

# **Northern Mining News**

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#### In this November 2019 issue:

Chamber editorials express concern, provide clarity on Mary River process	2
Pine Point resource estimate, and Osisko drilling gravity anomalies	E
NorZinc receives final major permits for Prairie Creek Mine	7
Sabina Gold & Silver Q3 financial results; inaugural SD Report released	9
Fortune signs agreement with Tlicho Government for NICO access road	10
New Northern Canada Event coming at PDAC – Invest Canada North!	11
Mining North magazine, Chamber's annual publication, released	12
From Baker Lake Council – Thank you Agnico Eagle Mines	12
MAX awards celebrate mineral resource industry excellence	13
Geoscience Forum photos – the North's largest trade show and conference	14
2019-20 Chamber Board elected	
New GNWT leaders demonstrates support for minerals industry	17
NWT mineral exploration overview released	20
DPA's new campaign chronicles 'The Diamond Journey'	21
Exploration & development news briefs	22
Our deepest sympathies to friends and family of Nick Lawson (1961-2019)	23
Member news releases this past month	24
Calendar of events	24
Welcome new members!	25
Enhancing Mineral Investment in various NWT Land Claim Regions	26
Mines & promising Northwest Territories mine projects	27
Mines & promising Nunavut mine projects	30
Project mans	33

#### From the Editor ...

Good news this month on advancing mining projects in the NWT and Nunavut from NorZinc, Osisko, Sabina, and Fortune. In regards to some surprising regulatory developments for the Baffinland Mary River Iron mine prompted editorial from both outgoing and incoming Chamber Presidents Gary Vivian and Ken Armstrong, who reached out to the public and leadership for responsible actions to help advance the project. In her first month in office, our new NWT Premier is promising strong support for industry, and getting national attention too!

Congratulations to our 2019 mining and exploration MAX award recipients. This year's banquet highlighted shining examples from our minerals industry, and marked the conclusion of another successful Yellowknife Geoscience Forum. Thanks to all for making both these events so successful.

We welcome a new Chamber of Mines Executive and Board of Directors. A very BIG thank you to Gary Vivian who served on the Executive for many years including the past four as president. Though no longer president, he remains a director and we look forward to his, and indeed to all our directors' input, in the year ahead.

Happy reading! ... Editor

**Our Mission:** To provide leadership on, and advocate for, responsible and sustainable mineral exploration and development in the NWT and Nunavut.

# Chamber editorials express concern, provide clarity on Mary River process Iron ore mining not for the faint of heart (it's a tough business)

By Gary Vivian, President, NWT & Nunavut Chamber of Mines, Chamber of Mines editorial published in Nunatsiag News, November 19

The NWT & Nunavut Chamber of Mines was created over 50 years ago, and our Vision is to work for "A strong minerals industry that benefits the Peoples of the North". From that perspective, we would like to offer the following thoughts and observations on the Mary River mining project.

The Mary River project is a game changing opportunity for Nunavut and Nunavummiut. It provides an opportunity for longer term training, employment, and sustained revenues for Inuit, Inuit Associations and Governments.

In 1962, two flying prospectors discovered the high quality, but remote Mary River iron ore deposits on northern Baffin Island. Despite being found to be of better quality than most deposits being mined around the world, their remote location and the low iron ore prices in a very competitive marketplace dashed any hopes of ever mining them economically. Thus, the iron ore deposits would remain as interesting oddities for another 50 years.



Chamber of Mines President Gary Vivian.

A quick google of 30-year iron ore prices (eg, indexmundi.com) shows why Mary River had no chance of becoming a mine at historically flat and low prices. However, with an almost 500% jump in prices briefly in 2008 and then again from 2010-2013, market optimism suggested mining at Mary River might be possible.

With rising iron ore prices and a positive outlook, Baffinland Iron Mines made the decision in 2008 to unlock the Mary River iron ore opportunity. They were joined by partner ArcelorMittal who, besides being the world's biggest steel maker, operates an iron ore mine in remote northeastern Quebec, from which it ships ore on its own privately funded 420-kilometre railway to its port, Canada's largest private port. Their experience was a good fit to make Mary River mining work.

Unfortunately, by the end of 2015 iron ore prices had fallen to abysmal levels similar to the previous 30 years. While prices have turned around, it's been less than dramatic.

While Mary River is arguably the best iron ore deposit in the world, it is also in the worst location to be mined profitably, and all on its own without infrastructure support. It needs a much better iron ore price, or much larger production levels, in order to achieve the economies of scale required to be sustainable in a highly competitive market and ultimately be profitable.

To be profitable, bigger is better in the iron ore business as bigger production reduces the costs per tonne of mining.

The Mt. Wright iron ore mine in Quebec produces around 25 million tonnes annually, and Mt. Tom Price in Australia produces about 28 million tonnes annually, and the really big mines like Hamersley in Australia and Carajas in Brazil produce over 100 million tonnes per year. Mary River, even as proposed, is not a big iron ore mine. A good comparison might be that even with expanded production, the Mary River mine in the iron ore business is like an arctic hare compared to a musk ox.

Thus, it is no surprise that Mary River must be mined at higher production levels to be economic, certainly at these market prices.

It's important that people understand that governments around the world – both public and Indigenous – invite mining companies to come and invest in order to do what those governments themselves cannot do: that is to convert rock into training, into jobs, into business opportunities and to generate revenues that can help benefit governments' constituencies and beneficiaries. When they invite companies in to invest, governments also expect those companies to take on even more responsibilities by bringing their required expertise, bringing in huge investment dollars, and also having the courage and capacity to take on what can be significant and unpredictable market risk.

Governments, in turn, can provide companies with regulatory process certainty, an able labour force, and in many cases, they assist by helping with supporting transportation and power infrastructure. For example, in Alaska government funding provided the port and road for the Red Dog mine which is owned by the Inupiat and operated by Teck. The company pays off that road and port over time with annual payments.

The Mary River iron ore mine appears to be at an unfortunate and dangerous impasse at the moment. All parties – company, Inuit, and government – have much to lose. Our members



The Mary River Mine's Milne Inlet port site, Baffin Island, Nunavut. Baffinland photo

watching the process are expressing concern over potential effects of this impasse on future projects.

We would respectfully provide the regulators and all the parties, including the company, with the following recommendations [which are the usual recipes for mining success]:

- Move with speed. Don't let the impasse drag on. Markets (and iron ore especially) are very competitive and prices are fickle. Too many projects have failed due to process slowness while the markets changed. A good case in point is the Mackenzie Gas Project, which became uneconomic when new gas supply decimated the market. Unfortunately, the Aboriginal Pipeline Group which was going to have equity participation in the project was also the loser because of the snail-paced environmental assessment process.
- Work together quickly to resolve concerns. Mary River has been described as a multigenerational mining opportunity. The deposit currently being mined is just one of many that can sustain operations and benefits for many future generations. Build the landowner-company foundation with strength and trust, so that it lasts
- Of course, be diligent to ensure the work being proposed is done with due care for the environment. The NIRB process is a good one to provide those assurances. Know too that companies and their investors understand and support environmental diligence.
- Continue to work to maximize socio-economic opportunities. Public and Inuit
  governments must continue to help the mine maximize economic opportunities by
  providing education and training of the workforce, building business capacity, and
  perhaps even looking if there is infrastructure support they might provide.

The outcomes of the Phase 2 assessment process are being closely watched by many current and potential Nunavut investors, who are looking for a successful resolution to bolster their confidence in the territory. We urge the Parties to sit down quickly and find creative solutions to address and resolve the current impasse and support responsible advancement of the mine. We very much believe that a solution exists.

#### Shining a little light on Mary River process

By Ken Armstrong, newly elected President of the NWT & Nunavut Chamber of Mines, editorial published in Nunatsiag News, November 26

The current impasse that Phase 2 of the Mary River project finds itself in is of great interest and also concern to investors and industry watchers. We'd like to shine some light on three aspects of the process.

First, there has been recent criticism of BIM for positioning several buildings and construction materials [Link: https://nunatsiaq.com/stories/article/baffinlands-massive-railway-based-sealift-angers-pond-inlet/], needed for the Phase two railway expansion, before approvals for the railway are in place. Operating in the North is challenging, with remote projects relying on limited transportation infrastructure and seasonal shipping windows. For northern resource projects, it is not uncommon to pre-position equipment at or near a project site in advance of receiving required permits. Pre-positioning equipment is permitted by regulatory authorities and land owners, and this practice should not be considered as presumptive, but rather as an

additional project risk, borne by the proponent. The company is not assuming the permit is a slam dunk, rather they are being optimistic. Optimistic in the future of their project, that their stakeholder engagement has been effective and sufficient, and that their resultant submissions to regulatory agencies are reasonably complete. The proponent is also displaying confidence in the regulatory process and its embedded timelines for holding hearings, making decisions and granting permits. In effect, the proponent is weighing the risk and cost associated with shipping and storing equipment it is unable to use until permits are in place versus being granted permits but unable able to proceed because necessary equipment is not available.

Second, the Nunavut regulatory process has many layers, checks and balances that ensure a proponent cannot say one thing, then do another. At the recent hearings, BIM was characterized as secretly telling investors it wants to build an 18Mt/annum mine and regulators it wants a 12Mt/annum mine [Link: https://nunatsiaq.com/stories/article/conservationists-allege-baffinland-withheld-vital-information-from-regulators/]. It is up to proponents to present their aspirations for a planned project in a transparent and balanced way, to all stakeholders, but it is not at all unusual for companies to present plans for upcoming drilling programs, or mine developments, prior to permits being in place. In fact, mining feasibility studies always include timelines for raising money, construction and commencement of mining operations.

Mining development in the North is a slow process. Investors can accept this, IF the potential upside makes up for the risk. Many of our members operate exploration and development projects in Nunavut. When they are speaking with investors in Canada and elsewhere in the world, not only are they promoting their project, but they are also promoting Nunavut as a jurisdiction in which mines can be successfully and responsibly developed. Jurisdictions with a reputation for a transparent and rules based regulatory process, in which profitable mining operations have been constructed, will typically see the inflow of more investment dollars.

Lastly, some of our Chamber members have been hearing of an emerging sentiment that another company will step in to operate Mary River should Baffinland be forced to abandon the project. This sentiment is misguided. Setting aside questions related to the logistics and timelines involved with a new company positioning itself to take over a project, the fact is that if a mine is not profitable for Company #1, the economics likely won't change and the mine will also be uneconomic for Company #2. Furthermore, the world of mine finance is highly interconnected and the chances are that Company #2 would end up approaching the same investors that lost money investing in Company #1. Once a deposit has a reputation as being a money loser, finding new investment can be very difficult.

For everyone's sake, we are hopeful that the impasse we are currently seeing will be overcome in short order by the landowner and the company and supported by the regulatory system. We suggest that the success of this project to both is well worth the effort.



## Pine Point resource estimate, and Osisko drilling gravity anomalies

# Osisko Metals releases Pine Point mineral resource estimate: Updated resource at 52.4 Mt grading 6.47% ZnEq

Osisko Metals Incorporated announced the 2019 mineral resource estimate update for its 100% owned Pine Point project, located near Hay River, in the Northwest Territories. The 2019 estimate was prepared by BBA Inc. Cut-off grades are based on estimated long-term metal prices, mining costs, metal recoveries, concentrate transport, and smelter costs.

#### Highlights:

- The Pine Point MRE now totals 52.4 Mt grading 4.64% zinc and 1.83% lead (6.47% zinc equivalent) containing ~5.3 billion pounds of zinc and 2.1 billion pounds of lead in-situ.
- Compared to the previous MRE, the tonnage of the 2019 MRE increased by 36% with a minor 0.11% drop in the zinc equivalent grade. Tonnage increase is attributable to the 2018-2019 drilling campaign, historical resources on newly acquired claims, and the inclusion of newly modelled underground resources.
- Underground mineral resources were incorporated into the 2019 MRE and totaled 4.5 Mt grading 5.76% zinc and 2.43% lead (8.19% ZnEq). For the underground resource, a cut-off of 5% ZnEq was used.
- The central core of the Project (East Mill, Central and North Zones) now contains approximately 31.9 Mt grading 6.22% ZnEq or 3.1 billion pounds of zinc and 1.1 billion pounds of lead in situ.
- Even though drill density in certain portions of the Project would have permitted
  resource classification in the Indicated category, management decided to classify the
  entire resource as Inferred until such time as the entire historical database can be
  validated, including an ongoing resampling of the historical drill core from Cominco
  Limited era.
- Metallurgical test work completed to date continues to highlight Pine Point as potentially producing among the cleanest high-grade zinc and lead concentrates globally.
- An updated MRE is planned to accompany a preliminary economic assessment in Q2-2020 with the aim of continuing to increase the mineral resource base.
- A technical report supporting this 2019 MRE will be filed within the next 45 days.

Jeff Hussey, President & CEO of Osisko Metals, commented: "Following our maiden MRE in December 2018, we are very pleased to again demonstrate significant asset growth at Pine Point. Global zinc and lead projects with all supportive infrastructure and more than 50Mt in near-surface resources are extremely rare and we are delighted that Pine Point now enters this select group. There is a depleted pipeline of quality zinc development projects globally and we believe Pine Point will place Osisko Metals at the forefront of junior base metal exploration and development companies."

See the release for more information, including details on the following:

Sensitivity to cut-off grades

- Pit optimization parameters
- Underground mineralization
- Underground inferred cut-off grade sensitivity
- Metallurgy
- Concentrate elemental analysis
- 2019 and 2020 drill program

### Osisko Metals to begin drilling gravity targets at Pine Point

Osisko Metals Incorporated announced drilling will begin targeting sixty initial prismatic-style targets have been chosen based on processing and analyses of the 2019 airborne gravity gradiometry survey data in conjunction with LiDAR features and newly-interpreted structural controls on mineralization.

These targets are specifically identified on criteria that are indicative of prismatic mineralization based on responses over known, in-situ, high grade prismatic deposits as measured by ground-based gravity surveys used as a control for the AGG system. The targets are distributed both within, and between, mineralized trends with many occurring in very sparsely drilled areas within the East Mill, Central and North Zone.

Jeff Hussey, President & CEO of Osisko Metals, commented: "During the work leading up to the release of our 2019 MRE (see press release dated November 13, 2019) outlining 52.4Mt grading 6.47% ZnEq, we completed the first part of our interpretation of the airborne gravity gradiometry survey. The start of this phase of the exploration campaign marks an exciting time for Osisko Metals as we leverage tools never available to previous operators to potentially make new discoveries."

See Osisko's NSR royalty and \$7 million placement release

## NorZinc receives final major permits for Prairie Creek Mine

#### Permitting process complete

NorZinc Ltd. reported that on November 22, 2019, Parks Canada issued the water licence and land use permit for its portion of the all season access road through the Nahanni National Park Reserve to the Prairie Creek Mine in Canada's Northwest Territories.

Combined with NorZinc's existing mine operating permits, and the road permits issued by the Mackenzie Valley Land & Water Board (MVLWB) on November 13, 2019, NorZinc now has all major permits necessary for construction and operation of the Prairie Creek Mine, and all season access road. The all season road will provide the mine with year round access to Canada's national transportation network.

#### Construction and schedule

As previously announced, NorZinc plans to develop the Prairie Creek Mine in two phases. Prior to major construction on site, Phase 1 will start with the construction of an initial 170km winter road to the Prairie Creek Mine site, planned for Q1 2020. Prior to commencing that winter road construction, NorZinc must obtain approval from both the MVLWB and Parks Canada of a series of updated road Management Plans. The timing of issuance of the road permits, and the time

for the review process required for the Management Plans, has made it necessary to consider alternative road construction options to retain schedule. The company, working with the road contractor and local First Nations, has developed an alternative road construction schedule, the success of which will be dependent on the timing of approval of the Management Plans. NorZinc will be providing more details on this and other important developments in the coming weeks.

Don MacDonald, NorZinc Ltd President & CEO stated, "I would like to thank all those inside and outside of NorZinc who have put in so much hard work, over so many years, to make this day possible. We finally have the last major permit in place to build the Prairie Creek Mine and will be working very hard over the coming weeks to present, and obtain approval for, the management and monitoring plans for the all season road so we can advance construction and start to build." MacDonald added, "The timely approval of the management plans will be critical for us to continue to meet our development schedule outlined over 16 months ago. It is also critical that we develop the Prairie Creek Mine in a manner that is the most environmentally sustainable and with the strongest local indigenous support."

#### Financial and corporate results

Also in November, NorZinc Ltd. reported financial results and development activities for the third quarter ended September 30, 2019. Highlights included:

- Private investment fund RCF VI CAD LLC (RCF) is to purchase 1% royalty on Prairie Creek Mine for \$8m, subject to shareholder approval
  - 1. Existing royalty holder waives right of first refusal
  - 2. Special Meeting to approve RCF royalty to be held November 18, 2019
- RCF agrees interim short-term loan of \$7.9 million (Sep)
- Retained specialist in concentrated marketing, transportation and logistics
- Cash at September 30, 2019 \$3.45 million (Sep)
- Loss for Q3 2019 \$5.13 million (Sep)

Site activities concentrated on refurbishing the mobile fleet, administration building renovations, sewage treatment plant upgrades and clearing the site in support of 2020 laydown areas (Q3). Other activity included:

- Road building contractor RFP issued and contractors short-listed (Sep)
- Planning and scheduling winter road construction for Q1 2020 (Sep & Oct)
- Negotiation of EPCM contract with Ausenco initiated (Sep)
- Draft ASR permits issued by MVLWB and Parks Canada (Aug)

For additional recent media releases, see the 3 links below.

- NorZinc welcomes Gary Sugar and Stephen Flewelling to its board of directors
- NorZinc announces shareholder approval of previously announced RCF royalty
- Peter Portka appointed chief financial officer of NorZinc

## Sabina Gold & Silver Q3 financial results; inaugural SD Report released

Sabina Gold & Silver Q3: \$21.9 million in cash and short-term investments, pre-development activities continue

Sabina Gold & Silver Corp. reported interim financial results for quarter ended Sept 30, 2019.

"During the quarter, Sabina advanced pre-development activities for the Back River Project by completing construction of two bulk fuel tanks totaling 10.5 million litres of capacity, at our Port facility," said Bruce McLeod, President & CEO.

## Highlights

- \$21.9 million in cash and short-term investments at September 30, 2019.
- Construction of two bulk fuel tanks was completed at the Port Facility as well as the delivery and receipt of sealift to the Port transporting various equipment and supplies.
- The EPC contract for the plant at the Goose site was advanced and is currently being integrated into an updated Capital Cost estimate expected during Q4, 2019.
- Completion of a summer regional exploration program focusing on the advancement of geoscience initiatives on structural geology with updated geological models for Nuvuyak, Llama extension ad Umwelt Vault finalized in August.

#### **Financial Results**

For the three and nine months ended September 30, 2019, the company reported net losses of \$0.6 million or \$0.00 per share and \$6.7 million or \$0.02 per share respectively. The year-to-date net loss includes an after-tax write-down of \$4.2 million on non-core Red Lake mineral properties. Excluding the impact of the mineral property write-down, the adjusted net losses for the three and nine month ended September 30, 2019 would be \$0.6 million or \$0.00 per



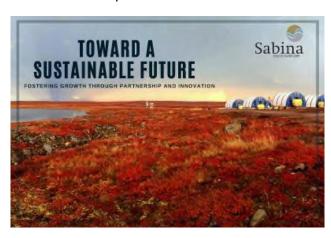
In 2019, Sabina's new winter road broke trail from the Bathurst Inlet marine laydown area to the site of the future Back River mine. Sabina photo

share and \$2.5 million or \$0.01 per share respectively. For the full September 30, 2019 interim financial statements and management's discussion and analysis, please see the company website at www.sabinagoldsilver.com or on SEDAR.

### Sabina inaugural environmental, social, and governance report

In November, Sabina Gold & Silver Corp. released its inaugural environmental, social, and governance report. This document highlights Sabina's commitment to environmental, social and governance priorities for its permitted Back River Gold Project. Since signing the Inuit Impact Benefit Agreement with The Kitikmeot Inuit Association in mid-2018 Sabina has continued to develop strategies to positively effect our Northern partners.

The ESG Report provides investors and other stakeholders with information about our strategy, commitments and performance on relevant environmental, social and governance topics. The ESG Report outlines Sabina's commitment to the following priority areas: governance and integrity, value for stakeholders, value for employees, value for society and environmental sustainability as well as climate change. It also outlines Sabina's commitment to the economy, society and environment in Nunavut.



For more information on Sabina's commitment to community and sustainability, or to read the full report, visit: http://www.sabinagoldsilver.com/corporate/esg-report

Click here for the 26 November 2019 video interview with Bruce McLeod, President and CEO, Sabina Gold and Silver.

### Fortune signs agreement with Tlicho Government for NICO access road

Fortune Minerals Limited announced it has signed an access agreement with the Tlicho Government that supports the development of the NICO cobalt-gold-bismuth-copper project in Canada's Northwest Territories. The NICO Project is one of the few mineral development assets outside of the Democratic Republic of Congo positioned to service the accelerating demand for cobalt in lithium-ion batteries as the global automotive industry transitions to electric vehicles. The NICO Mineral Reserves also contain more than one million ounces of gold.

The agreement details the conditions under which Fortune can build and operate the 51 km NICO project access road on Tlicho-owned lands between the community of Whati and the company's mineral leases. It also specifies the conditions for financial security for reclamation of the road that will be held by the Tlicho Government. Fortune can now complete the process to secure the water license and land use permit required to construct the road upon receipt of NICO Project financing.

Tlicho Government Grand Chief, George Mackenzie commented, "The signing of an access agreement with Fortune is an important step in the approvals process. We are now looking forward to concluding the required impact and benefits agreement with Fortune Minerals, thereby ensuring Tlicho citizens, communities and companies will benefit from the construction and operation of the NICO mine."

Dr. Rick Schryer, Vice President of Environmental and Regulatory Affairs for Fortune stated that, "This access agreement is a significant step forward for Fortune Minerals as it provides for the access required to construct and operate the NICO mine. The access agreement demonstrates the strong working relationship between Fortune Minerals and the Tlicho Government as the company advances the NICO project toward construction."

Fortune is also pleased to report that construction of the 97-kilometre, Tlicho All-Season Road connecting the community of Whati with Highway 3 is progressing well. Government of the Northwest Territories land use inspection reports indicate that, as of October 31, 2019 Kiewit Canada Development Corp. had completed 32 km of brushing, 27 km of roadbed stripping, and the road bed is constructed beyond Kilometre 25 where quarried material was being transported for use. The construction camp accommodating more than 100 workers had also been relocated from kilometre 0 to



Click image or link for Tlicho Government website with video and map. Tlicho

kilometre 19. The Canadian Council for Public-Private Partnerships recently recognized the Tlicho Road with a gold award for project development innovation and excellence, noting it is among the first in North America with an Indigenous government cash-funded equity stake in the project.

## New Northern Canada Event coming at PDAC - Invest Canada North!

A new event, Invest Canada North! (ICN) will appear at PDAC 2020. The 3-year project will connect global investors with the competitive advantages and opportunities in Canada's three northern territories: Yukon, Northwest Territories and Nunavut, at one of the world's biggest annual mining conferences, the PDAC Convention.

ICN initiatives will showcase each region, through keynote presentations, panels, reception and dedicated media centre, highlighting the leaders in exploration, development and production, as well as the mining ecosystem that is supported by exciting mineral production, significant untapped geological potential, strong geopolitical stability and progressive Indigenous and community partnerships.

Be there! Reception March 1, Forum all day March 2.

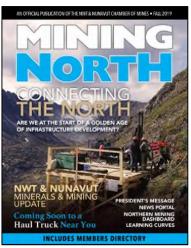
## Mining North magazine, Chamber's annual publication, released

Mining North, the NWT & Nunavut Chamber of Mines annual publication, was released in November in time for the 47<sup>th</sup> Yellowknife Geoscience Forum.

The Fall 2019 edition includes feature articles on the North's newest mining operations, mine training across the two territories, and the chamber's Mining North Works! public awareness program. The cover story delves into the question 'are we at the start of a golden age of infrastructure development?'

Other content in the 70-page publication includes the president's message, northern mining dashboard, and news portal. There's also mineral updates covering both territories and profiles of some of the industry's workers. As with previous year's publication, Mining North includes a listing of the chamber's members too!

Wrapping up the magazine is a guest column from Nunavut Senator Dennis Patterson where he addesses the infratructure gap.



## From Baker Lake Council – Thank you Agnico Eagle Mines

On behalf of the Council and the residents of the Municipality of Baker Lake, we would like to extend thanks to Agnico-Eagle Mines Inc. for their continued cooperation and assistance with

the community's ongoing efforts of managing and cleaning the Baker Lake Landfill of contaminated items.

A total of 32 sea-cans of various materials were removed from the community including Hazmat materials, used tires and scrap metal and sent to recycling and dangerous goods disposal sites in Southern Canada.

Without the help of Agnico Eagle, these and other contaminants would continue to cause damage to our fragile environment for many years to come.

Thank you Agnico-Eagle, for your generous assistance to the community of Baker Lake.

IT IS REALLY APPRECIATED!

Regards,

Hamlet Council of Baker Lake



# OPEN LETTER TO AGNICO EAGLE MINES INC.

On behalf of the Council and the residents of the Municipality of Baker Lake, we would like to extend thanks to Agnico-Eagle Mines Inc. for their continued cooperation and assistance with the community's ongoing efforts of managing and cleaning the Baker Lake Landfill of contaminated items. A total of 32 sea-cans of various materials were removed from the community including Hazmat materials, used tires and scrap metal and sent to recycling and dangerous goods disposal sites in Southern Canada. Without the help of Agnico-Eagle, these and other contaminants would continue to cause damage to our fragile environment for many years to come.

Thank you Agnico-Eagle, for your generous assistance to the community of Baker Lake.
IT IS REALLY APPRECIATED!

Regards, Hamlet Council of Baker Lake

## MAX awards celebrate mineral resource industry excellence

The NWT & Nunavut Chamber of Mines announced the 2019 MAX Awards recipients, recognized for their excellence in mining and exploration in the Northwest Territories.

MAX Award recipients have all played an enormous role in responsible and successful resource development, helping establish industry best practices, creating opportunities, and demonstrating leadership in their respective categories. Their contributions include highlighting the minerals industry, exploring for, finding and developing resources, engaging with the public and governments, ensuring Indigenous participation, creating jobs and business benefits, and training northerners, all of which strengthens the Northwest Territories.

Recipients of the 2019 MAX Awards are:

- Distinguished Service Walt Humphries
- Economic Leadership Det'on Cho Management LP
- Environmental Responsibility Newmont Goldcorp Corporation
- Indigenous Achievement Shayne Paul
- Special Achievement Hilary Jones
- Honorary Achievement Bob McLeod

The awards, the third annual, were presented November 21 in Yellowknife at the conclusion of the 47th Annual Yellowknife Geoscience Forum.

Keynote speaker for the event was Abacus Data Chairman Bruce Anderson. Special guest speaker was Government of the Northwest Territories Premier The Honorable Caroline Cochrane.

The MAX Awards selection and celebration is a partnership of the Chamber of Mines and the Government of the Northwest Territories.

For more details on this year's MAX awards recipients and previous years' recipients click here.



2019 MAX awards recipients Dwight Grabke and Scott Stringer with Newmont Goldcorp, Bob McLeod, Hilary Jones, Shayne Paul, Bobby Drygeese and Paul Gruner with Det'on Cho Management, and Walt Humphries. GNWT photo

# Geoscience Forum photos – the North's largest trade show and conference



This year's Geoscience Forum, the 47<sup>th</sup> annual, included about 750 delegates, over 80 trade show exibitors, and numerous guest speakers. GNWT photos by Fran Hurcomb

# **Geoscience Forum photos continued**



#### 2019-20 Chamber Board elected

At its annual general meeting, held November 20 in Yellowknife, the NWT & Nunavut Chamber of Mines elected its 2019-20 Directors and Executive.

#### **Executive**

- President Ken Armstrong, North Arrow Minerals Inc., Vancouver, BC
- Vice President NWT, Kenny Ruptash, Nahanni Construction, Yellowknife, NT
- Vice President NU Scott Trusler, Stantec, Vancouver, BC
- Treasurer, Glen Koropchuk, Calgary, AB
- Secretary Joe Campbell, TerraX Minerals Inc., Ottawa, ON
- Past President, Gary Vivian, Aurora Geosciences, Yellowknife, NT

#### **Directors**

Robin Adair – Osisko Metals Inc. Alex Buchan – TMAC Resources Inc. Adam Chamberlain – Gowling WLG

David Connelly – Ile Royale Consulting Lane Dewar – Independent Robin Goad - Fortune Minerals Limited Paul Gruner – Det'on Cho Management LP Leni Keough - Olivut Resources Ltd. Toby Kruger - Lawson Lundell LLP Suzanne Leclair – Agnico Eagle Mines Darren Lindsay – Nx Gold Ltd. Denise Lockett – Lockett Consultation Don MacDonald - NorZinc Ltd. Rory Moore – Dominion Diamond Mines Erik Madsen – De Beers Group Brent Murphy – Seabridge Gold Ron Pankratz – Tlicho Investment Corp Matthew Pickard - Sabina Gold & Silver Thola Rusike – Northern Security David Smith - Nordgold Grant Stewart - Rio Tinto Diavik Gary Vivian – Aurora Geosciences Ltd.



The Chamber of Mines' Scott Trusler, Ken Armstrong, Glen Koropchuk, Gary Vivian, Tom Hoefer, Kenny Ruptash, and Leni Keough at the annual general meeting in Yellowknife. Chamber of Mines photo

## New GNWT leaders demonstrates support for minerals industry

### "Mining is the NWT's number one industry" – NWT Premier Caroline Cochrane

During the annual Geoscience Forum, the Northwest Territories government leaders demonstrated support for the North's mining and exploration industry. Increasing resource exploration and development is a priority was the message from government during the annual event in Yellowknife.

Below is the Premier's speech delivered at the annual mining and exploration awards.

### Premier Cochrane: MAX Awards, Geoscience

It is an honour to be here with everyone to celebrate excellence in mining and exploration.

I would like to recognize the NWT and Nunavut Chamber of Mines, the NWT Geological Survey, and the many staff and volunteers who make this event possible each year.

Our government is pleased to be both partner and sponsor of the Annual Yellowknife Geoscience Forum and this evening's awards.

All of us here recognize that the history of the Northwest Territories cannot be separated from mining and exploration.

Mining is part of my own personal history, too. My father was a diamond driller, and my brother and his family continue this important work today.

From the kitchen table to the board room, I have had the good fortune to meet and learn from family friends who are now regarded as our territory's pioneers.



Last year at this event, I had the pleasure of presenting an award recognizing Gren Thomas for his distinguished service to the NWT mining community. It was an emotional occasion for me. Gren was not just a builder and shaper of our mining sector, but also a good family friend.

Mining is the NWT's number one industry and many of our residents and their families depend on it for jobs and security. Unfortunately, our number one industry is facing challenges. They're challenges I feel personally.

My family came to Yellowknife 56 years ago, and I have seen this city transition from gold town to diamond capital. I have seen the prosperity mining brings when it is strong, and I have seen the downs the people of this territory experience when it weakens.

When I put my name forward to be Premier, I talked about the need to act fast to ensure jobs for today and jobs for tomorrow.

All residents, I said, want to know that prosperity, jobs and property values are secure for the long term.

The mineral resources sector is an important part of that long-term future, and our government recognizes the importance of actively supporting it.

Mining has also been recognized by the 19th Legislative Assembly in the priorities document all Members agreed to last month, which states that we will increase resource exploration and development. We also set related priorities that will benefit mining, like making strategic infrastructure investments, and reduce the cost of power.

Cabinet is still working on a mandate to advance these priorities, and making sure that we support mining will be an important part of that final mandate.

The good news is we have a lot to build on.

We have mineral potential rivalling just about anywhere in Canada, or around the globe.

We are well positioned to provide the technology metals that the world will need as it continues to advance clean technologies.

We have a history of leading the way with Indigenous participation.

And of course, we have you — the talented, driven, experienced professionals in this room, with a collective century or two of leadership in our industry.

We are early in this government and we're still establishing our mandate for the term, but I can tell you this.

In the next four years, we will do everything we can to create prosperity for all NWT residents, in big and small communities. Delivering on that commitment obviously includes mining.

Those looking to support and advance responsible and ethical mineral development in the Northwest Territories have an ally in my office. I would like to thank each of you for your continued commitment to our territory, and your service to our most important industry.

Here's to four years of collaboration and progress. Enjoy the evening. Click here for the GNWT online post.

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Subsequently, Premier Cochrane attended her first Canada Premier's meeting and it is very encouraging to see the North emerge as one of four key priorities: Tangible and significant nation-building activities are needed in the three territories. This includes robust investment in infrastructure that will improve the lives of northerners, and greater support for climate action that fights, mitigates and adapts to rapidly changing environments in the North.

#### NWT "Mines" Minister Nokleby opens Geoscience Forum

"Our government's priorities line up with the priorities of the mining, exploration, and geoscience industries. We intend to be allies for miners and explorers looking to responsibly develop our vast mineral resources," said Katrina Nokleby, newly elected and newly appointed Minister of Industry, Tourism and Investment (and responsible for mining).



ITI Minister Katrina Nokleby at the Women in Mining NWT chapter launch. GNWT photo

"We support the idea of investing in geoscience to better understand our land — and the potential that lies beneath its surface. We are committed to building the bridges, roads, and energy infrastructure needed to advance resource development and create economic development," Minister Nokleby added.

See the new premier and cabinet stand with mining Industry at Yellowknife Geoscience Forum release.

Minister Nokleby also spoke at the launch of the Women in Mining NWT chapter.

"You can't expect young girls to envision themselves working in male dominated fields if they don't have the example and mentors to look up to, to emulate and follow. That's what today's event is all about."

Click here for highlights from the North's premier industry event, the 47th Annual Geoscience Forum.

See the GNWT's blog -- NWT Mining and Exploration (MAX) Awards photos.

Watch for it!
March 1, 2 at PDAC 2020

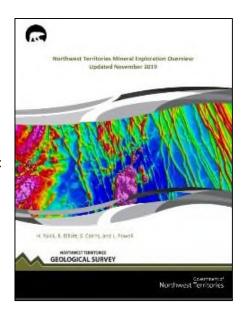


### **NWT** mineral exploration overview released

The NWT Mineral Exploration Overview is an annual review of mineral exploration and resource development in the Northwest Territories. The report is written by geologists at the Northwest Territories Geological Survey and released at the end of each fiscal year in March. A preliminary report is produced in November in time for the Yellowknife Geoscience Forum.

#### **November 2019 report executive summary**

In spite of a poor year for rough diamond sales globally, diamond mining continues to provide a foundation for the NWT economy. Gahcho Kué mine, which has been operating at better than forecast production levels, announced the discovery of the diamondiferous Wilson kimberlite within the current mine plan area. Consistently high predictions for zinc demand have encouraged both the rejuvenation of Pine Point by Osisko Metals Inc. and Norzinc Ltd.'s on-going efforts to bring Prairie Creek into production. Gold prices have been buoyed by a safe-haven sentiment due to concerns over lagging economic growth, tariffs and trade wars with China. Advanced projects have benefitted from an improving investment climate encouraging on-going exploration by Nighthawk Gold Corp. and TerraX Minerals Inc.



However, many smaller projects were suspended as the companies were not able to raise sufficient funds in the tough investment market. Lack of exploration capital was particularly true for projects targeting green energy and battery technologies. Most of the projects focusing in lithium, cobalt and vanadium started the year strongly but were dormant by the summer. A notable exception was the reactivation of Avalon's Nechalacho project with an infusion of resources from Cheetah Resources and Vital Metals of Australia.

One of the indicators of exploration activity – claims staked vs. lapsed – displayed a pessimistic trend. In 2018, a total of 268 claims covering 184,985 hectares were added and 70 claims covering 58,876 hectares were released. In the first three quarters of 2019, 121 claims covering 46,222 hectares were added but an area of 165,086 hectares in 211 claims and leases were cancelled. There are 37 active Prospecting Permits this year.

New staking included areas in the Mackenzie Mountains, additional ground at Pine Point, restaking of claims in the Lac de Gras region and expansion of claims in the Yellowknife area.

In 2019-2020, the Government of Northwest Territories invested nearly \$1 million in grassroots mineral exploration through the Mining Incentive Program. This funding was dispersed to 19 exploration projects comprising twelve prospectors and seven companies.

For a blog by John Ketchum, Director, Northwest Territories Geological Survey, click here. *Unlocking our Potential: The Last Word on Geoscience*, provides insight into the value and purpose of today's geological surveys.

## DPA's new campaign chronicles 'The Diamond Journey'

#### 3 billion years in the making

The Diamond Producers Association (DPA) recently launched its new Real is Rare, Real is a Diamond campaign, 'The Diamond Journey'. The campaign, featured here www.realisadiamond.com is an unprecedented, cinematic telling of the natural diamond story.

At the campaign's centre is a three-minute video displaying the life of a diamond.

From genesis to finished jewelry, the remarkable journey of a diamond plays out across time and space. In addition to themes of love and romance, the heirloom quality of diamonds is expressed throughout the film, powerfully tying diamonds to our most intimate moments and life events.

"The Diamond Journey' tells the timeless and epic story of natural diamonds in a new and modern way." said Jean-Marc Lieberherr, C.E.O of the DPA, in the October announcement. "We know from research that the majority of consumers are unaware that diamonds are the oldest thing they will ever touch or own – it's a powerful message that resonates and one this campaign celebrates with the tagline '3 Billion Years in the Making' across all its assets and, in some instances, also includes 'Before there was life, there were diamonds'

This campaign chronicles the transformation of a beautiful rough diamond from discovery to the ultimate representation of love, commitment and meaningful moments. The design of the 2-carat cushion cut diamond engagement ring, set in yellow gold, evokes a classic, timeless quality with eternal appeal.



## **Exploration & development news briefs**

Blue Star Gold Corp. reports complete analytical and assay results for its 2019 drilling and prospecting program on the company's Hood River concessions in western Nunavut. The diamond drilling focused on the North Fold Nose gold zone and consisted of eleven completed holes for approximately 1,540 meters of core, producing 531 core samples.

The prospecting and sampling program ran in parallel with the drilling, exploring and tracing a series of gold mineralized zones from the NFN south for 2.1 km to the claim boundary with the Ulu mining lease. Blue Star has called this series of gold zones, the "Robb Trend". The Robb Trend can be mapped an additional 2.9 km south within the Ulu property to the Gnu and Flood Gold Zones. This prospecting and sampling program produced 168 channel samples, cut with diamond saws over various lengths and sent for analyses. Previously taken historic samples by BHP or others were also evaluated and taken into consideration. Significant results for the Blue Star samples that graded of 3.9 grams/tonne Gold or greater are summarized in Table 1 with locations shown in Figure 1 and Figure 2 in the release.

Stephen Wilkinson, the company's CEO and President commented, "Our 2019 exploration program focused on the gold zones of the north-western part of our Hood River concessions has far exceeded our best expectations. The diamond drilling confirmed a new gold zone at the NFN which could potentially develop into another substantial gold and silver resource. In addition the gold resources of the Flood and Gnu zones in the Ulu mining lease anchor the newly-recognized 5 km long Robb trend in the south. In addition, the prospecting discovered a new zone, that we call the INT gold zone, about 350 m south of the NFN zone and also confirmed and increased previously seen gold values at the Apex and Bizen Zones".

Blue Star Gold Corp. reports the TSX Venture Exchange has accepted for filing the amendment agreement among Blue Star and Mandalay Resources Corp. and its subsidiary, Lupin Mines Inc. dated July 19, 2019, under which the terms of the previous Ulu option agreement as earlier approved by the Exchange were amended.

Pursuant to the terms of the amending agreement and to acquire a 100-per-cent interest in the Ulu Gold Property, Blue Star will:

- Pay \$450,000 to Mandalay in lieu of issuing 15 million common shares of Blue Star, with such payment being made upon the closing of the transfer of the Ulu Gold Property and associated permits;
- Assume all environmental liabilities, past and present, of the Ulu Gold Property, including all current and future obligations to any regulatory agency; and.
- Arrange for a third-party cash payment of \$200,000 for the five million common shares of Blue

Star presently held by Mandalay upon the closing of the Property transfer.

Under its amended obligations, Mandalay will:

- Transfer to Blue Star a 100-per-cent interest in the Ulu Gold Property and associated permits upon regulatory approval of the transfers;
- Assign all its rights to the remediation security, currently standing at approximately \$1.68million and held by the Nunavut Water Board; and,
- Transfer all right, title and interest in all structures, property and equipment located on the Ulu Gold Property.

Dunnedin Ventures Inc. announced a non-brokered private placement financing of up to \$500,000 of a combination of non flow-through units priced at \$0.075 and flow-through units priced at \$0.1125. Each Unit to be issued in the Private Placement will consist of one common share in the capital of the company and one-half-of-one transferable common share purchase warrant. It is anticipated that key existing shareholders and insiders of the company will participate in the Private Placement on the terms described herein.

Claudia Tornquist, President and CEO of Dunnedin said, "This small top-up financing will bolster Dunnedin's reserves and give us additional flexibility as we execute our initial drill program at our 100% owned MPD copperporphyry project in Southern British Columbia, and plan our exploration strategy for 2020. Our crews are on site at MPD and the work is progressing on time and on budget. A particularly intriguing area we are drill-testing is a porphyry target at Prime that was tagged during historic drilling in 2013 and never followed up. In this area both copper and gold grades, and bornite increased at depth, which is the desired outcome. Historic results include a drill intercept of 123 metres of 0.25% copper and 0.03g/t gold, including 0.34% copper and 0.066 g/t gold over the last 25 metres, before the hole ended, still in mineralization. This is just one of many examples that illustrate the excellent discovery potential at MPD. We are looking forward to the results of the current drill program by January."

The Warrants to be issued as part of the Units will entitle the holder to acquire an additional common share at a price of \$0.15 for a period of twenty-four months. They are subject to accelerated expiry in the event the common shares of the company trade on the TSX Venture Exchange at a closing price of \$0.25 or more for twenty consecutive trading days.

Proceeds of the Offering will be used to fund the company's exploration programs on its wholly owned, advanced-stage copper porphyry exploration projects in British Columbia and Arizona, and for general corporate purposes.

Fortune Minerals Limited announced it has closed a private placement of common shares issued on a basis pursuant to the Income Tax Act (Canada). A total of 7,500,000 new common shares were issued at a price of C\$ 0.10 per share providing the company with gross proceeds of C\$750,000. The funds received from this private placement will be used to fund eligible Canadian Exploration Expenses on the company's wholly-owned NICO cobalt-gold-bismuth-copper project ("NICO Project") in the Northwest Territories.

Fortune's NICO deposit, and its nearby Sue-Dianne coppersilver-gold satellite deposit, belong to the Iron Oxide Copper-Gold ("IOCG") class, among global analogues such as the Olympic Dam mine in South Australia, the Salobo and Sossego mines in Carajas, Brazil and the Candelaria district deposits in Chile. Two large, combined gravity, magnetic and magnetotelluric geophysical anomalies have been identified on the NICO Project leases that are independent of the known deposit and are indicative of unidentified high density, magnetic and conductive sources. Magnetotelluric surveys measure changes in magnetic and resistivity response and are commonly used to outline IOCG mineralization in other districts around the world. The proceeds from this issue will be used to better define the NICO Project targets for possible drill testing and for potential resource expansion.

**Seabridge Gold** reported today that it has filed its Report to Shareholders, Financial Statements and Management's Discussion and Analysis for the three and nine months ended September 30, 2019 on SEDAR (www.sedar.com). To view the Report on the company's website, please see: www.seabridgegold.net/sharefinrep.php.

#### Highlights:

- Drill program commences at Snowstorm, Nevada project
- New gold-copper porphyry target identified at likut
- Drill program at KSM targets high-grade gold occurrences near Sulphurets deposit
- Acquisition completed of nearby Goldstorm Project in northern Nevada

During the three-month period ended September 30, 2019 Seabridge posted a net loss of \$2.5 million (\$0.04 per share) compared to a loss of \$2.8 million (\$0.05 per share) for the same period last year. During the 3rd quarter, Seabridge invested \$10.8 million in mineral interests, compared to \$17.2 million during the same period last year. At September 30, 2019, net working capital was \$19.1 million compared to \$18.0 million at December 31, 2018. See release.

## Our deepest sympathies to friends and family of Nick Lawson (1961-2019)

It was with heavy heart and great sadness that we learned of the passing of Nick Lawson, who passed away on November 4 at Stanton Territorial Hospital surrounded by his family.

Nicholas (Nick) John Lawson was a real gentleman who worked for many years in the North and with many of our membership. We will all miss him very much.

Our sincere condolences go to his family, his partner Heidi Wiebe and his many friends.

The funeral took place on November 9 in Yellowknife.

In lieu of flowers, donations may be made to the NWT Disabilities Council.



## Member news releases this past month

- 3 December 2019 Osisko announces sale of 1.5% NSR royalty on Pin Point project and \$7 million nonbrokered priavte placement
- 2 December 2019 Peter Portka appointed chief financial officer of NorZinc
- 2 December 2019 Blue Star announces TSX acceptances of its acquisition of the Ulu gold property
- 26 November 2019 Interview with Bruce McLeod, President and CEO, Sabina Gold and Silver
- 26 November 2019 Blue star reports complete results from Hood River exploration program
- 25 November 2019 NorZinc receives final major permits for Prairie Creek Mine
- 21 November 2019 Fortune Minerals signs agreement with Tlicho Government for NICO access road
- 19 November 2019 Fortune Minerals closes flow-through private placement
- 19 November 2019 NorZinc announces shareholder approval of previously announced RCP Royalty
- 18 November 2019 NorZinc welcomes Gary Sugar and Stephen Flewelling to its board of directors
- 18 November 2019 Baker Lake Council thanks Agnico Eagle Mines
- 18 November 2019 Osisko Metals to begin drilling gravity targets at Pine Point, provides corporate update
- 14 November 2019 All season road permits for NorZinc's Prairie Creek Mine granted by MVLWB
- 14 November 2019 Dunnedin announces private placement of up to \$500,000
- 14 November 2019 Aston Bay Holdings announces revised terms for non-brokered private placement
- 13 November 2019Seabridge files third quarter report to shareholders, financial statements and MD&A
- 13 November 2019Sabina releases inaugural environmental, social, and governance report
- 13 November 2019Osisko Metals releases 2019 Pine Point mineral resource estimate
- 12 November 2019 Sabina announces interim financial results for quarter
- 8 November 2019 Members corporate presentation: Western Atlas Resources, November 2019
- 8 November 2019 Members corporate presentation: TMAC Resources, November 2019
- 7 November 2019 NorZinc provides results for third quarter 2019

## Members' presentations

- Western Atlas Resources, November 2019
- TMAC Resources, November 2019
- Sabina inaugural environment, social, and governance report, November 2019

### **Calendar of events**

- AME Roundup 2020 Mark your calendars for AME mineral exploration Roundup 2020,
   January 20-23 at the Vancouver Convention Centre. For schedule at a glance, click here.
- Arctic360 Second Annual Conference, February 2-4 at the Hunt Club/Munk School of Global Affairs (TBC) in Toronto, will focus on the emerging economy of the North American arctic, investing in 21st century critical infrastructure and transportation corridor. Contact jshadian@billgrahamcentre.ca for more information.
- Northern Lights 2020, is a high-profile business and cultural showcase of Nunavut, Nunavik, and Labrador/Nunatsiavut hosted by the Baffin Regional Chamber of Commerce and the Labrador North Chamber of Commerce. It will be held at the Shaw Centre in Ottawa, February 5 - 8, 2020. The four-day event is expected to attract 200 exhibitors and 1,200 delegates. For the schedule, click here. #NL2020Ottawa
- PDAC 2020, the world's premier mineral exploration and mining convention will host 1,100 exhibitors, 2,500 investors and 25,000 attendees from over 100 countries, in

- Toronto March 1-4. PDAC includes echnical sessions, short courses and networking events. Click here to register. @the\_PDAC
- Invest Canada North PDAC watch for this new PDAC 2020 event (March 1-4 in Toronto), which connects global investors with the competitive advantages and opportunities in Canada's North. @InvestCANorth
- Nunavut Mining Symposium will be held in Iqaluit from March 30 to April 2, 2020.
   Registration is now open! Stay tuned for schedule updates on the website and the release of a custom app this year! #NuMS20

#### Welcome new members!

Please join us in welcoming the newest Chamber of Mines members!

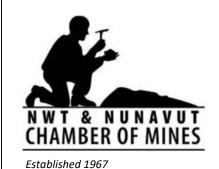
- Corvan Consultants Ltd., located in Yellowknife, NT, is a project and general management company, which also provides business development and technial services. Contact President Cory Vanthyne corvan@northwestel.net; 867 445 1192.
- DGI Geoscience Inc., located in Toronto, ON, provides environmental and survey services. Contact President Chris Drielsma cdrielsma@dgigeoscience.com; 416 361 3191 ext 301.
- Wilfred Laurier University, located in Waterloo, ON., founded over 100 years ago, is a
  post secondary educational institution six campuses/locations, and over 20 research
  centres/institutes and is well known for its co-op programs. Contact Una Glisic,
  Manager, Research Compliance uglisic@wlu.ca; 519 884 0710.

#### **Chamber of Mines' Social Media**

Follow via live Twitter and Facebook links.







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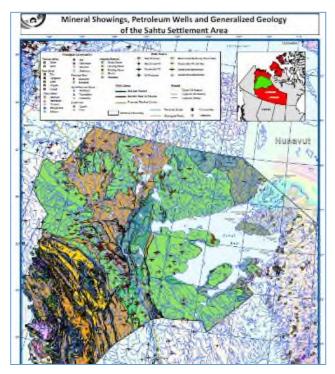
For further information contact us at: PO Box 2818, Yellowknife, NT X1A 2R1 Email: info@miningnorth.com Website: www.miningnorth.com

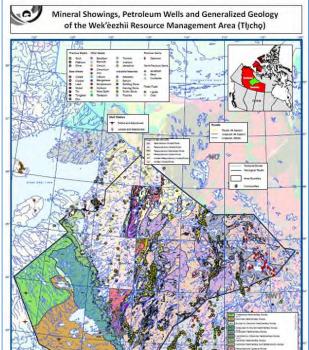
Volume 13, No. 11 November 2019 25

## **Enhancing Mineral Investment in various NWT Land Claim Regions**

The Northwest Territories comprises various land claim regions, each with its own Indigenous government, with its own mineral potential, and its own perspectives on development. While this may be seem a bit confusing, clarity is emerging through some interesting initiatives.

- Indigenous Mineral Development Strategies (or Roadmaps). The Northwest Territories developed its own Mineral Development Strategy (2014-2019) which is now up for renewal. In addition, efforts have been made in recent years to see Indigenous regions create their own (sub) strategies, to complement the NWT MDS. At the recent Geoscience Forum in Yellowknife, presentations were given on two Indigenous strategies: a Gwich'in Mineral Development Strategy and a Roadmap to Mineral Exploration & Development in the Inuvialuit Settlement Region. Check them out. We will help publicize them when they are final.
- **Geological potential mapping.** The Northwest Territories Geological Survey has produced maps of mineral potential in the various settled and unsettled land claim regions of the NWT. They are available from the Survey, and our Chamber of Mines has posted them on our website too here:
  - o Mineral Potential: Gwich'in Land Claim Region, NWT (3.5Mb)
  - o Mineral Potential: Sahtu Land Claim Region, NWT (11Mb)
  - o Mineral Potential: Inuvialuit Land Claim Region, NWT (8Mb)
  - o Mineral Potential: Dehcho Land Claim Region, NWT (6Mb)
  - o Mineral Potential: Tlicho Land Claim Region, NWT (8Mb)
  - o Mineral Potential: North South Slave Land Claim Regions, NWT (11Mb)





# **Mines & promising Northwest Territories mine projects**

The following table describes leading mineral development projects in the NWT.

Project Name	Owner(s)	Commodity	Description	Status
Ekati Mine	Dominion	Diamonds	Canada's first and largest diamond	Media release, 22 March 2019 Canadian
	Diamond Mines		mine, 310 km. NE of Yellowknife.	Championship Dog Derby and Dominion
	ULC, and Dr.		Open pit and underground. Mine life	Diamond announce race schedule
	Stewart Blusson		potentially to 2041. Workforce in	
			2018, 1,625.	
			The Ekati mine consists of two joint	
			ventures, the core zone joint venture	
			and the buffer zone joint venture, in	
			which the company has interests of	
			88.9% and 72.0%, respectively.	
			Reserves at 31 January 2017 were	
			68.9 million tonnes at 1.5 carats per	
			tonne for 105.4 million carats.	
			Inferred mineral resources were 20.6	
			million tonnes at 1.0 carats per tonne	
			for 19.8 million carats.  Additionally, Fox Deep indicated and	
			inferred resources of 51.0 million	
			tonnes at 0.4 carats per tonne for	
			18.7 million carats.	
Diavik Mine	Rio Tinto	Diamonds	Canada's largest producer of	Media release, 1 October 2018 Diavik Stars of
Diavik Willie	(operator) &	Diamonds	diamonds, 300 km NE of Yellowknife.	the Arctic dazzle in rough diamond tender
	Dominion		Mine life to 2025. Became all	the Arctic dazzle in rough diamond tender
	Diamond Mine		underground mine in 2012.	
	ULC		Workforce in 2018, 1,113. New A21	
	020		open pit development budgeted at	
			US\$350m over 4 years. A21 grand	
			opening celebrated August 2018.	
			Reserves at Dec 31, 2018 were 11.5	
			million tonnes at 2.4 carats/tonne for	
			total of 27.4 million carats.	
Gahcho Kué Mine	De Beers Canada	Diamonds	Located 280 km NE of Yellowknife,	Media release October 29 Gahcho Kué mine
	Inc (51% and		NWT. Open pit mine with life of 12	Wins Yellowknife Chamber Of Commerce
	operator) and		years. Mine reached commercial	workplace health and safety award
	Mountain		operation in Q1 2017. Workforce in	
	Province		2018, 527. Plan is for three open pits	
	Diamonds Inc.		to mine 5034, Hearne and Tuzo ore	
	(49%)		bodies producing average of 4.5	Madia valance 10 Contember 2010 Cababa
			million carats/year. Mining started	Media release 10 September 2019 Gahcho Kué mine rescue team wins overall national
			with 5034 orebody and production	western regional title for surface mining
			from Hearne began in April 2018.	western regional title for surface mining
			Reserves at December 31, 2018	
			(production commenced Q3 2016) were 31.1 million tonnes at 1.54	
			carats per tonne for 47.9 million carats. Initial mine plan extends to	
			fiscal year 2028.	
Prairie Creek	NorZinc Ltd.	Zinc-lead-	Proposed underground mine 120 km	Media release 2 December 2019 Peter Portka
Tunic creek	NOIZING Etu.	silver	W of Ft. Simpson. Estimated mine	appointed chief financial officer of NorZinc
		]	jobs: 220	
			All permits now in place to construct	Media release 25 November 2019 NorZinc
			and operate the mine. Feasibility	receives final major permits for Prairie Creek
			Study completed in 2017 supports 15-	Mine
			year mine life. Subject to completion	Media release 19 November 2019 NorZinc
			of financing, and 2.5-year	announces shareholder approval of
			construction phase, production	previously announced RCP Royalty
			proposed for mid-2020.	
			In 2017, the Mackenzie Valley	Media release 14 November 2019 All season
			Environmental Impact Review	road permits for NorZinc's Prairie Creek Mine

	1	•		
			Board recommended approval of the proposed all season road. Over the past eight years Canadian Zinc has successfully completed numerous environmental assessments related to exploration and development of the Prairie Creek Mine. Canadian Zinc has obtained all the significant regulatory permits and social licences required to complete construction and development and undertake mining and milling at Prairie Creek, including construction and use of a winter access road to the mine site.	granted by Mackenzie Valley Land and Water Board  Media release 18 November 2019 NorZinc welcomes Gary Sugar and Stephen Flewelling to its board of directors  Media release 7 November 2019 NorZinc provides results for third quarter 2019
NICO	Fortune Minerals Limited.	Cobalt- gold- bismuth- copper	Proposed open pit and underground mine located 50 km NE of Whatì. Estimated mine jobs: 150. Mine life, 20 years. In March 2018, The Mackenzie Valley Environmental Impact Review Board has recommended that the Tlicho allseason road be approved. The approval is subject to measures designed to mitigate potential environmental, social, and cultural impacts. The Government of the Northwest Territories, Department of Transportation and Tlicho Government received this conditional approval on March 29, 2018, enabling construction of the 97-kilometre Tlicho Road to connect the community of Whatì to the territorial highway system.	Media release 21 November 2019 Fortune Minerals signs access agreement with Tlicho Government for NICO project access road Media release 19 November 2019 Fortune Minerals closes flow-through private placement
Kennady North	Mountain Province Diamonds Inc.	Diamonds	Kennady North project comprises 13 leases and claims immediately to north and west of 4 leases controlled by the Gahcho Kué Joint Venture (see above). Project aims to identify a resource along the Kelvin – Faraday kimberlite corridor of between 12 and 15 million tonnes at a grade of between 2 and 2.5 carats per tonne and to identify new kimberlites outside of the corridor. The Kelvin – Faraday corridor is a target for further exploration. Potential quantity is conceptual as there has been insufficient drilling to define a mineral resource and it is uncertain if further exploration will result in target being delineated as a mineral resource.	Media release 17 October 2019 Mountain Province Diamonds announces third quarter 2019 production and sale results, provides Q3 conference call details
Indin Lake	Nighthawk Gold Corp	Gold	Nighthawk controls over 90% of the prospective Indin Lake Greenstone Belt in this historic gold camp with a total ground position now comprising 930 sq km, approximately 220 km north of Yellowknife, NT. The Indin Lake Greenstone Belt is one of Canada's most underexplored gold camps. The property contains 14 known gold deposits and showings, 3 are historic mines (eg Colomac)	Media release 31 October 2019 Nighthawk extends broad mineralized zones to new depths at Colomac  Media release 8 October 2019 Nighthawk intersects 6.50 metres of 10.08 Gpt Au (uncut) including 4.00 metres of 15.94 Gpt Au at Treasure Island

Volume 13, No. 11 November 2019 28

Pine Point	Osisko Metals Incorporated	Lead-zinc	Proposed open pit mine east of Hay River, NT. 10 open pits mined sequentially with 321 jobs. PEA quotes 13-year mine life. Osisko Metals has begun active exploration to advance the project. The objective of the 2018 drill program is to upgrade approximately 50 million tonnes of unclassified near-surface historical resources (Cominco Ltd.) to NI43-101 Inferred Mineral Resources as quickly as possible in areas amenable to open pit mining. The 2018 program consists of approximately 700 drill holes (323 now completed) within the Main Trend, a 20- kilometre long, portion of the PPMC that is located on the south shore of Great Slave Lake in the NWT, near infrastructure and paved highway access and with 100km of haulage roads already in place.	Media release 3 December 2019 Osisko announces sale of 1.5% NSR royalty on Pin Point project and \$7 million non-brokered priavte placement  Media release 18 November 2019 Osisko Metals to begin drilling gravity targets at Pine Point and provides corporate update  Media release 13 November 2019 Osisko Metals releases 2019 Pine Point mineral resource estimate
Courageous Lake	Seabridge Gold Inc.	Gold	Proposed open pit mine 240 km NE of Yellowknife. 6.5 M oz proven and probable reserves in 91.0 million tonnes at 2 g/t (2016 Annual Report). Positive PFS July 2012. The FAT deposit is one of Canada's largest undeveloped gold projects. Seabridge is currently focusing on their KSM mine and other BC projects.	Media release 13 November 2019 Seabridge Gold files third quarter report to shareholders, financial statements and MD&A
Selwyn Project (Howard's Pass Project)	Selwyn Chihong Mining Ltd.	Zinc, lead	Proposed base metal mine in Yukon on NWT border and access is through NWT. Agreements signed with NWT (Sahtu) Indigenous land corporations. The project will process multiple open pit mines over an approximate 10+ year mine life and includes a mineral processing plant, tailing management facility and the required on-site infrastructure. The mine is being designed to process 38,500 tonnes per day (tpd) of ore which, after processing, is expected to result in 2,500 tpd of zinc and 600 tpd of lead concentrate, which would be trucked to the Port of Stewart for export. Selwyn Chihong estimates the proposed mine will create approximately 1500 jobs during construction and approximately 750 during operation.	Selwyn Chihong Mining's proposed upgrade of a road to its lead-zinc mining project in Yukon's Selwyn Mountains will undergo an environmental assessment. Parks Canada has referred the 79km Howard's Pass Access Road (HPAR) to Environmental Assessment under the MVEIRB, which accepted the referral in July 2015.  The HPAR was developed in the 1970s and runs from the Nahanni Range Road to the NWT-Yukon border. Passing through 2 national parks.  Yukon media reported in Feb 2016 that Selwyn Chihong has decided to slow their project down due to the current low zinc prices and will not to take the project to the permitting stage this year. According to External Affairs VP Maurice Albert, SC has opted for a traditional drilling program and hopefully add another 10 years to the mine life.
Nechalacho	Avalon Advanced Materials Inc.	Rare earth metals	Proposed underground mine 100km SE of Yellowknife. Estimated mine jobs: 200. The company remains optimistic that rare earth demand will recover sufficiently to advance the project.	Media release 30 October 2019 Avalon receives final payment from Cheetah Resources for acquisition of [some of the] Nechalacho resources

Volume 13, No. 11 November 2019 29

# Mines & promising Nunavut mine projects

The following table describes leading mineral development projects in Nunavut.

Project	Owner(s)	Commodity	Description	Status
Meadowbank Gold Mine	Agnico Eagle Mine Ltd.	Gold	In operation since 2010. roduced its three millionth ounce gold in 2018.  Open pit mine located in the Kivalliq Region, 300 km west of Hudson Bay and 70 km N of Baker Lake.  Mine jobs: 1,311 PYs 50km from Meadowbank mine site Amaruq project adds 7 years to mine life; commercial production expected to be achieved late in third quarter of 2019. At the end of the second quarter 2019, a test batch of low-grade Amaruq ore was processed at Meadowbank mill confirming ore characteristics and recoveries.	18 November 2019 Baker Lake Council thanks Agnico Eagle Mines  Media release 7 October 2019 Agnico Eagle achieves commercial production at the Amaruq satellite deposit
Mary River Iron Mine	Baffinland Iron Mines Corporation	Iron	In operation since September 2014; Open pit mine 936 km N of Iqaluit. Mine jobs: 1,411 PYs Production from Early Revenue Phase (ERP) began September 8, 2014. The company has proposed a Phase 2 project with increased production and shipping. AANDC Minister has approved application for exemption from NPC negative conformity determination, July 2015.	Media release 17 April 2019 Baffinland employees ratify a partnership agreement with the International Union of Operating Engineers – Local 793  Media release 16 April 2019 Baffinland supports successful technical meetings for phase 2 permitting process
Hope Bay (Mine began commercial production May 15, 2017)	TMAC Resources Inc.	Gold	Gold mine 130 km S of Cambridge Bay. TMAC's property covers the majority of the Hope Bay Greenstone Belt. Workforce in 2018: 516 PYs First gold poured in first quarter 2017 and achieved commercial production in second quarter 2017.	Media release 31 October 2019 TMAC announces Q3 2019 financial results  Media release 24 October 2019 TMAC initiates Madrid North underground portal  Media release 15 October 2019 TMAC continues to intersect high-grade at Doris BTD extension zone  Media release 15 October 2019 TMAC announces Q3 operating results
Meliadine Gold Mine (commercial production May 14, 2019)	Agnico Eagle Mines Ltd.	Gold	Meliadine mine declared commercial production on May 14, 2019. 25 km NE of Rankin Inlet. Estimated construction jobs: 1,000 Mine jobs: 1,099 PYs IIBA signed June 2015.Total capital cost ~\$830m, below \$900m forecast; mine life ~15 years. On February 15, 2017: Agnico Eagle approved Meliadine and Amaruq projects for development with production beginning in 2019. The high-grade Meliadine gold project has (by Dec 2018 figures) 3.75 million ounces of gold in proven and probable reserves* (16.7 million tonnes at 6.97 g/t) and a large mineral resource.	Media release 23 October 2019 Agnico Eagle reports third quarter results

Back River	Sabina Gold & Silver Corp.  Orano Canada Inc.	Gold	Approximately 60km from Hackett River; adjacent to the Wishbone Greenstone belt. Consists of George and Goose Lake deposits and holds significant gold resources.  Estimated construction jobs: 1,600 Estimated mine jobs: 900 Sabina's Feasibility Study on its 100% owned Back River Gold Project presents a project designed on a fit-for purpose basis, with the potential to produce ~200,000 ounces a year for ~11 years with a rapid payback of 2.9 years (at a US\$1,150 gold price and a 0.80 exchange rate). Initial CAPEX of \$415 million. EA complete	Media release 26 November 2019 Interview with Bruce McLeod, President and CEO, Sabina Gold and Silver  Media release 13 November 2019 Sabina releases inaugural environmental, social, and governance report  Media release 12 November 2019 Sabina announces interim financial results for quarter
Kiggavik	Orano Canada Inc.	Uranium	Proposed uranium mine 80 km W of Baker Lake. Estimated Construction jobs: 750 Estimated mine jobs: 600	25 July 2016, INAC, on behalf of responsible ministers for authorizing if Kiggavik Project should or should not proceed, accept NIRB's determination it not proceed at this time.
Izok Corridor Project (with High Lake & Hood River deposits)	MMG Ltd.	Copper, Zinc, Gold, Silver	High Lake is 1,710-hectare, copper- zinc-silver-gold property, 190 km ESE of Kugluktuk. Izok is high-grade zinc- copper-lead-silver deposit, 255 km SW of Kugluktuk. Estimated construction jobs: 1,140 Estimated mine jobs: 710	Media release 14 August 2019 Grays Bay Road and Port a 'game changer' for Nunavut and Izok Corridor
Chidliak	De Beers Group	Diamonds	Located 120kms NE of Iqaluit, Nunavut, and 180 km S of Pangnirtung. 74 kimberlites discovered with 8 potentially economic on 317,213-hectare site. Positive Phase One PEA, updated May 2018 highlights: • After-tax payback of 2.2 years • Life of mine 13 years • Resource at CH-6 and CH-7 exceeds 22 million carats • Pre-production capital requirement ~\$455m, incl \$95m for access road from Iqaluit, \$55m in contingency • Pre-tax NPV(7.5) of \$1069 million and a pre-tax IRR of 38.6% • After-tax NPV(7.5) of \$679 million and an after-tax IRR of 31.1% • Average LOM strip ratio of 6.6:1 (average across the combined CH-6 and CH-7 open pits); Mining to a depth of 300 mbs at CH-6	Media release 4 July 2019 New kimberlite discoveries may add to future of Gahcho Kué Mine
Angilak	ValOre Metals Corp. (formerly Kivalliq Energy)	Uranium	340,268-acre property located SW of Baker Lake; Hosts the high-grade Lac 50 Trend deposit	Media release, 14 December 2018 ValOre defines new gold in till target areas and extends geophysical coverage to 110 km on Baffin Island, Nunavut Media release, 3 December 2018 ValOre announces rights offering
Naujaat Diamond Project	North Arrow Minerals	Diamonds	7 km from tidewater; 9 km from Repulse Bay, Melville Peninsula; 7,143 hectares of contiguous mineral claims. Largest kimberlite in Nunavut.	Media release, 3 September 2019 North Arrow closes sale of Loki Diamond Project royalty for \$266,000 Media release 7 August 2019 North Arrow to raise \$266,000 selling Loki royalty; completes till sampling program

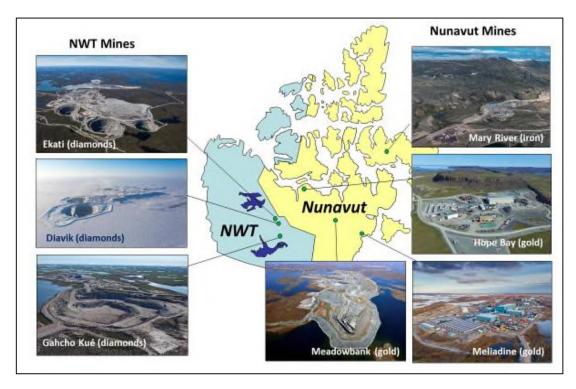
Volume 13, No. 11 November 2019 31

Committee Bay	Auryn Resources	Gold	High grade gold endowment	Media release 25 October 2019 Auryn drills
Gold Project	Inc. (purchased		<ul> <li>Existing exploration infrastructure</li> </ul>	gold-bearing hydrothermal system at
	North Country		• 217,600 hectares with district scale	Committee Bay
	Gold Corp.)		discovery opportunities	

Volume 13, No. 11 November 2019 32

## **Project maps**

# The northern mining industry's 7 operating mines



# We are surrounded by even more potential

