satellite targets nearby also supports the explorer's conviction that the Colomac deposit is not the only multimillion-ounce opportunity capable of hosting high-grade mineralization on the Indin Lake property.

Byron said the company plans to mobilize more drills this season to other high-priority regional prospects in the Indin Lake Greenstone Belt. ●

EXPLORERS AT A GLANCE

NORTHWEST TERRITORIES

TerraX Minerals Inc. ●

TSX.V: TXR 



TerraX traces Giant gold north onto YCGP

TerraX Minerals Inc. got off to an early start on 2019 exploration at its Yellowknife City Gold Project (YCGP), thanks to the ability to resample historical core drilled there.

Working with The Geological Survey of the Northwest Territories and The Giant Mine Remediation Project, TerraX was able to recover 16,000 meters of core from drilling on Northbelt, one of the properties that make up YGCP.

In a preliminary review of the core, TerraX geologists identified visible gold and began logging and splitting favorable sections for assaying.

"Acquiring core with visible gold provides an exciting and unexpected jumpstart to the advancement of key targets that will provide investors an early look at assay results in the first half of 2019," said TerraX Minerals President and CEO David Suda. "We have effectively gained a full season of drilling for a fraction of the normal cost."

TerraX identified core from several holes drilled on Northbelt that encountered the northern extension of the gold structure that hosts the historic Giant gold mine. These holes were significant to the development of priority targets for 2019 drilling.

The Vancouver, British Columbia-based exploration company flagged three areas of Northbelt – Sam Otto South, Barney Deformation Corridor (BDC) and Crestaurum, – as priority targets for deposit expansion and confirmation drilling in 2019.

Sam Otto, a prospective bulk tonnage target east of BDC where past exploration has outlined 2,500 meters of continuous gold mineralization, was the target of a 3,500-meter initial phase of drilling that got underway in July.

Previous drilling at Sam Otto has cut 49.7 meters averaging one gram of gold per metric ton, 32.13 meters of 1.24 g/t gold, 30.75 meters of 1.29 g/t gold, and 27.7 meters of 1.64 g/t gold.

TerraX' phase-1 2019 drill program targeted Sam Otto South, a roughly 3,500-meter-long gold-bearing southern extension of Sam Otto that was identified with surface sampling, mapping and geophysics.

One previous hole drilled along this corridor, about 1,200 meters south of the main Sam Otto mineralization, cut 27.16 meters averaging 2.16 g/t gold.

"The opportunity at Sam Otto South is the potential to increase the overall strike by a factor of four and to delineate higher grade structures previously unseen at this target. Positive results could represent a material step change in our ability to deliver a significant resource," said Suda.

TerraX said all of the holes of its 1,200 phase-1 drilling at Sam Otto South cut the targeted shear zones along 1,000 meters of strike extension.

A second phase of 2019 summer drilling, which got underway in August, further tested the Barney Deformation Corridor (BDC) high-grade Crestaurum deposit.

Based on the geological evidence, BDC is an 8,000-meter-long extension of the gold system mined at Giant, a historic operation on the outskirts of Yellowknife and just south of the Northbelt property.

Rock samples collected from the surface of BDC have returned abundant high-grade gold, including one sample with 44.8 g/t gold.

After analyzing the historical and 2018 surface exploration data, TerraX selected Berry Hill zone as a target of 900 meters of phase-2 2019 drilling. Berry Hill is at the north end of BDC.

"This part of our summer program at Berry Hill is an early look at the potential to define gold structures trending at least eight kilometers (five miles) onto TerraX property from the North Giant extension (NGX)," said Suda. "We are working to define the continuation of a trend that produced over 8M ounces of high-grade gold in the past."

After Berry Hill, the company began a second phase of drilling at Crestaurum, a zone adjacent to BDC where drilling in 2013 cut five meters averaging 62.9 g/t gold.

TerraX also plans to complete addition drilling this year at Sam Otto South. This follow-up program is expected to include aggressive step out holes intended to extend this zone another 2,000 meters to the south.

EXECUTIVE CHAIRMAN: Joseph Campbell

PRESIDENT AND CEO: David Suda

VP, EXPLORATION: Alan Sexton

CASH AND CASH EQUIVALENTS: C\$388,246 (April 30, 2019)

WORKING CAPITAL: C\$256,537 (April 30, 2019; closed C\$3.3 million financing on June 26, 2019)

MARKET CAPITALIZATION: C\$42.3 million (Sept. 23, 2019)

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An aerial view of the Sam Otto, a zone where TerraX has outlined gold mineralization along a strike of 2,500 meters.

OSISKO METALS INC.



This core from Pine Point drilling shows the extensive zinc (sphalerite) and lead (galena) mineralization targeted by Osisko Metals' 2019 drill program.

NORTHWEST TERRITORIES

Osisko Metals Inc. ● ●

TSX: OM 



Osisko expands Pine Point zinc resource

With a vision to become a leading base metals mining company, Osisko Metals Inc. is rapidly adding to the stores of zinc at its Pine Point project about 42 kilometers (26 miles) east of Hay River, Northwest Territories.

Cominco (now Teck Resources) produced an estimated 14 billion pounds of zinc and 4 billion lb of lead from around 64 million metric tons of ore averaging about 10 percent zinc-lead from a mine operated at Pine Point from 1964 to 1988.

The near-surface ore was mined from 52 open pits along a 60-kilometer (37 miles) trend. In all, the Canadian miner identified more than 90 such deposits in this area of the property.

Osisko Metals has not wasted any time building resources in the material Cominco left behind. In 2018 and the first four months of 2019, the company had drilled 1,031 holes at Pine Point.

Based on the results from the first 317 of these holes, combined with historical drilling, 38.4 million metric tons of inferred resource averaging 4.58 percent (3.9 billion pounds) zinc and 1.85 percent (1.6 billion lb) lead were calculated for this project on the south shore of Great Slave Lake in Northwest Territories.

The open-pit inferred resource outlined so far by Osisko is found in 42 undeveloped pits and extensions of two previously mined pits across five geographic zones – East Mill, Central, North, West and N204 zones – stretching some 65 kilometers (40 miles) across the district-scale project. The property's main core – East Mill, Central and North zones – hosts 23.4 metric tons of the inferred resource averaging 6.3 percent zinc-equivalent, or 2.3 billion lb of zinc and 900 million lb of lead.

The remaining 714 holes focused largely on upgrading the inferred resources to the higher confidence indicated category.

This summer, Osisko began exploring for new mineralization below and along strike of the known mineralized horizons.

To identify targets for this resource expansion drilling, the company had an innovative helicopter-borne gravity gradiometry geophysical survey flown over the mineralized trends at Pine Point designed to identify the denser sulfide mineralization where most of the zinc is found on the property.

Results from this geophysical survey, coupled with new site-wide digi-



JEFF HUSSEY

tal compilation and re-interpretation of historical datasets were used to target a 5,000-meter drill program that got underway in late August.

"Following extensive compilation work and advanced geological modelling, our exploration team has a better understanding of the structural controls associated to the distribution of lead-zinc mineralization in the 60-kilometer-long system," said Osisko Metals President and CEO Jeff Hussey. "We have identified several high priority targets that were not explored by previous operators."

The team's compilation work covering the East Mill, Central and North Trend zones along a 25-kilometer (16 miles) section of the property identified 100 drill holes with significant mineralization outside the current resource areas, indicative of near-surface mineralizing systems that were not pursued by previous operators.

Highlights from these orphaned holes include: 13.72 meters averaging 16.75 percent zinc and 8 percent lead in hole YR77-23-01; 6.1 meters of 5.28 percent zinc and 0.48 percent lead in YR86-04-14; 3.05 meters of 14.8 percent zinc in 6351; 4.26 meters of 12.2 percent zinc and 2.76 percent lead in 1362; and 5.27 meters of 16.24 percent zinc and 5.03 percent lead in 1883.

Osisko said its compilation work and analysis has also identified the potential for zinc-lead mineralization in the deeper Pine Point Formation, a more than 50-meter-thick underlying zone that has seen less historical exploration. Cominco mined 17.5 million metric tons of ore averaging 6.2 percent zinc and 2 percent lead from the X-15 deposit in this formation; and 149,700 metric tons of ore averaging 12.9 percent zinc and 7 percent lead. Both zones are in the deeper Pine Point formation.

A 5,000-meter drill program that got underway in August targeted priority gravity anomalies along favorable structural trends that could lead to the discovery of additional near-surface higher-grade deposits with prismatic sphalerite (zinc) and galena (lead) crystals.

A high-resolution Lidar (Light Detection and Ranging) topographic survey flown in 2018 was able to highlight structural controls and subtle circular collapse breccia structures that are indicative of the high-grade prismatic zinc-lead deposits the company is seeking.

EXECUTIVE CHAIRMAN: Robert Wares
PRESIDENT AND CEO: Jeff Hussey
VP, EXPLORATION: Robin Adair

CASH AND SHORT-TERM INVESTMENTS: C\$8.5 million (June 30, 2019)
WORKING CAPITAL: C\$3.9 million (June 30, 2019; closed C\$10 million financing on July 16, 2019)
MARKET CAPITALIZATION: C\$83.9 million (Sept. 23, 2019)

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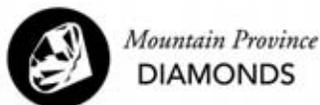
An overview of Gahcho Kué, where drilling discovered a new kimberlite within 200 meters of a known kimberlite slated for mining.

MOUNTAIN PROVINCE DIAMONDS INC.

NORTHWEST TERRITORIES

Mountain Province Diamonds Inc.

TSX/NASDAQ: MPVD 



Near mine find shows Gahcho Kué potential

Since achieving commercial production at the Gahcho Kué Mine in 2017, Mountain Province Diamonds Inc. has resumed exploring for more diamonds across the wider property and Kennedy North, an adjacent property the company acquired full ownership of through its purchase of Kennedy Diamonds Inc. in 2018.

In June, Mountain Province announced the discovery of a new kimberlite roughly 200 meters east of the planned open pit mining area for the Tuzo kimberlite on the Gahcho Kué property, which is co-owned by Mountain Province (49 percent) and De Beers Canada (51 percent). This is the first kimberlite discovered on Gahcho Kué joint venture property in more than two decades.

"The discovery of Wilson demonstrates the high exploration potential of the Gahcho Kué JV area, and after a 20-year discovery hiatus, it confirms that we are on track for discovering new kimberlites in this region," said Mountain Province Diamonds President and CEO Stuart Brown.

The Wilson kimberlite was discovered while testing geophysical and historical drill anomalies in the area surrounding the Gahcho Kué kim-

berlites.

The discovery hole, MPV-19-496C, cut roughly 174 meters of kimberlite from a depth of 152 meters. The initial 18 holes drilled at Wilson show no connection to nearby Tuzo.

After logging of the discovery hole, 115.2 kilograms of kimberlite was sent to a lab for microdiamond analysis. A total of 480 diamonds larger than 0.075 millimeters were recovered. The largest stone being a 0.28 carat colorless octahedral aggregate.

While there is not yet enough data to define a mineral resource, Mountain Province estimates a potential range from 1.5 million to 3 million metric tons of kimberlite is possible for Wilson.

"With this important discovery, what would have formerly been discarded as waste rock has, through methodical exploration, now been converted to rock of value as we move forward with development of the Tuzo open pit," said Mountain Province Diamonds Vice President of Exploration Tom McCandless.

The Mountain Province team said this find within the mine area provides further impetus to explore for more discoveries in the corridor between the Gahcho Kué Mine and Kennedy North property, which hosts three kimberlites with delineated resources – Kelvin, Faraday 1-3 and Faraday 2.

Kelvin hosts 8.5 million metric tons of indicated resource averaging 1.6 carats per metric ton (13.62 million carats) of diamonds; the Faraday 1-3 kimberlite hosts 1.87 million metric tons of inferred resource averaging 1.01 c/t (1.9 million carats) of diamonds; and Faraday 2 hosts 2.07 million metric tons of inferred resources averaging 2.64 carats per metric ton (5.45 million carats) of diamonds.

Exploration carried out at Kennedy North winter months early in 2019 had two objectives – remove heavy equipment from previous bulk sampling programs and drill exploration targets 3,000 to 4,000 meters southwest of the Gahcho Kué Mine.

The first objective was met but drilling of priority kimberlite targets was hindered by flight-restrictive weather. As such, less than half of the 2,000-meter program was completed and no kimberlite was intersected. Mountain Province said the untested targets will be reviewed for discovery potential and reprioritized along with other targets in the Kelvin-Faraday Corridor northeast of Gahcho Kué.

CHAIRMAN: Jonathan Comerford
PRESIDENT & CEO: Stuart Brown
VP, EXPLORATION: Tom McCandless

CASH AND SHORT-TERM DEPOSITS: C\$30.2 million (June 30, 2019)
WORKING CAPITAL: C\$107.4 million (June 30, 2019)
MARKET CAPITALIZATION: C\$269 million (Sept. 23, 2019)

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Aurora Resource Exploration President David Wright helps Millrock Resources assess the soil in anticipation of building a road to drill targets on Millrock Resources' West Pogo property.

Goodpaster – Gold is where you find it

Explorers find abundant high-grade gold in district that shed little placer

By **SHANE LASLEY**
Mining News

The Goodpaster Mining District in Interior Alaska adds credence to the sourdough mining adage “gold is where you find it.”

Unlike the 8.3 million ounces of placer gold recovered from the Fairbanks Mining District to the west, 1.2 million oz from the Circle Mining District to the northwest or 20 million oz from Yukon’s Klondike District to the east, the Goodpaster Mining District has thrown off a paltry 2,050 oz of placer aurum.

Yet, Northern Star Resources Ltd.’s Pogo Mine in the Goodpaster has churned out more than 4 million oz of gold and the high-grade underground operation has another 6 million oz in 19.3 million metric tons of resources averaging 9.6 grams per metric ton gold.

Included in these resources are 6.1 million metric tons of reserves averaging 7.5 g/t (1.5 million oz) gold, enough ore to feed the Pogo mill for the next five years.

And the Australian miner continues to find gold all around its newly acquired Interior Alaska gold mine.

In addition to the Pogo property itself, Northern Star has cut a deal to buy Stone Boy, a group of four earlier staged gold properties

in the Goodpaster Mining District, from subsidiaries of Sumitomo Metal Mining (95 percent) and Sumitomo Corp. (5 percent).

“This is a district-scale camp that we got our hands on,” Northern Star Resources Executive Chairman Bill Beament said. “It is very rare to discover and get your hands on those assets anywhere around the world, especially in places you want to live in, work in and come holiday in.”

“We are really excited about the Pogo district,” he added.

This excitement is infectious – at least another five mineral exploration and royalty companies have nabbed a stake in this high-grade gold district.

Pogo gold discoveries

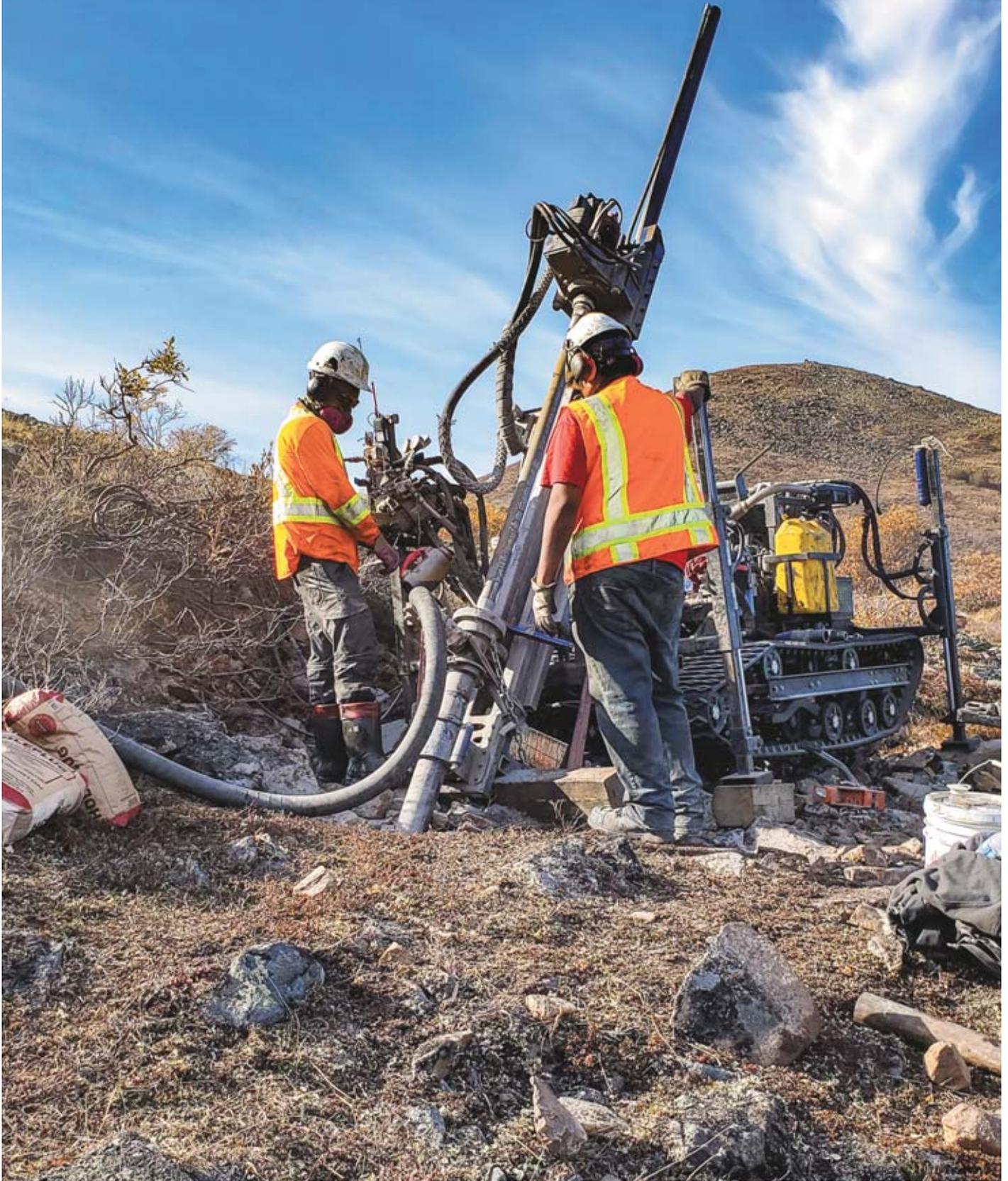
While Northern Star’s quick build-up of gold resources and reserves in zones already known at Pogo has been impressive, it is the Perth-based company’s discoveries outside of the immediate mine area that is creating excitement for the potential of the wider Goodpaster district.

Central Veins, a discovery that is good for the future of the mine and demonstrates the hidden potential of the Goodpaster District as a whole, is one such discovery.

continued on page 109

GroundTruth Exploration tests Hilltop, a potential extension of the Grey Lead vein at Tibbs, with its track-mounted rotary air blast drill.

SHANE LASLEY



Only about 800 meters north of the underground development at Pogo, Central Veins is interpreted to be a stack of at least five vein structures similar to the Liese Veins where most of the Pogo gold has been mined.

Significant intersections from Central Veins surface drilling include:

- two meters (1.2 meters true-width) averaging 175.3 grams per metric ton gold;
- 3.6 meters (2.6 meters true-width) averaging 50.6 g/t gold;
- 14.3 meters (10.9 meters true-width) averaging 6.1 g/t gold;
- two meters (1.8 meters true-width) averaging 35.1 g/t gold; and
- 3.4 meters (2.2 meters true-width) averaging 26.8 g/t gold.

According to a calculation published in August, drilling through mid-2019 had outlined roughly 500,000 oz of gold at Central Veins in a resource that averages 7.9 g/t gold.

Northern Star also had drills turning this year at Goodpaster, an earlier staged gold discovery about another 800 meters north on the Pogo Mine property.

Sumitomo Metal Mining discovered the Goodpaster prospect before selling Pogo to Northern Star.

The Goodpaster discovery hole, drilled in 2017, cut 6.9 meters averaging 3.2 g/t per ton gold. A second hole drilled that year cut 5.3 meters averaging 54.1 g/t gold.

Core from these mineralized intercepts at Goodpaster looks identical to Central and Liese veins, providing evidence that the two zones may have once been contiguous and have since been separated by a fault that runs between them along the Goodpaster River. Geophysics indicate that the Goodpaster discovery could be quite large and the mineralization may extend off the

Pogo property to the west.

Trending westward

The discoveries made at Pogo show the gold mineralizing system in the Goodpaster is quite robust and there is plenty of evidence a lot more gold is yet to be found across the larger district.

Millrock Resources Inc., a project generating mineral exploration company that has long believed in the larger potential of the Goodpaster District, has pulled together a large portfolio of mining claims covering some of the most prospective gold exploration ground around the Pogo Mine property and an extensive geological database that supports the idea that the district represents a large gold mining camp.

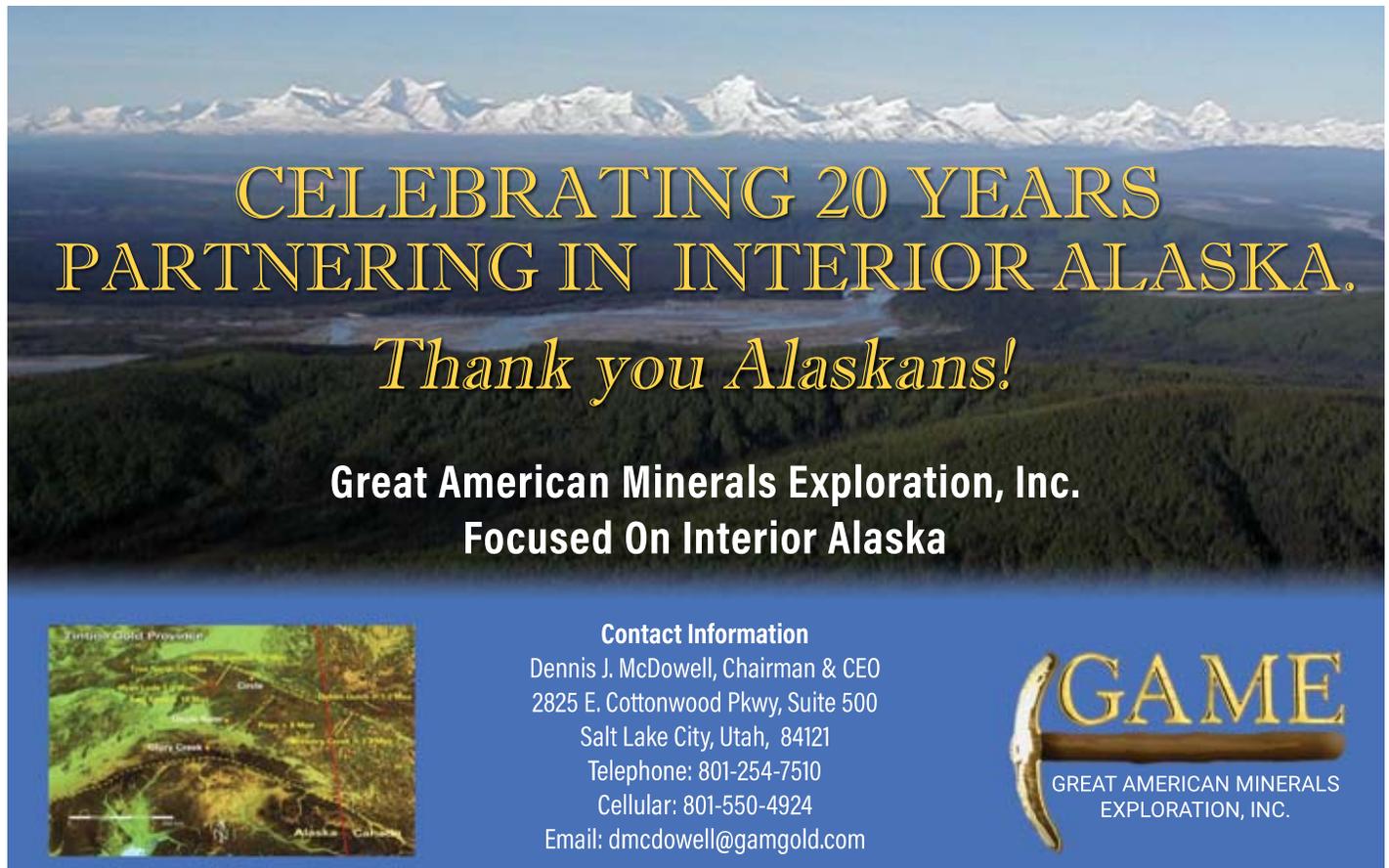
Millrock's growing Goodpaster portfolio includes West Pogo, a block of mining the project generator acquired in 2015 that appears to cover further continuations of the Pogo gold Northern Star is tracing to the northwest.

This year, the project generator expanded its Goodpaster portfolio to roughly 163,200 acres.

"We have amassed a dominant land position and intend to do our best to discover one or more gold deposits on the claims we have staked," said Millrock Resources President and CEO Greg Beischer.

In addition to West Pogo, these properties include Shaw-LMS, which covers a prospective corridor extending roughly 19 miles southwest from West Pogo; North Pogo, a largely overlooked area on the north side of the Goodpaster Batholith, a large igneous intrusion that is considered the source for the gold being mined at Pogo; East Pogo, which covers several prospects on the east side of Northern Star's Pogo property; and Divide, a property that Millrock

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GREAT AMERICAN MINERALS
EXPLORATION, INC.



SHANE LASLEY

Aurora Resources President David Wright (left), Millrock Resources Senior Project Geologist Chris Van Treec (center) and Northway Resources Vice President of Exploration Luke van der Meer (right) discuss the upcoming exploration program at Millrock Resources' West Pogo property.

GOODPASTER GOLD *continued from page 109*

staked about 25 miles southeast of the Pogo Mine.

Millrock's 2019 exploration focused primarily on West Pogo, where the company completed geophysics and other surface work to refine drill targets on this property that looks to blanket expansions of the high-grade gold deposits at Pogo.

Millrock's ability to substantially expand and explore its Goodpaster portfolio this year is due largely to a C\$1 million investment by EMX Royalty Corp., a company that has found success in generating royalties through low-cost property acquisition and early-stage exploration.

In addition to 7.14 million Millrock shares plus warrants to acquire further equity in the project generator, EMX now owns significant royalty interests on Millrock claims in the Goodpaster district.

EMX Royalty CEO David Cole said a combination of Millrock's ideas and Northern Star's exploration success is what enticed his company to invest in the Goodpaster District.

"Northern Star has implemented an aggressive drilling program that has resulted in some nice discoveries being made along the trend of mineralization," he said. "That caught our eye, and we recognize this as a prospective, geological terrain."

Great stretch of Goodpaster

Millrock's Divide claims sit in a stretch of the Goodpaster District that has caught the eye of global gold mining companies, as well as junior mineral explorers.

Stone Boy Inc, a partnership between Sumitomo Metal Mining (95 percent) and Sumitomo Corp. (5 percent), has been exploring the Ink and Fog properties in this area for more than two decades.

High-grade gold similar to Pogo and bulk tonnage mineralization have been identified on these adjacent claim groups sold to Northern Star earlier this year.

"Another great stretch of country in a very good stretch of geology across Alaska," Northern Star Beament said in May, referring to the area southeast of Pogo where these Stone Boy claims are found.

This stretch of geology also attracted Newmont, which staked the Healy claims just south of Ink in 2011. At the time, the gold major was not focused on the Goodpaster District. A massive regional survey of the gold-rich areas of eastern Alaska, however, identified the Healy property as the most prospective.

Newmont optioned the claims to Northway Resources Corp., an

exploration company formed in 2018 and went public in August of this year.

"We have the advantage of picking up where Newmont left off, following multiple years of systematic regional exploration which has led to the definition of numerous drill-ready targets which have never been tested," said Northway Resources President and CEO Zachary Flood.

Northway tested the first gold-arsenic-antimony target Newmont turned up with a maiden drill program on the Healy property this summer.

While Northway explores south of Ink, Tectonic Metals Inc. is investigating the Tibbs property on the north side of Northern Star's newly acquired Stone Boy claims.

Tectonic was founded by former executives of Kaminak Gold Corp., the company that advanced Coffee Gold in the Yukon from a grassroots prospect to a gold mine project Goldcorp Inc. (now Newmont Goldcorp) was willing to pay more than half a billion dollars for. Now the team is exploring the same geology as it trends east into Alaska.

"It is good to see that the successful Yukon explorers are now recognizing there is great potential on the Alaska side of the Tintina Gold Province, and the Goodpaster Mining District in particular," said Beischer.

Several high-grade gold occurrences have been encountered during past drilling and trenching at Tibbs. This historical work, however, never turned up the large flat-lying structures that were being mined at Pogo during its early years.

The recent discovery of the Central Veins at Pogo shows that these horizontal structures are not easy to find, even when they are lying next to an established mine with the geology well understood.

Tectonic, however, is not immediately focused on the potential for hidden horizontal veins. Instead, the explorer is focused on expanding the multiple high-grade vertical gold structures that have already been identified along a rough 3,500-meter corridor on the property.

"This property still has not been tested from that perspective," Tectonic Metals CEO Tony Reda said, referring to the search for vertical veins at Tibbs.

Grey Lead is a prime example of a high-grade vertical gold vein at Tibbs. Previous drilling at Grey Lead cut 5.7 meters of 19.14 g/t gold across the vein and a trench dug by Tectonic during the 2018 season encountered five meters of 38 g/t gold.

While a limited section of Grey Lead has historically been drilled, expansion targets surrounding this high-grade gold vein have not. Connector, a parallel zone about 400 meters to the east where Tectonic geologists have collected rock samples with as much as 103 g/t gold, and Hilltop, a previously undrilled target immediately north of Grey Lead where rock samples with as much as 75.6 g/t gold have been found.

After compiling historical exploration data and carrying out its own sampling and mapping program during 2018, Tectonic is testing the potential of expanding several high-grade gold targets along a 3,500-meter trend at Tibbs with a rotary air blast drill program that got underway in August.

Taiga Mining Company, one of Alaska's largest and most successful placer gold mining companies, has staked placer claims just downstream from Tibbs. While the company has not yet begun any mining in the Goodpaster district, the company's interest and exploration in this area not renowned for its alluvial aurum is a further reminder that gold is where you find it. ●



The mills spinning at the Pogo Mine. Northern Star Resources is investing US\$30 million to expand the Pogo recovery plant throughput to 1.3 million metric tons per year, a 30 percent increase over current capacity.

Northern Star investing in Pogo future

Extensive exploration adding high-grade gold to mine plan

By **SHANE LASLEY**
Mining News

Since its founding in 2010, Northern Star Resources Ltd. has built a multi-billion-dollar mining company by breathing new life into aging underground gold mines in Australia. Now, the Perth-based company is applying the same strategy that has proven so successful at home to its newly acquired Pogo gold mine in Interior Alaska.

This strategy includes making large investments into the exploration, underground mine development and equipment needed to turn Pogo into a tier-one asset that rivals Jundee and Kalgoorlie, the company's other high-grade underground gold mines in Western Australia.

The previous Pogo owner, a joint venture between Japanese firms Sumitomo Metal Mining Company (85 percent) and Sumitomo Corp. (15 percent), produced nearly 4 million ounces of gold at Pogo before selling the mine to Northern Star in September 2018.

In the years leading up to this acquisition, however, gold reserves and production at the mine had been dwindling. This was largely



due to the availability of less ore to feed the mill.

Northern Star's team saw plenty of opportunities to expand the gold reserves at Pogo and knew this Alaska mine held the potential to be a third pillar of its growing portfolio and a vanguard to further expansion in North America.

"Some of our geologists are looking at it and saying it is about five times the size of Jundee, which is running at about 300,000 oz (of gold annually), with a 10-year mine-life. So, it has the potential to be a huge mine for us," Northern Star Pogo General

Manager Shaun McLoughney said during an April presentation in Fairbanks, Alaska.

To realize this potential, the Australian miner is investing roughly US\$50 million into exploration and US\$35 million on a state-of-the-art mining fleet that arrived at Pogo this summer.

Including the US\$260 million paid to buy Pogo, Northern Star is investing nearly \$485 million Australian dollars to elevate its new Alaska gold mine to tier-one status, which the company defines as

continued on page 112



The fleet of new mining equipment delivered to Pogo this year includes jumbos that can also do the bolting and meshing required to stabilize the underground mine, which increases efficiency and reduces the number of drills needed.

NORTHERN STAR RESOURCES LTD.

NORTHERN STAR *continued from page 111*

having the ability to produce at least 300,000 ounces of gold annually for at least 10 years.

The Pogo purchase and the work being done there earned Northern Star the coveted Dealer of the Year Award at Diggers & Dealers, an annual mining convention in Kalgoorlie, Western Australia.

"The honor reflected the ability of our team to identify a great opportunity, the world-class nature of the Pogo mine and its ability to generate superior returns for Northern Star shareholders," Beament said in August.

Simple philosophy – drill

Much of Northern Star's success over the past decade is built off of the company's willingness to invest into the needed exploration.

"If you don't drill you don't find and if you don't find you don't mine – it's a very simple philosophy," Beament said.

And, the drills are finding the gold to mine at Pogo.

"We've got 12 diamond drill rigs spinning on the property at the moment and it is fair to say it is popping up a lot of extra gold in

that mine plan," the Northern Star Chairman said in May.

This gold popped up in the first Australian Joint Ore Reserves Committee- (JORC) compliant reserves calculated for Pogo.

According to a calculation published on Aug. 1, Pogo now hosts 6.1 million metric tons of proven and probable reserves averaging 7.5 g/t (1.5 million oz) gold.

These reserves are included in 19.3 million metric tons of JORC resources – measured, indicated and inferred – averaging 9.6 g/t (5.95 million oz) gold.

This is a 43 percent increase over a resource calculated shortly after Northern Star acquired Pogo and the largest in the history of the Interior Alaska mine.

Northern expansion targets

Roughly 500,000 oz of the gold in the updated Pogo resource is found in the Central Veins, a discovery the Perth-based miner made north of the underground workings last year.

"That is really one of the most exciting prospects we have going forward," McLoughney said of the Central Veins discovery.

That it is only about 800 meters away from the areas currently being mined at Pogo makes this discovery even more enticing.

Significant intersections from Central Veins surface drilling include:

- 1.2 meters averaging 175.3 g/t gold;
- 2.6 meters averaging 50.6 g/t gold;
- 10.9 meters averaging 6.1 g/t gold;
- 1.8 meters averaging 35.1 g/t gold; and
- 2.2 meters averaging 26.8 g/t gold.

The Pogo manager said grades like these, which are much higher than anything the company is seeing at its Australia operations, has Northern Star geologists smiling.

While spectacular grades have been encountered in individual intercepts, the average resource grade is 7.9 g/t gold, which is comparable to the reserve grade for the zones currently being mined.

About 800 meters further north lies Goodpaster, a discovery

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made by the Sumitomo Metal Mining team about a year before Northern Star bought Pogo.

The Goodpaster discovery hole, drilled in 2017, cut 6.9 meters averaging 3.2 grams per ton gold. A second hole drilled that year cut four meters averaging 64.5 g/t (2.07 oz/t) gold.

Core from these mineralized intercepts at Goodpaster look identical to Liese, providing evidence that the two zones, along with the Central Veins in between, may have once been contiguous and have since been separated by a fault that runs between them along the Goodpaster River.

Drilling carried out this year has traced the Goodpaster zone for 2,300 meters along strike and to a depth of 500 meters. For comparison, this is roughly the combined length of the Liese and Central Vein zones.

The company said the drills have tapped both the flat-lying stacked Liese-style and the vertical North Zone-type vein structures currently being mined at Pogo.

Highlights from Northern Star's first 10 holes at Goodpaster include:

- 2.1 meters averaging 44.5 g/t gold in hole 18-050;
- 5.2 meters averaging 15.7 g/t gold in 18-051
- 0.6 meters averaging 100.1 g/t gold in 18-058;
- 0.3 meters averaging 170.2 g/t gold in 18-069; and
- 0.3 meters averaging 129 g/t gold in 19-080.

Northern Star said the results from drilling at Goodpaster supports its view that this newest discovery zone hosts extensive gold mineralization, part of a large stacked vein system with many similar geological characteristics to the Pogo deposit.

In conjunction with the Central Veins discovery, permitting has been established to allow the development of initial underground access into the Central Veins and potentially the Goodpaster area for further exploration and pre-development activities.

"We have owned Pogo for only a year and our exploration results already provide strong evidence that it is an emerging camp-scale system with huge potential to grow the inventory and mine life beyond the current 10 million oz endowment," Beament said.

Good stretch of geology to the south

The Australian miner is also finding more gold to the south.

This includes establishing reserves at Pogo South, which is a southern extension of the Liese veins, which hosted the original reserves mined at Pogo and continue to contribute ore to the mill today.

Roughly two miles further southeast, Northern Star has established a 500,000-oz gold resource at Hill 4021 in material that averages 8.2 g/t gold.

This deposit, which was explored before Northern Star bought Pogo, provides evidence of further gold potential trending south from the gold reserves and resources established at and around the mining infrastructure.

Star Ridge and Star Vein are two other target areas identified between Pogo South and Hill 4021. There are also prospects further southeast that could represent further future expansions.

In fact, there seems to be no shortage of Pogo-style high-grade and bulk tonnage gold mineralization in the Goodpaster district and Northern Star has already picked up some exploration properties to the east and southeast of the Pogo property.

In addition to its work on the immediate Pogo property, Northern Star has acquired Stone Boy, a group of four earlier staged gold properties in the Goodpaster Mining District where its Alaska mine is located.

The Australian miner paid Stone Boy Inc., which is owned by subsidiaries of Sumitomo Metal Mining (95 percent) and Sumitomo

Corp. (5 percent), US\$1.2 million for these properties.

The Ink claims, located about 20 miles (32 kilometers) southeast of Pogo, was the primary focus of exploration carried out by Stone Boy over the years, including a US\$1.3 million program completed in 2013.

Yuki Beppu, the geologist in charge of Sumitomo Metal Mining America's exploration in Alaska at the time, said much of the exploration at Ink focused on the Brink core zone, a bulk-tonnage gold deposit more akin to Fort Knox than the high-grade Pogo Mine.

At the time, Stone Boy had drilled 29 drill holes (8,903 meters) over a 500- by 1,700-meter area at Brink. The best hole, DH13-30, cut 514.4 meters averaging 0.427 g/t gold.

The Stone Boy properties also include Fog, immediately north of Ink, Skippy, adjacent to the east side of the Pogo property, and Shaw, which is west of the Pogo claim block.

"Another great stretch of country in a very good stretch of geology across Alaska," Beament said in May, referring to the Stone Boy claims.

Not letting up on expansion

Northern Star does not plan to let its foot off the throttle when it comes to expanding gold resources and reserves, as well as the capacity of the mill at Pogo in the coming year.

In July, the company budgeted A\$64 million (approximately US\$54 million) on exploration and expansion activities at Pogo during fiscal year 2020.

This includes A\$20 million (roughly US\$14 million) on exploration aimed at upgrading the 12.1 million metric tons of inferred resources on the property averaging 9.5 g/t (3.7 million oz) gold to higher confidence categories.

The balance will be invested into developing and bringing new mining areas into the Pogo mine plan, as well as about A\$7 million (approximately US\$5 million) on removing bottlenecks ahead of the mill to increase capacity.

"The extensive changes we have implemented and our ongoing optimization program, including the introduction of long-hole stoping and the use of bigger, more efficient mobile mining equipment, have been highly successful," said Beament.

To keep up with the mining success, in September Northern Star allocated an additional US\$30 million toward upgrades of the Pogo processing plant that will increase the annual throughput capacity.

When these upgrades are complete, expected by early 2021, the Pogo processing plant will be able to handle 1.3 million metric tons of ore per year, a 30 percent increase of the current one-million-metric-ton-per-year capacity.

"We now know that Pogo in the future can comfortably sustain a mining rate of 1.3 million tonnes a year. The progress we are making and the visibility we now have, shows that this is the optimal run-rate for Pogo in terms of sustainability and cost-effectiveness," said Beament. "With this confidence in the mining operation now well-established, we will move quickly to begin expanding the plant, driving further efficiencies in the process."

Given the mining success, mill upgrades and resource expansions, Northern Star is well on its way toward elevating Pogo to its former tier-1 status, a mine that can produce more than 300,000 oz of gold per year well into the future.

"The combination of the exploration success at Goodpaster and the effectiveness of the operational changes made in the mine leaves us in no doubt that investing in the plant expansion will generate strong returns for our shareholders and local stakeholders at Pogo," said Beament. ●

EXPLORERS AT A GLANCE

ALASKA

Millrock Resources Inc.



TSX.V: MRO 



Millrock expands Goodpaster portfolio

Primarily focused on gold, copper and silver, Millrock Resources Inc. is a project generating mineral exploration company that has built a large portfolio of highly prospective mineral exploration properties in Alaska, British Columbia and Mexico.

Many of the projects the company has generated have been sold recently to other companies in exchange for cash and shares of the company acquiring and exploring the project.

For 2019, Millrock focused largely on amassing a large land position in Goodpaster Mining District, a gold-rich region about 100 miles east of Fairbanks that is anchored by Northern Star Resource Ltd.'s Pogo high-grade underground gold mine.

Based on a long-held confidence in the district-scale potential of Goodpaster, Millrock pulled together a large portfolio of mining claims covering some of the most prospective gold exploration ground around the Pogo property.

"We believe that the Goodpaster District will ultimately prove to be a gold mining camp of significant stature. The area has seen very little exploration despite the obvious potential and proximity to infrastructure," said Millrock Resources President and CEO Greg Beischer.

EMX Royalty Corp., which generates royalties through low cost property acquisition and early-stage exploration, bought C\$1 million worth of Millrock shares in April, providing the project generator with funds to expand its Goodpaster District portfolio to 163,213 acres.

In exchange for paying a significant premium for Millrock shares, EMX was granted royalty interests on Millrock properties in the Goodpaster District.

The Goodpaster portfolio resulting from this strategic investment includes the extension of West Pogo, a block of claims the project generator acquired in 2015 that demonstrates geological, geochemical and geophysical evidence of covering western extensions of the gold discoveries on Northern Star's property.

The expanded West Pogo property now covers 43,468 acres of prospective land. Previous explorers have identified the Tourmaline Ridge, Half-Ounce Gulch and ER prospects on this property. Several of these West Pogo targets are nearly drill ready and Millrock carried out a ground-based CSAMT (controlled-source audio-frequency magnetotellurics) geophysical survey to narrow down structures for drilling.

CSAMT has proven effective for the successful targeting of buried structures that host high-grade gold veins at Pogo, including gold bearing structures Northern Star is tracing to the boundary of West Pogo. Millrock also plans to apply information gleaned from its exploration at West Pogo to the other properties it has generated in the Goodpaster. This will be especially applicable to Shaw-LMS, a 42,580-acre block of claims that covers a prospective corridor extending roughly 19 miles southwest from West Pogo.

These claims cover stream sediment, soil, and rock samples containing elevated gold, arsenic, and bismuth geochemical anomalies that appear to be associated with intrusive rocks near splays off the Shaw Creek fault.

Millrock's expansive Goodpaster portfolio also includes East Pogo, North Pogo and Divide.

East Pogo is a 54,340-acre land package that covers several known prospects – Scott, Boundary, and Cal-Surf – on the east side of Northern Star's Pogo property.

Together, the East and West Pogo projects cover 27 miles along the Pogo Trend of gold occurrences.

North Pogo covers a largely overlooked area of favorable structures and stratigraphy on the north side of the Goodpaster Batholith, a large igneous intrusion that provided the mineralized fluids responsible for depositing the gold being mined at Pogo.

Divide is a property that Millrock staked about 25 miles southeast of the Pogo Mine based on the gold potential identified after going over an extensive geological database from nearly two decades of Goodpaster District exploration carried out by AngloGold-Ashanti and International Tower Hill Mines.

Millrock obtained this data as part of a larger deal with Corvus in 2015 that included the West Pogo claims.

Millrock's Alaska portfolio also includes Liberty Bell, a road-accessible project about 70 miles southwest of Fairbanks that is prospective for copper-gold porphyry and associated gold deposits; Apex El Nido, a high-grade gold project in Southeast Alaska; and Chisna, a gold-copper-silver project about 75 miles southeast of Goodpaster.

The project generator also has an interest in Alaska Range resulting from the 2017 sale of its Stellar property to Australia-based PolarX Ltd. In exchange for Stellar, Millrock gained a substantial equity position in PolarX, retained a 1 percent net smelter return royalty on the property; and receives advanced royalty and milestone payments.

Following the deal, PolarX merged Stellar with the adjacent Caribou Dome property to form Alaska Range, which covers a 22-mile mineralized trend that hosts Zackly, a high-grade gold-copper skarn deposit; Saturn and Mars, porphyry targets near Zackly; and Caribou Dome, a sediment-hosted copper deposit.

Millrock cut a similar deal with ArcWest Exploration Inc. (formerly Sojour Exploration) on a portfolio of gold and copper exploration properties in British Columbia's Golden Triangle – Oweegee Dome and Willoughby.

As a significant ArcWest shareholder, Millrock can benefit from that company's success in B.C. as it focuses on the Goodpaster District and other mineral projects it has generated in Alaska and Mexico.

PRESIDENT AND CEO: Gregory Beischer
CHIEF EXPLORATION OFFICER: Philip St. George
CHIEF FINANCIAL OFFICER: Keith Granberry

CASH AND CASH EQUIVALENTS: C\$237,791 (June 30, 2019)
WORKING CAPITAL: C\$548,894 million (June 30, 2019)
MARKET CAPITALIZATION: C\$8.6 million (Sept. 23, 2019)

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The Pogo Mine road cuts across West Pogo, providing Millrock Resources with easy access and lower exploration costs on this gold project that covers prospective extensions of the Goodpaster prospect being drilled by Northern Star Resources.

SHANE LASLEY



ALASKA

EMX Royalty Corp. ●

TSX.V/NYSE: EMX 

EMX invests in Goodpaster royalty, explorer

EMX Royalty Corp., a company that has found success in generating royalties through low-cost property acquisition and early-stage exploration, nabbed significant royalties on properties in Alaska's Goodpaster Mining District.

EMX nabbed a foothold in this district that hosts Pogo, a high-grade underground gold mine owned by Northern Star Resources Ltd., when it invested C\$1 million to acquire 7.14 million shares of Millrock Resources Inc. early this year.



Prior to the EMX investment, Millrock held West Pogo, an exciting property bordering the Pogo Mine.

Millrock used funds raised from EMX Royalty's investment to expand its land position in the Goodpaster District to around 163,213 acres.

This includes a significant increase in the West Pogo property; a 42,580-acre package of claims covering the Shaw Creek trend, a prospective corridor that extends roughly 19 miles southwest from West Pogo; a 54,340-acre block of claims known as East Pogo that covers the Scott, Boundary, and Cal-Surf prospects; North Pogo, a largely overlooked area of favorable structures and stratigraphy on the north side of the Goodpaster Batholith; and Divide, a block of 67 claims covering gold occurrences and interesting geochemical anomalies about 25 miles southeast of the Pogo Mine.



DAVID COLE

As part of the deal with Millrock, EMX was granted a royalty on all Millrock properties in the district.

In addition to its deal with Millrock, EMX invested C\$350,000 to acquire Corvus Gold Inc.'s net smelter return (NSR) royalty interests on three groups of claims in Goodpaster District and a copper-gold property in the Chistochina Mining District, about 75 miles southeast of Goodpaster.

Corvus held onto a 3 percent royalty on precious metals and a 1 percent royalty on base metals when it sold West Pogo to Millrock in 2015. With its transaction with Corvus, EMX will own a 2 percent precious metals NSR on West Pogo.

EMX also acquired Corvus' 3 percent NSR royalty on precious metals and 1 percent NSR on base metals at the LMS claims, a gold exploration property about 20 miles southwest of West Pogo.

EMX will hold a combined 1.5 percent NSR on the newly staked Millrock claims within an agreed upon area of interest in the Goodpaster district.

Beyond the royalties in the Goodpaster district, EMX acquired Corvus' 1 percent NSR on precious and base metals at Chisna, a copper-gold project Millrock acquired from Corvus in 2016.

CHAIRMAN: Michael Winn
PRESIDENT & CEO: David Cole
GENERAL MANAGER, EXPLORATION: Eric Jensen

CASH AND CASH EQUIVALENTS: C\$75.5 million (June 30, 2019)
WORKING CAPITAL: C\$83.1 million (June 30, 2019)
MARKET CAPITALIZATION: C\$149.7 million (Sept. 23, 2019)

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Photo by Judy Patrick Photography



Technicians log core from Great American Minerals Exploration's expansive drill program at the SAM gold property about 45 miles west of Pogo.

GREAT AMERICAN MINERALS EXPLORATION INC.

ALASKA

Great American Minerals Exploration Inc.

A bigger GAME at the SAM gold property

Great American Minerals Exploration Inc. is investing roughly US\$10 million on exploration this year at its 55,465-acre SAM gold project about 45 miles west of the Pogo Mine.

Having staked its first claims in at the SAM project area in 1999, GAME, as the privately held exploration company is commonly known, is no stranger to this emerging gold-rich stretch of the Tintina Gold Belt between the Pogo and Fort Knox mines. GAME's previous land position, however, covered only a portion of the district-scale potential of this region.

More than US\$22 million of exploration by various mining companies over the past three decades has identified gold occurrences and deposits on separate properties that appear to be part of a larger gold system that spanned boundaries.

To bring these projects together, GAME negotiated deals to reassemble the original Uncle Sam property previously explored by Kennecott Exploration. The company then entered into an option agreement with Stone Boy Inc. – a partnership between subsidiaries of Sumitomo Metal Mining (95 percent) and Sumitomo Corp. (5 percent) – for Monte Cristo, which now makes up the southern half of the SAM property.

"To finally be able to start working the geology and eliminate the property lines seems to be in everybody's best interest," GAME Chairman and CEO Dennis McDowell told Mining News.

On the Monte Cristo side of the now erased property line, Sumitomo Metal Mining had already outlined a significant gold deposit at the Naosi zone.

Highlights from Sumitomo's exploration at Naosi include 7.92 meters grading 7.8 grams per metric ton gold and 19.7 g/t silver; 22.83 meters of 4.2 g/t gold and 48 g/t silver; and 14.69 meters of 3.6 g/t gold and 84.4 g/t silver.

According to a 2017 calculation, Naosi hosts 13.85 million metric tons of inferred resource averaging 3.36 g/t (1.5 million ounces) gold and 43.5 g/t (19.4 million oz) silver.

This includes 7.89 million metric tons of oxide material averaging 2.71 g/t (691,000 oz) gold and 39.1 g/t (9.9 million oz) silver. The oxide resource at SAM could be recovered with heap leach – a low cost method that involves staking ore in a lined facility and using cyanide to leach the gold from the rock. Kinross Gold Corp. has had great success with heap leach recovery at its Fort Knox Mine about 40 miles northeast of SAM.

By the end of the 2020 season, GAME hopes to have outlined at least 1.55 million oz of gold in oxide resources – about 750,000 oz reporting to inferred resources and 800,000 oz in the higher confidence

indicated category.

While upgrading and expanding the oxide resource at Naosi is a part of this plan, the biggest prize could be Mon Ridge, an exploration target about 1,000 meters to the southeast.

According to the 2017 technical report that supports the Naosi resource estimate, Mon Ridge is estimated to host at least 1 million oz of gold in a minimum of 25 million metric tons of oxide resource with grades similar to Naosi.

To begin outlining this resource, GAME plans to target Mon Ridge with at least 7,500 meters of drilling by the end of next summer.

To ready this target for core drilling, GAME brought in Yukon-based GroundTruth Exploration Inc. to carry out GT Probe and GT RAB (rotary air blast) testing of this target. These track mounted rigs have been proven effective for testing the top of the bedrock (GT Probe) and into the bedrock (GT RAB) in the Yukon. The SAM property, however, marks the first time they have been used in Alaska.

Two more oxide gold target areas – Lone Wolf and Lone Tree – are found on the original Uncle Sam property previously explored by Kennecott and others.

Only about 500 meters northwest of Naosi, Lone Wolf appears to be a fault offset extension that was previously separated by the Monte Cristo-Uncle Sam property boundary.

One RC hole drilled by Kennecott cut 21.3 meters of 3.2 g/t gold at Lone Wolf.

Drilling under a partnership between Millrock Resources and Crescent Resources in 2011 returned similar results, including 2.74 meters of 3.63 g/t gold; 11.46 meters of 4.86 g/t gold and 3.05 meters of 3.27 g/t gold.

According to the 2017 technical report, Lone Wolf is estimated to host 250,000 to 650,000 oz of gold in an oxide resource with grades similar to Naosi.

Lone Tree, situated roughly 3,500 meters further north, is estimated to host another 550,000 to 900,000 oz of oxide gold in lower grade (0.7 to 1 g/t gold) material.

Lone Tree and Lone Wolf will be refined for resource drilling in subsequent work programs.

In addition to the four priority oxide zones, GAME will begin prioritizing the 24 other targets that have been identified across the SAM property for future drilling.

In addition to SAM, GAME's portfolio also includes Circle, a gold exploration property in the Circle Mining District, and Glory Creek, a copper-zinc-silver-gold volcanogenic massive sulfide property in the Bonfield Mining District.

CHAIRMAN AND CEO: Dennis McDowell

EXECUTIVE VP: Ted Sharp

2825 E. Cottonwood Pkwy, Suite 500, Salt Lake City, UT 84121
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A track mounted reverse circulation rig tests the first target at Northway Resources' Healy gold project in Alaska's Goodpaster Mining District.

JESSE ANDERSON, MIDNIGHT SUN DRILLING

ALASKA

Northway Resources Corp. ●

TSX.V: NTW 

Northway completes IPO, explores Goodpaster

Northway Resources Corp., a new company with two gold exploration properties in Alaska, Aug. 26 announced the completion of an initial public offering and listing on the TSX Venture Exchange.

"We are very excited about closing this transaction and being listed as a new public company on the TSXV," said Northway Resources President and CEO Zach Flood. "Northway Resources was founded last year with the primary focus to explore for gold in Alaska."

Northway is currently focused on exploring its Healy gold property, a discovery stage gold project in the Goodpaster Mining District that was generated by Newmont Goldcorp over four years of exploration that began in 2010.

Newmont identified Healy as a priority target after carrying out analysis of a large swath of Alaska's Eastern Interior region. Follow-up soil sampling on this property about 45 kilometers (28 miles) southeast of Northern Star Resources Ltd.'s Pogo gold mine identified three 1,000 to 2,000-meter long gold-arsenic-antimony anomalies.

Based on the large soil anomaly and encouraging results from the backpack drilling, a technical report completed for Healy at the end of 2018 recommends using a reverse circulation drill to drill fences of holes across the main zone identified at Healy.

Northway cut a deal with Newmont to earn up to a 70 percent joint venture interest in Healy by completing at least US\$4 million of exploration on the property by the end of 2022.

Northway is beginning is working toward meeting its earn-in commitment this year with an RC drill program similar to the one outlined in the technical report.

"The Healy project, which we have optioned from Newmont Goldcorp, presents significant opportunities for Northway in the Goodpaster Mining District, host of the Pogo gold mine," said Flood. "We have the advantage of picking up where Newmont left off, following multiple years of systematic regional exploration which has led to the definition of numerous drill-ready targets which have never been tested. We look forward to updating the market with drill results this fall as they become available."

Northway's second Alaska gold project, Napoleon, is located near the community of Chicken in the Fortymile Mining District. While more than 600,000 ounces of placer gold has been mined from the streams and benches in the Fortymile district, a large lode source of this alluvial aurum has yet to be discovered.

To fund its exploration, Northway raised C\$1.85 million through an IPO that involved the issuance of 18.49 million shares at C10 cents each.

PRESIDENT AND CEO: Zach Flood
VP, EXPLORATION: Luke van der Meer

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