

# Northern Mining News

Volume 12, No. 11

November 2018

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## From the Executive Director ...

Latest NRCan statistics are out, and it's not a pretty sight for NWT or Nunavut, with expenditures down from last year. We're encouraging governments to help turn this around, for exploration today is for the mine 20 years out. While not a silver bullet for the north, we do congratulate this Federal Government for being the first to extend the METC for 5 years.

Some good reports from our mining members who are showing continuous improvement. Exploration reporting this month is a bit quieter, likely reflecting the late fall freeze up season.

Our President was busy with a number of guest editorials to remind readers of the importance of our industry and actions to support it. And it's the month of awards and events, with the annual Geoscience Forum, and the PDAC and the NWT MAX Awards honouring some very special recipients.

**Happy reading! ... Editor**

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



## NWT and NU exploration expenditures projected to decline

The latest federal government projections for 2018 mineral exploration spending show expenditures decreasing in Nunavut and NWT but increasing significantly in Yukon and Canada. Natural Resources Canada's (NRCan) [Exploration and Deposit Appraisal Expenditures by Province and Territory](#) provides the following spending intentions for 2018:

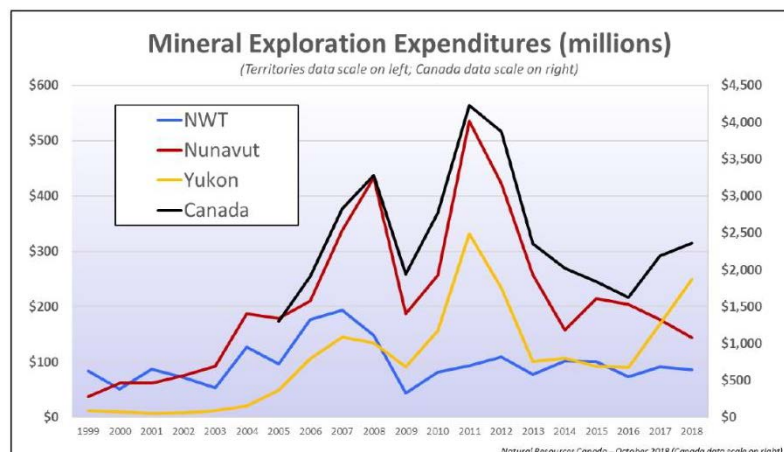
- \$86.2 million in NWT, a decrease of \$5.0 million (5%) from 2017 expenditures of \$91.2 million;
- \$143.9 million in Nunavut, a decrease of \$33.1 million (19%) from \$177.0 million in 2017;
- \$249.4 million in Yukon, an increase of \$80.7 million (48%) from \$168.7 million in 2017; and
- \$2,359.7 million in Canada, an increase of \$174.2 million (8%) from \$2,185.5 million for 2017.

"The continual declining exploration investment in NWT and Nunavut is worrisome," said Gary Vivian, President of the NWT & Nunavut Chamber of Mines. "Exploration today is the key to finding mines that will open 10-20 years from now. When only 1 in 1,000 discoveries becomes a mine, the more exploration we attract, the greater the odds of making a mine discovery. Even Bingo players know to play multiple cards to increase their odds of success."

While exploration investment for Canada and Yukon shows increasing trends over the past several years, annual spending in the NWT and Nunavut are flat or declining. From a competitiveness perspective, the NWT and Nunavut are projected to see their jurisdictions' share of Canadian exploration investment continue to fall. "The serious lag in expenditures behind Nunavut and Yukon should be especially worrisome in the NWT given its world class mining industry is maturing."

"The statistics tell us that investors are not finding NWT and Nunavut that attractive and are talking with their feet," added Vivian. "We continue to advise all governments, Federal, Territorial, and Indigenous – and their boards too – that if you want to create an environment which welcomes exploration investors in their high-risk endeavours, then help them by creating certainty around land access, by reducing unnecessary complexity, and by addressing the higher costs they face working in the North. Sustaining and growing future mining benefits depend on it."

Charts of historical and projected expenditures in northern Canada are in the Backgrounder Charts attached. The Chamber has summarized NRCan's complete data in chart form [here](#) and for the release [here](#).



### Chamber applauds five-year Mineral Exploration Tax Credit

In renewing the Mineral Exploration Tax Credit, and for an unprecedented five years, the Federal Government has demonstrated significant, and much needed, [support for the Canadian minerals industry](#), says the NWT & Nunavut Chamber of Mines.

“This extension to 2024 is unprecedented and is a major and much-needed boost for the exploration industry. A five year program will help companies develop longer term exploration plans, something the historical 1-year renewals didn’t provide,” said NWT & Nunavut Chamber of Mines President Gary Vivian.

“The Federal METC extension is the type of support our industry needs to help Canada strengthen generally declining mineral exploration investment. While this won’t be the ‘silver bullet’ to turn around the investment declines in the Northwest Territories and Nunavut, it will provide some help,” he added. “Maybe more importantly, the Federal Government’s supportive approach should signal to northern and Indigenous governments that they too can take innovative actions to help their exploration industries.”

The Chamber of Mines has rallied for an even higher mineral exploration tax incentive for northern Canada. “In our recent presentation to the Senate Special Committee on the Arctic, we recommended that a special tax incentive double that which is currently in place, and bring that forward under the Arctic Policy Framework, which Canada is developing. It would give the North a ‘leg up’ to level the playing field,” said Vivian. An industry study, [Levelling the Playing Field](#), has revealed exploration costs can be as much as six times higher in some parts of Canada’s north. “We continue to urge governments to take additional actions to improve our competitiveness and address the higher costs associated with operating in the North,” said Vivian.

The Government of Canada made the METC announcement Wednesday in its Fall Economic Statement. The credit is designed to assist exploration companies raising equity funds by passing tax credits to investors. The METC is a 15 per cent non-refundable tax credit. This is the first-ever multi-year METC renewal since the credit was created in 2000. [Natural Resources Canada METC link](#).

Exploration companies are a key part of the mining cycle as they search for mineral deposits which could one day become mines, creating enormous benefits.

Mining is the largest private sector employer in the North and the largest employer of Indigenous peoples. Nearly 2,100 northern residents work at six mines operating in the NWT and Nunavut.

In 2017, mining represented approximately one third of the North’s GDP. Since 1996, mining companies have invested \$17 billion directly in the North.

For details on mineral resources benefits in the Northwest Territories and Nunavut, see the [Mining North Works! poster series](#).



### **What's in an Act? Make sure it makes the North better, not worse!**

[Guest editorial](#) by Gary Vivian, Chamber of Mines President, News/North, November 12, 2018

*The proposed NWT Mineral Resources Act has received much attention in the legislative assembly and the media. I'd like to provide some clarity on the act, our position and what is needed in the new legislation.*

*Government has a responsibility to create a healthy and safe environment for its residents through such things as education, health care, policing and infrastructure. To help pay for this, government looks to see what it has available to make money, including non-renewable resources.*

*The NWT's large size and great geology mean it has significant potential to develop mineral resources responsibly for the benefit of Northerners. Government relies on the minerals industry to bring its expertise and its billions of dollars of investment to get the job done. Look at the diamond mines for great examples.*

*Many acts and regulations currently in place exist to inform industry how to work, where it can work, how to protect the land and water and wildlife and how to protect workers. There are also rules for the many corporate, fuel, property, payroll, sales and airport taxes that industry must pay.*

*The Mineral Resources Act's specific job is to allow rules to be created for accessing land to explore and mine minerals and for paying royalties, a profit tax in addition to all the other taxes. Those detailed rules the act creates are called the mining regulations.*

*For over 30 years, in nearly 100 pages, the mining regulations explain in great detail how to stake claims, get mining leases, keep them in good standing and how royalties are calculated and must be paid. These regulations are clear, stable and competitive with the provinces. Industry understands them well and they provide investor certainty in the NWT land tenure and royalty systems.*

*We must be very careful in tinkering with them. Our Chamber supports the creation of a new act to oversee the mining regulations. In those regulations, government should:*

- *Analyze the royalty regime to make sure it's competitive. All governments do this from time to time. The last review was about 10 years ago. It's likely due.*
- *Provide modern, more efficient computer staking.*
- *Make changes to ensure explorers are active and not just sitting on land; and*
- *Make more data public.*

*Regulations that do this will help improve exploration investment in the NWT. This is critically important and much needed, if we are to keep our mining industry strong.*

*Unfortunately, exploration investment is not healthy in the NWT. It began to slide in 2007 and hasn't recovered. While other jurisdictions saw significant investment, the NWT didn't. Compared to Yukon and Nunavut, the NWT missed out on over \$1 billion in exploration.*

*The reasons for this were not related to the mining regulations or the act that creates them. If the act isn't broken, then don't fix it.*

*Our Chamber continues to advise governments to improve investor confidence with: settled land claims, good land use plans, cost reductions, less regulatory red tape, alternatives to the carbon tax, more and better access to land, protection of small exploration projects from unnecessarily complex environmental assessment and remove surprises by making land that's open for staking open for business.*

*If we are to replace our aging mines and sustain and grow their great benefits, we must make improvements to the investment climate. If politicians truly want to help mining, they need to meet investors' needs – after all, it's their money you are trying to attract – not pick their own solutions, their own royalty rates, their own opinions of what's best for investors and then try to weld their opinions into the act. They simply don't have that expertise, or they are not supportive of mining and the benefits it creates.*

*NWT leaders must ensure the new Mineral Resources Act makes the NWT more attractive to investment, not less; that it provides land tenure certainty, risk reduction and increased competitiveness. This will help set the stage for continued responsible mining development that contributes to the health and well-being of Northerners. It's needed to help turn around the Conference Board of Canada's "grim" economic forecast.*

*Northerners deserve that.*

### **TMAC advancing Boston-Madrid projects – Project Certificate received**

TMAC Resources Inc. has received the project certificate for its Madrid and Boston Project from the Nunavut Impact Review Board. The certificate marks the end of the environmental assessment process including terms and conditions for monitoring and reporting.

In addition to the Project Certificate, the Nunavut Water Board concluded final hearings on October 25, 2018. The NWB is expected to submit for approval, Type A Water Licences for the Madrid and Boston mines to the responsible Ministers of Crown-Indigenous Relations and Northern Affairs Canada by mid-December. The ministerial approval is expected to follow 45 days thereafter. As a result, TMAC is pleased to move forward the anticipated timing for receipt of the Type A Water Licences to the first quarter of 2019.

The permitting strategy for Madrid and Boston has addressed the development scenario described in the 2015 pre-feasibility study. It also provided additional flexibility including increases to processing capacity belt wide, additional infrastructure at Madrid and Boston, alternative wind power generation and tailings capacity of 18 million tonnes and 5.1 million tonnes at Doris and Boston respectively. The permitting strategy also includes surface crown pillar recovery like what is being executed at the Doris Mine.

Jason Neal, President and Chief Executive Officer of TMAC, stated, "This is another timely and significant milestone in our permitting path. TMAC looks forward to working with the Kitikmeot Inuit Association and responsible government agencies as we enter the development and



monitoring phase of the Madrid and Boston Project. This Project will provide significant long-term economic prosperity and employment in the Kitikmeot region.” [View release](#)

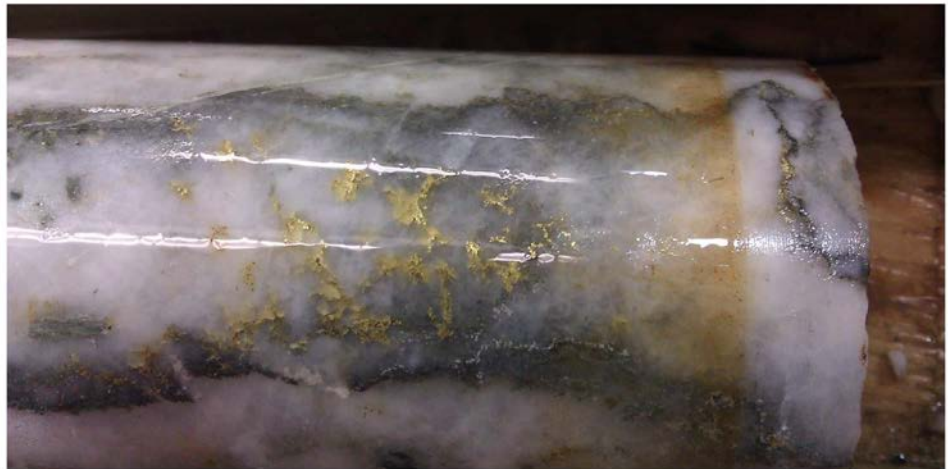
### **TMAC reports record numbers**

For third quarter, TMAC Resources Inc. reported [record performance](#), including 1,900 tonnes per day of plant throughput and 1,975 tonnes per day production for October.

“TMAC is pleased to report record performance in the third quarter, including tonnes mined, tonnes processed, gold production and gold sales, but we are more excited about the progress we have made that will drive further substantial improvement in our operating and financial results. After a difficult July to open the quarter, the processing plant improved to average 80% recoveries for the full quarter, and then in October exceeded our ramp up expectations with throughput of 1,900 tonnes per day while maintaining recovery of 82%. Our investments in the processing plant to improve recoveries through additional gravity concentrators and other modifications are well advanced with the Knelson XD20s online and both the Falcon SB1350s and the Falcon C2000s are being installed in November,” said Jason Neal, President and Chief Executive Officer of TMAC.

The company achieved record gold production of 33,100 ounces during the third quarter. Gold sales of 32,140 ounces during the third quarter produced record revenues of \$50.3 million with cost of sales of \$50.0 million, resulting in a profit from mining operations of \$0.3 million. The net loss totalled \$3.3 million, or \$0.04 per share on a basic and fully diluted basis and EBITDA (1) totalled \$15.7 million. Increased production resulted in the generation of positive cash flows from operations of \$6.1 million.

**Doris North High Grade Gold**



TMAC also provided an update on 2018 exploration activity at Doris Mine and the Madrid North Deposit, highlighting that drilling continues to intersect high-grade gold over significant widths at both Doris and Madrid North.

Drilling at Doris has continued to upgrade confidence in and expand on the high grade BTD Extension zone, which remains open to the north. The 2018 drilling at Madrid North has focused on the core of the Naartok West and Naartok East zones and has confirmed the continuity of both grade and width of mineralization, near surface, which has potential to provide significant high-grade ore early in the Madrid mine plan.

See the company’s [November 8 exploration activity release](#) for details.

## **Baffinland Iron Mines sets shipping record at Mary River Mine**

Over its brief 2018 shipping season, Baffinland Iron Mines transported approximately 5.1 million tonnes of iron ore from its Milne Inlet Port to markets in Europe, the United Kingdom, Taiwan, and Japan – a new Canadian High Arctic [shipping record](#)!

From July 24 to October 17, the company completed 71 voyages, carrying an average of 71,750 tonnes of iron ore each over an 86-day period. This establishes the record for the region's largest shipping program by volume ever, surpassing Baffinland's previous record of 4.1 million tonnes shipped in 2017. Baffinland also carried out two Northern Sea Route transits to Asia, a first for iron ore bulk carriage.

"As we focus on our expansion program, a successful, safe, and responsible shipping season remains a critical component of our growth. Along with our employees, I want to thank all of our partners involved in making this program a success. This includes our shipping partners and the continued support of the North Baffin communities and the Qikiqtani Inuit Association," said Brian Penney, president and chief executive officer of Baffinland stated:

Consistent with last year's successful shipping program, Baffinland again deployed world-leading health and safety control systems and conducted environmental monitoring programs to adhere to strict environmental standards, developed in collaboration with the North Baffin communities. This included providing real-time vessel locations and an onboard monitoring



*At 5.1 million tonnes, Baffinland has set a record for Canadian High Arctic shipping. Significantly, no health and safety or environmental incidents occurred during the shipping program. Pictured is the Mary River port site. Photo: Baffinland*

program supported by the Mittimatalik Hunters and Trappers Organization to ensure no adverse environmental impacts or impacts on Inuit shipping vessels. These programs combined scientific and traditional Inuit knowledge.

Ice conditions this past year were projected by Canadian Ice Services to be extreme, and proved so. To not compromise its annual sealift, Baffinland needed to call in extra ice-breaking support in the form of the Estonian ice breaker, *Botnica*, pictured here.



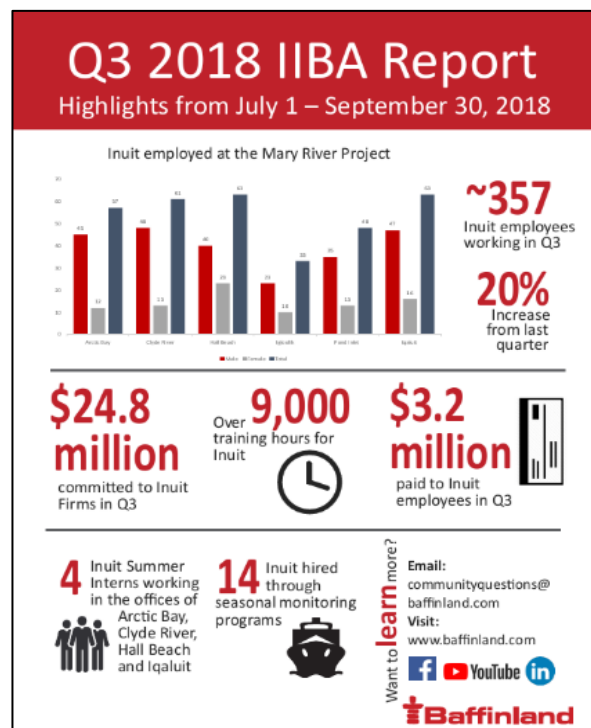
### Baffinland reaches its highest Inuit employment of 2017-2018

Each quarter, Baffinland develops an IIBA Report to report on its commitments outlined in the Inuit Impact Benefit Agreement signed with the Qikiqtani Inuit Association. In this quarter, Baffinland saw its highest Inuit employment level in the last two years with approximately 357 employees.

### Baffinland hosts Pond Inlet's Mittimatalik Hunters & Trappers Organization

Working in partnership with the local communities to develop the Mary River Mine is an important part of the company's work. Baffinland is committed to incorporating community feedback into its existing operation and plans for future development of the mine. Baffinland recently hosted members of the Mittimatalik Hunters & Trappers Organization (MHTO) of Pond Inlet, the Hamlet of Pond Inlet, and the Qikiqtani Inuit Association (QIA) at its mine and port sites. During the two-day visit in August, representatives from the MHTO, Pond Inlet, and QIA toured the site via helicopter, seeing the Mine Site, Tote Road, Milne Port, and Bruce Head, an important base for Baffinland's marine mammal monitoring programs.

Together, the group developed new ways to improve communication and improve hunter site access, including new Tote Road crossings, and additional facilities for hunters on site including improved hunters' cabins. [View release](#)



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## **Mountain Province announces third quarter results**

Mountain Province Diamonds Inc., part owner of the Gahcho Kué Mine, announced its financial and operating results for third quarter ended September 30, 2018.

Highlights included:

- Earnings from mine operations for the three and nine months ended September 30, 2018 amounted to \$25.2 million and \$68.3 million respectively.
- The net income for the three and nine months ended September 30, 2018 was \$17.5 million or \$0.08 cents earnings per share and \$11.3 million or \$0.06 cents earnings per share. Included in the determination of net income for the three and nine months ended September 30, 2018 are unrealized foreign exchange gains (losses) of \$6.7 million and (\$11.5) million respectively, on the translation of the Company's USD-denominated long term debt. Generally, the weakening Canadian dollar compared to US dollar is beneficial to the Company.
- Adjusted EBITDA of \$38.0 million and \$112.7 million in the three and nine months ended September 30, 2018 respectively.
- During the quarter ended September 30, 2018, the Company repurchased \$19.7 million (US\$15.0 million) of secured notes.
- For the nine months ended September 30, 2018, approximately 2,443,000 tonnes of ore treated and 5,391,000 carats recovered, on a 100% basis, for an average recovered grade of 2.21 carats per tonne ("cpt"), ahead of expectations. The recovered grade for Q3 2018 was also very high at 2.40 cpt.
- The Company's 49% attributable share of diamond production for the three and nine months ended September 30, 2018 was approximately 891,000 carats and 2,642,000 carats respectively.
- Sales for the nine months ended September 30, 2018 were \$240.5 million (US\$186.4 million) at an average realized value of \$99 per carat (US\$77 per carat).

"The performance of Gahcho Kué Mine was as expected for the quarter, we remain on track to achieve or exceed all production targets for the year in a safe and sustainable manner. The sales for the quarter were in line with our expectations but do reflect the somewhat difficult trading conditions that have been widely reported in the rough diamond market over the recent period," said Stuart Brown, President and CEO. [View release](#)



*The conveyor and process plant at Gahcho Kué mine. Photo: De Beers*

## **Mountain Province announces 2019 guidance and provides year-end update**

In November, Mountain Province Diamonds Inc. provided guidance for fiscal 2019 for the Gahcho Kué Mine as well as an update on company's performance in 2018. Highlights 2019: (all figures quoted on a 100% basis)

- 3.1 to 3.2 million ore tonnes processed
- 6.6 – 6.9 million carats recovered
- Production costs of \$110 – \$120 per tonne processed
- Production costs of \$50 – \$54 per carat recovered

The company also provided a three-year production outlook for the Gahcho Kué Mine from the updated life of mine plan as summarized in the following table.

		2019	2020	2021
ore tonnes processed	million	3.1- 3.2	3.1-3.2	3.1-3.2
carats recovered	million	6.6 – 6.9	6.6 – 6.9	6.8 - 7.1
cash costs of production per tonne <sup>1</sup>	\$	\$110 - \$120	\$110 - \$120	\$110 - \$120
cash costs of production per carat	\$	\$50 - \$54	\$49 - \$53	\$48 - \$52
Sustaining Capital Expenditures	\$ million	\$20	\$10	\$7

<sup>1</sup> including capitalized stripping

The production guidance over the three-year period 2019 to 2021 is evidence of a sustainable and smooth mining rate as the mine performance maintains a steady state. In the near term, ore tonnes mined and processed for 2019 will be predominantly from the Hearne pit where knowledge of the various kimberlite facies is still being gained as mining into this new area is being expanded.

The mine has performed well in 2018 and there is high confidence that the tonnes treated will be on target for the year and carats recovered will be above the upper end guidance of 6.6 million carats, all of which will be achieved within the expected working cost and capital budgets stated for 2018.

"With the 2018 fiscal year coming to an end, we are well on our way to exceed the upper end of our 2018 guidance," said Stuart Brown, President and Chief Executive Officer. "As we look forward to 2019 and beyond, our business plan demonstrates the quality of our core asset and the excellent work that the operations team has carried out over the past year; both in exceeding the targets for the current year and building a stronger longer term business plan that should extend the life of mine beyond 2028," he added.

"2018 has certainly been a difficult year for producers in the industry. The first half of the year was relatively calm with modest price increases seen across all categories of diamonds; however, from July onwards we have witnessed some price pressure, particularly in the smaller, lower quality diamond space. We did see a slight price improvement in the smaller lower quality goods in our recent 9th sale where we again sold all our available production. The improved sales performance was encouraging as we head into the peak diamond retail season, which if successful should hopefully translate into an improvement of confidence in the rough diamond market in 2019."

Mountain Province Diamonds is a 49% participant with De Beers Canada in the Gahcho Kué diamond mine located in Canada's Northwest Territories. For more details, [view release](#).

In other news, Mountain Province [announced appointment of Tom McCandless](#) as Vice President of Exploration.

### **Sabina Gold & Silver receives Type A Water Licence from Nunavut Water Board**

#### ***Final major Licence for construction and operations***

Sabina Gold & Silver Corp [reports receipt of its type A water licence](#) for its Back River Gold Project from the Nunavut Water Board.

On September 21, 2018, the company received a copy of the NWB's recommendation to the Minister of Intergovernmental Affairs, Northern Affairs and Internal Trade, the responsible Federal Minister, that the project's type A water licence should be issued with proposed terms and conditions.

On November 14, 2018, Sabina received confirmation that the Minister has approved the Type A water licence with no changes to the terms and conditions.

Receipt of the Type A water licence represents a key step in the environmental permitting process and will enable activities at site including mine construction and operations and sets the closure bonding amounts for the project moving forward.

The type A water licence includes development of the Umwelt open pit and underground, as well as the Llama and Goose Main open pits as envisioned in the current development plans.

The type A water licence also includes the ability to develop the Llama and Goose Main undergrounds as well as the Echo open pit and underground should it choose to do so in the future.

"The issuance of the type A water licence is the culmination of significant work completed during the environmental assessment and permitting process, as well as the negotiation of long term land tenure with the Kitikmeot Inuit Association. We appreciate the professional approach of the Nunavut Water Board during the licensing process, as well as the support for the project from our other stakeholders in the Kitikmeot. While a rigorous process, the receipt of this last major licence demonstrates the responsible mining friendly jurisdiction in which we work," said Bruce McLeod, President & CEO.



*Click image for November 2018 Sabina corporate presentation.*

## Sabina announces results from new gold trend near Goose Property, Back River

Sabina Gold & Silver reported results from the 2018 summer exploration program from the Boulder property at its 100% owned Back River gold project in Nunavut Canada.

The Boulder property, one of five properties within in the 80 kilometer iron formation gold trend at the Back River Project, is located approximately 15 km northwest of the Goose property, the current focus of Sabina's development and exploration efforts. The geology at Boulder is like other prospective locations throughout the Back River District as it is host to extensive poly-deformed sequences of oxide iron formation, the principle host to gold mineralization at Back River.

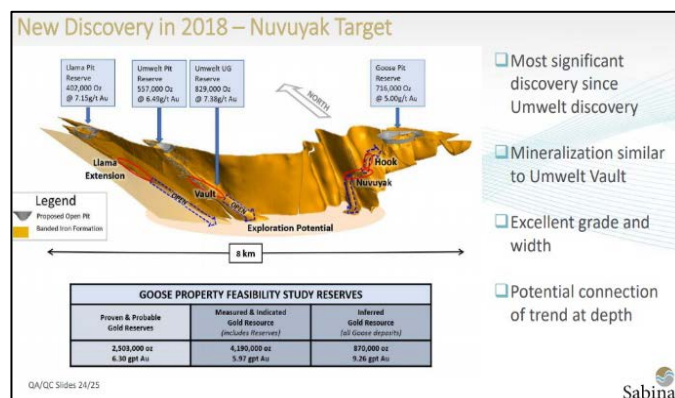
Exploration at Boulder over the 2018 summer season focused on a >1.6 km trend of under explored, folded iron formation that has anomalous gold in till signatures. Sabina's exploration approach, developed through a successful history of discovery at Goose, focuses on an optimal geologic framework that allows effective vectoring towards the definition of drilling targets.

"As we continue with our significant success and discovery at the Goose project we are also developing and advancing targets throughout Back River district area. We have a robust district wide, target pipeline of over 50 quality showings and concepts. At Boulder, the Vega target offers considerable potential for discovery of a new shallow gold zone. Given its close proximity to Goose and the shallow nature of the iron formation sequence, any discovery here could have a positive impact on project economics and mine life. We look forward to future exploration at Boulder as we build on the excellent progress from our 2018 field work," Bruce McLeod, President and CEO. For the release, including field work and drilling results details, click [here](#).

Other recent releases from Sabina include:

Interim [third quarter financial results](#). During the quarter, the company continued to advance pre-development activities for the Back River Project, including the selection of the single major vendor that will supply the gold plant equipment, completion of the construction of the Marine Laydown Area and shipment of equipment and supplies via sealift to the port. [View release](#)

Announcing expansion of the [Nuvuyak discovery](#) at its 100% owned Back River gold project in Nunavut Canada. Drilling results continue to demonstrate that Nuvuyak has the potential to be a significant new discovery at Back River within the foot print of the currently planned mine infrastructure.



Sabina reports expansion of the Nuvuyak discovery. Image: Sabina



## **NWT Mining and Exploration (MAX) award recipients announced**

The NWT & Nunavut Chamber of Mines, in partnership with the Government of the Northwest Territories, was pleased to announce the 2018 Northwest Territories Mining and Exploration (MAX) Award recipients. NWT MAX awards recognize individuals, organizations and accomplishments that have made major contributions to a variety of aspects of the Northwest Territories' minerals industry, the largest private sector contributor to our economy.

This year's MAX Awards recipients are:

- Distinguished Service: Gren Thomas – explorer and mine finder
- Economic Leadership: De Beers Canada – Gahcho Kué diamond mine operator
- Environmental & Social Responsibility – Ni Hadi Xa environmental monitor Gahcho Kué mine
- Indigenous Achievement: Cece Hodgson-McCauley – Development & community supporter
- Special Achievement (shared):  
    Diavik Dike Design, Construction and Operations  
    Tibbitt to Contwoyto Winter Ice Road

See the [recipients' photos, including award presentations](#) and backgrounder (page 7). The awards banquet was held November 22 at the Explorer Hotel in Yellowknife. Keynote speaker at the event was President and CEO Robin Goad from Fortune Minerals, developers of the proposed NICO mine.



*Pictured at the November 22 MAX awards banquet in Yellowknife, are Allan Rodel with De Beers, Tom Unka with Ni Hadi Xa, Gren Thomas, Denton Henkelman with Diavik, Todd McCauley, and Ron Near representing the winter road joint venture. The Max Awards are a partnership of the NWT & Nunavut Chamber of Mines and the Government of the Northwest Territories. Pat Kane photo courtesy GNWT*

### ***Distinguished Service Award: Gren Thomas***

Gren Thomas arrived in Yellowknife over 50 years ago. Since then, he has explored for mineral deposits in the NWT and Nunavut, heading up several companies including Highwood Resources, Aber Resources, Navigator Resources, Stornoway and North Arrow Minerals. Most importantly, Gren's efforts have resulted in new and significant mineral discoveries, including the Diavik mine, Thor Lake (now the Nechalacho project), Sunrise base metal, and others that may one day become mines.

### ***Economic Leadership: De Beers Canada***

De Beers Canada has contributed over \$7 billion to the Canadian economy, including \$2.1 billion to the NWT economy. Since 2005, \$3.5 billion has been spent with Indigenous and NWT businesses through Snap Lake and Gahcho Kué mines. This represents 78 per cent of De Beers Canada's total spend to build and operate these mines. Over the life of the Gahcho Kué mine, a joint venture with Mountain Province Diamonds, De Beers Canada expects to contribute a further \$5.3 billion to the NWT economy.



*Honourable Wally Schumann, NWT Minister of Industry, Tourism, and Investment (Minister for Mining) gave the opening address at the annual MAX Awards. Guest speaker for the event was Robin Goad, Fortune Minerals CEO, left. Above, Gren Thomas accepts a MAX Award from Carolyn Cochrane. Pat Kane photos courtesy GNWT*

### ***Environmental & Social Responsibility: Ni Hadi Xa, monitoring of Gahcho Kué Mine***

Ni Hadi Xa is a cooperative of five Indigenous parties and De Beers that focuses on traditional knowledge and supports Indigenous community participation in environmental monitoring and management programs at the Gahcho Kué diamond mine. Ni Hadi Xa staff includes a minesite environment monitor working with the mine's environmental team to provide real-time feedback to improve practices and maintain strong communication. Ni Hadi Xa's on-the-land program supports Indigenous people to travel to, and observe the region around the mine, practising traditional activities.

### ***Indigenous Achievement: Cece Hodgson-McCauley (posthumous)***

A tireless 'woman warrior', Cece Hodgson-McCauley ardently advocated for completion of the Mackenzie Valley Highway as she understood its potential to advance economic development and assist northern communities. She was a selfless and tireless supporter of her people, seeking change and working hard towards stronger northern communities. She supported responsible resource development and the jobs and business benefits it would bring. Through a weekly column in News/North, she passionately shared her thoughts about the importance of economic development and government's role in it.

### ***Special Achievement (shared): Diavik Dike Design, Construction and Operations***

For its outstanding engineering and construction success, the first of Diavik's three rockfill dikes – named A154 for the orebodies it surrounded – received the 2003 Canadian engineering profession's national award. The structure allowed safe open pit and underground mining of world class diamond deposits discovered under Lac de Gras. Using the same award-winning approach, Diavik built a second dike for mining of the A418 orebody, and in 2018 completed its third and final dike to mine the A21 orebody. Diavik's dike technology has allowed access to valuable resources that have generated significant benefits for the North and its people.

### ***Special Achievement (shared): Tibbitt to Contwoyto Winter Ice Road***

The Tibbitt to Contwoyto Winter Road is the most unique winter road in the world, being the longest road built over ice-covered lakes linked by land portages. It was developed from a road pioneered in 1962 to the historic Tundra gold mine. In the early days, the ice road supported 130-150 truckloads hauling up to 2,500 tonnes. Twenty years ago, a Joint Venture under the diamond took over the safe construction and operations of what has become a world-famous ice-road. The largest season saw 330,000 tonnes of freight safely trucked north in nearly 11,000 truckloads in its two-month season – over 100 times the annual tonnage hauled in its early days. Without this unique technology the gold and diamond mines hundreds of kilometres north of Yellowknife would not have been possible. The ice road has helped unlock significant benefits to the North, to Indigenous communities and to Canada. [View release](#)

## **PDAC 2019 awards honour two industry leaders with northern roots**

Two Prospectors & Developers Association of Canada annual award recipients have strong connections with the North's minerals industry. They are:

### ***Bill Dennis Award: Peregrine Diamonds Ltd, Chidliak Diamond District***

In 2008, the Peregrine Diamonds exploration team made the grassroots discovery of the Chidliak Diamond District, near Iqaluit on Baffin Island, Nunavut. Exploration programs and engineering studies completed between 2008 and 2018 led to the discovery of 74 kimberlites, one of which has an 18 million carat inferred mineral resource with an average grade of 2.4 carats per tonne. Peregrine was acquired by De Beers Canada in 2018, and anticipation is that Chidliak will become Canada's next diamond mine.

### ***Distinguished Service Award: Donald (Don) Bubar***

The inaugural Chair of the PDAC Aboriginal Affairs Committee that was formed in 2004, Don is credited with raising awareness about the importance of engagement between companies and Indigenous communities and encouraging participation by Indigenous peoples in the mineral industry. During Don's tenure, PDAC saw tremendous growth in participation by self-identified Indigenous people at the annual PDAC Convention. Don was instrumental in developing a relationship with the Assembly of First Nations (AFN, which ultimately led to the Memorandum of Understanding between PDAC and AFN, signed March 4, 2008.

Award recipients will be celebrated in Toronto on March 5 during the PDAC 2019 convention.

## **Black Thursday – strong actions needed to avert economic crisis**

[Guest editorial](#) by Chamber of Mines President Gary Vivian, News/North, November 26, 2018

*Oct. 24, 1929, or "Black Thursday" is memorable for it signalled the start of the Great Depression, an economic crisis that hurt many people.*

*On Nov. 15, the NWT suffered its own "Black Thursday" with the release of two reports.*

*First was the [Conference Board of Canada's Fall Territorial Economic Forecast](#). Canada's trusted economic think tank stated: "the economic outlook for the Northwest Territories is less than rosy," and among the three territories, "left behind is the NWT, where the economy is forecast to contract at an average annual pace of 1.6 per cent between now and 2025." That's negative growth and the bleak outlook is due to a lack of investment. We haven't made the necessary expenditures to keep the mining cycle robust.*

*Coincidentally, on that same Thursday Canada revealed that the NWT has still not improved in attracting new mineral exploration investment, the very investment we need to keep our mining industry strong. Once again, [NWT exploration is forecast to fall](#), marking 11 years now of continued poor investment.*

*All this comes on top of new GNWT statistics that show mining's contribution to the economy has jumped from 31 to 37 per cent of our GDP. For perspective, we welcome tourism, but NWT diamond production is 10 times more than their recent record expenditures.*



*So what do we do to get off this downward path?*

*We need all of our leaders to recognize that we are all in this economic trouble together and they all need to weigh in together to fix it, and fast. We've already suffered 11 years of poor investment.*

*The NWT is a complex jurisdiction, with multiple governments and agencies who control the levers of the economy.*

*Federal, territorial and Indigenous governments – and their regulatory boards – control significant environmental and land claims processes and legislation, development policies, land access, infrastructure funding pots, and the rules and procedures under which development can occur, for just some examples. And all of them are responsible for vision.*

*Collectively, these folks have the ability and the responsibility to avert the economic crisis we are facing. It's up to them to put us on a healthier course.*

*What should their actions look like?*

*First, federal, territorial and Indigenous governments and their regulatory boards need to recognize that the NWT has a serious economic problem. I'm shocked to hear some people say they don't believe what the economists are saying.*

*Second, NWT MLAs (those that aren't anti-mining) need to support the GNWT in taking action to improve industry investment.*

*This means GNWT departments breaking out of their silos, working together and making investor confidence a common denominator to all of their work plans.*

*It means having the regulatory boards examine their policies and procedures to ensure they are supporting needs and abilities of investors, especially at the junior level to create some enthusiasm towards exploration.*

*And importantly, it means getting all to understand that when you go fishing, you use bait attractive to the fish, not the fisher. That means asking industry investors what they need to bring their money and expertise to the NWT, not telling them what they need.*

*And what is it that investors need?*

*We've shared thoughts with governments for several years now, and we've posted them as "[An Investment Guide to Governments and Agencies](#)" on our [miningnorth.com](#) website.*

*If you want to help the NWT avert an economic crisis, tell your leaders you're concerned and demand they take action to turn this around. Don't let them "hope for a solution." Compel them to take steps to guarantee one. If they don't believe it's a crisis, quote some lines from the Conference Board projections:*

- *Over the next 10 years, it will become more difficult to find work in the NWT.*
- *There will be 1,600 fewer people working in the private sector by 2025.*
- *Government revenues will suffer as labour markets cool.*
- *Government costs will rise 3.2% per year, while revenues will only grow 1.8 per cent.*

*This will affect all of us. Like it or not, we are all in this together.*

## **Yellowknife deserves more from MLA O'Reilly (Chamber editorial)**

[Guest editorial](#) by Chamber of Mines President Gary Vivian, News/North, November 16, 2018,

*Mining continues to provide significant benefits to the Northwest Territories, its residents, businesses and public and Indigenous governments.*

*Yellowknife, in particular, has seen the bulk of those benefits and most of us who remember when the gold mines closed, are grateful that diamonds have come along.*

*Our chamber is a strong supporter of all things mining, it works hard to provide truthful information about our industry and what the minerals industry needs to remain responsible and be healthy again.*

*The recent move by some MLAs to remove Minister Schumann from cabinet has prompted me to weigh in on comments by one MLA in particular, who represents the Yellowknife riding of Frame Lake. In his questioning of Minister Schumann, MLA Kevin O'Reilly seems to demonstrate a lack of support for government's work to strengthen the minerals industry.*

*While I honour every MLA's right to say whatever they want as elected officials, when Mr. O'Reilly tells the public that he wants mining as much as anybody else, something needs to be said. The facts could be seen as suggesting otherwise. He should come clean with the public and his constituents: he is not a supporter of the minerals industry.*

*As Northerners, we have seen evidence of his anti-mining sentiment mounting throughout the life of this assembly, but let's simply look at his recent questioning of Minister Schumann. I've added my observations.*

*What we heard: "While billions of dollars of resources are extracted here each year, revenues to our government have been described by an international expert as paltry."*

*In fact, that expert correctly explained that royalties were low because of the mines' high cost of building winter roads every year and their costs to generate their own power. This was missing in the MLA's comments.*

*Mr. O'Reilly criticized the minister for the government's "relentless pursuit of large projects such as the Slave Geological Province Road and Taltson (power) expansion." In fact, this kind of infrastructure investment requires leadership and vision. And it creates legacy benefits. Remember, the power and roads that we take for granted today north and south of Great Slave Lake are due to mining. Ironically too, the international expert he defers to explained that with roads and power, mining royalties would be higher.*

*Mr. O'Reilly says he is "deeply disturbed" by the Resources and Energy Development Information (REDI) initiative, stating it is "more about promotion of resource development than about providing balanced information and tools to enable citizen participation in resource development decisions."*

*In fact, the government's REDI initiative is quite unique, it includes every relevant department at its events in an effort to provide balance. REDI is a very responsible government initiative and teaches youth about how industry works and the career opportunities it provides. Our youth would lose out without this initiative.*

*Perhaps his statement that is most contrary to his track record is: “I want mining too, as much as anybody else.”*

*Quite frankly, we have seen no actions or statements from the MLA to make us believe that he really supports mining.*

*Mining can continue to be responsible and strong, but it will take many supportive actions from governments. The most important is to listen to and help investors with their needs. You don’t go fishing with bait that you like, rather what the fish likes. Our Chamber gathers and passes that bait on to government regularly.*

*Interestingly, we have yet to see MLA O’Reilly in our office or calling us up to ask what he can do to help the minerals industry or even provide comment on what he thinks we might do better.*

*I understand that not all MLAs will be supportive of mining. That is what the process is about. We have come a long way in trying to educate the public on our strong regulatory system, the social and economic responsibility the industry feels in the regions in which they work and how governments continue to ask industry to do much of their work on consultation.*

*Like it or not, as an elected official MLA O’Reilly represents a constituency of miners and mining businesses. He lives in a city built on and strongly reliant on, mining. When he speaks inaccurately about the NWT’S number one industry, his comments can affect all Northerners’ lives. I hope his constituents will take him to task in the coming election.*

*I think Yellowknifers – and all Northerners – deserve better from their MLAs.*

### **Read all about it! 2018 Mining North Magazine is out (Members’ Directory too)**

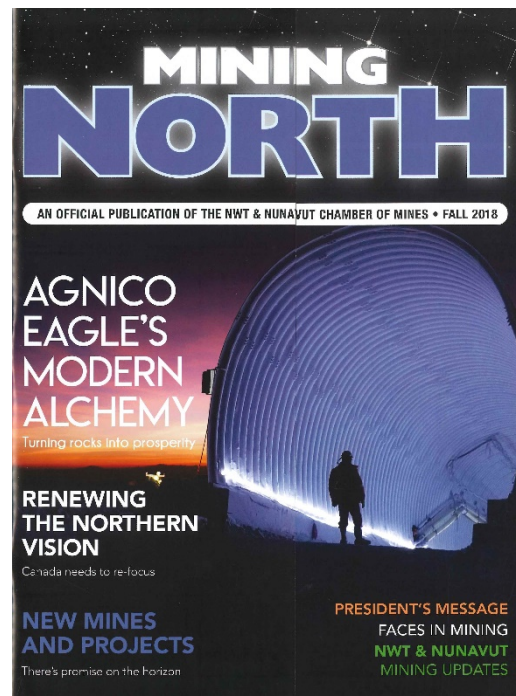
Released at the Geoscience Forum, our annual glossy magazine, *MININGNORTH* is chock full of updates on exploration and mining activities this past year, some great profiles of people in our industry, some thought providing stories on how to renew Canada’s northern Vision, and the infrastructure challenge. There are maps too of where our members are working.

Check out the bonus *Members Directory* and see who supports our Chamber.

View *MININGNORTH* online through our website. Go to [www.miningnorth.com](http://www.miningnorth.com) and on the Home page under Other Postings, watch for this stunning cover (it’s the portal at Agnico Eagle’s Meliadine mine currently under construction), to appear. Simply Click on the magazine icon and enjoy reading!

Feel free to Tweet any stories/pages that you like.

Happy reading!



## **Chamber elects Board of Directors**

At its annual general meeting, held 28 November 2018 in Yellowknife, the NWT & Nunavut Chamber of Mines elected its 2018-2019 board of directors.

### **Executive:**

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

### **Directors:**

- Robin Adair, Osisko Metals – Fredericton, NB
- Don Bubar, Avalon Advanced Materials – Toronto, ON
- Alex Buchan, TMAC Resources Inc. – Cambridge Bay, NU
- Adam Chamberlain, Gowling WLG – Toronto, ON
- David Connelly, Isle Royale – Yellowknife, NT
- Lane Dewar, Cassidy Point Exploration – Yellowknife, NT
- Roy Erasmus – Yellowknife, NT
- Robin Goad, Fortune Minerals Ltd. – London, ON
- Grant Goddard, Baffinland Iron Mines – Toronto, ON
- Paul Gruner, Det'on Cho Corporation – Yellowknife, NT
- Leni Keough, Olivut Resources Ltd. – Hinton, AB
- Toby Kruger, Lawson Lundell – Yellowknife, NT
- John Laitin, Burkman Consulting – Vancouver, BC
- Suzanne Leclair, Agnico Eagle Mines Limited – Mirabel, QC
- Darren Lindsay, NX Gold – Vancouver, BC
- Denise Lockett, Lockett Consultation Services Inc. – Vancouver, BC
- Erik Madsen, De Beers Group of Companies – Calgary, AB
- Gaeleen McPherson, Dominion Diamond Corporation – Yellowknife, NT
- Donald McDonald, NorZinc Ltd – Vancouver, BC
- Ted Muraro, MMG Limited – Vancouver, BC
- Brent Murphy, Seabridge Gold Inc. – Denver, CO
- Ron Pankratz, Tlicho Investment Corporation – Yellowknife, NT
- Matthew Pickard, Sabina Gold & Silver – Vancouver, BC
- Thola Rusike, Northern Security Services – Yellowknife, NT
- Ken Ruptash, Nahanni Construction – Yellowknife, NT
- Dave Smith, Nordgold Ltd. – Toronto, ON
- Grant Stewart, Diavik Diamond Mines Inc. – Yellowknife, NT
- Jeff Ward, Dunnedin Ventures Inc. – Vancouver, BC

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## **Geoscience Forum, the North's largest conference & trade show successful!**

Participation remained strong at the 2018 Yellowknife Geoscience Forum, the 46th trade show & conference built around the largest private sector contributor to the northern economies. The annual networking event, held November 20-23, brought together members of the North's exploration, mining and petroleum sectors, with public and Indigenous government representatives and vendors – all under a variety of venues. Registration was up slightly from last year at 732, as were trade show exhibitors at 86.

The Opening Ceremony saw NWT Premier Bob McLeod speak to attendees about the economic challenges the NWT is facing, and the importance of having a sustainable economy fueled by responsible resource development and by much needed infrastructure. Yellowknives Dene Chief Edward Sangris echoed with the message that now, more than ever, we all need to work together to develop mineral rich lands, in a balanced manner, to ensure a sustainable future for the north. One hundred twenty presenters delivered information across several key areas including geoscience and exploration, NWT and Nunavut exploration updates, diamond geology, community engagement, mining, energy, and the environment.

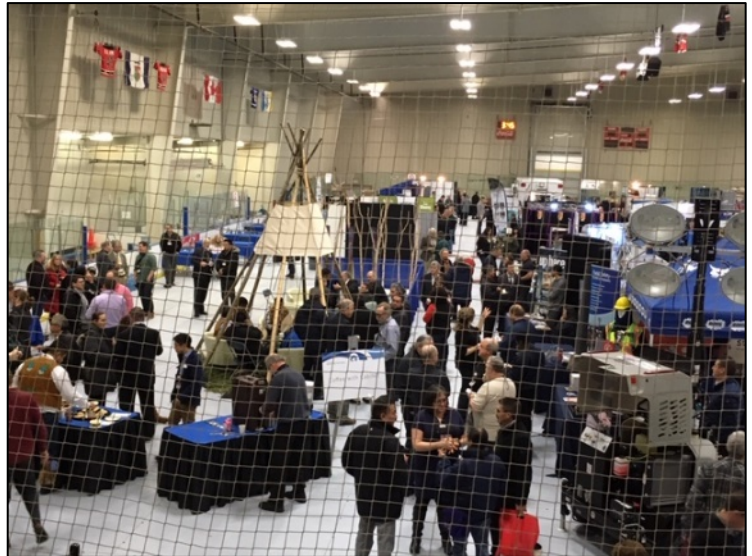
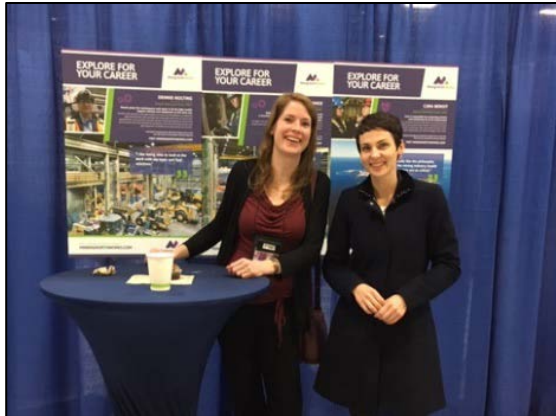
In addition to the tradeshow, there were 'soap box' talks, workshops, and the public events, including the NAPEG-sponsored Camsell Talk. A new event this year was 'Coffee with Cabinet' where participants were able to meet Northwest Territories Cabinet members in an informal setting around the trade show's 'gathering place' teepee.

According to NWT & Nunavut Chamber of Mines President Gary Vivian, "As the Premier stated so well, 'It's not the time to throw our hands up in the air and give up. The rich resources of the NWT are still largely untapped, and the next major mine will begin with geoscience.' Events like this Geoscience Forum remind us of the important role we all play in keeping our number one industry strong. What we saw at the conference was a distinct signal that there are supporters ready to step up and try to turn this around," he added. "On behalf of the organizers, we want to thank all of our volunteers, our delegates, and our trade show participants for their strong efforts again this year." View the Chamber's [release](#).



*The annual Geoscience Forum is a joint initiative of the NWT & Nunavut Chamber of Mines and the Government of the Northwest Territories Department of Industry, Tourism and Investment. Next year's #YkGeo2019 will be held November 19-21 in Yellowknife. Photos Pat Kane courtesy GNWT*









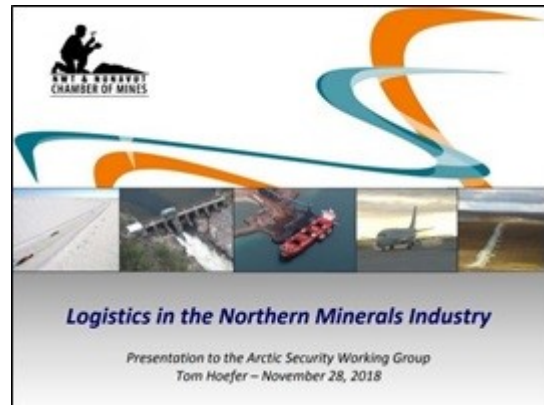
### Chamber's northern minerals logistics presentation to Arctic security group

On November 28, the Chamber of Mines was pleased to present to the Arctic Security Working Group on [\*Logistics in the Northern Minerals Industry\*](#).

The presentation was delivered at this biannual meeting of federal, territorial, Indigenous and international governments and agencies, and academics with an interest/mandate for working in the North in the areas of safety, security and defence. This meeting was meeting was focused on logistics in the North.

Key messages and themes presented included:

- Mining is the North's largest private sector industry
- Logistics are key to its success – examples
- Northern mining industry is under-developed
- Where improving logistics could help
- Time is right for Vision and Action



The presentation is posted on the Chamber website [here](#).

### Exploration & Development news briefs (see [Chamber website](#) for more information)

**Auryn Resources Inc.** is pleased to announce that the company drilled a 1.5 kilometer gold-bearing hydrothermal system at the Aiviq target. A total of 16 diamond drill holes (4,996 meters) consistently intersected the target structure (Figure 2), with the best intercept being 13.5 meters of 1.54 g/t gold (including 6 meters of 3.3 g/t gold) in hole 12 at the southwest margin of the drilling program, leaving the system open in that direction (Figures 3 – 4). Hole 12 also exhibited the most intense alteration and quartz veining along the system.

#### Highlights:

- Discovery of the gold-bearing hydrothermal system at the Aiviq and Kalulik prospects
- Identifying that the system strengthens towards the southwest
- Sampling additional high-grade rock at Aiviq and Kalulik
- Identifying additional targets within the 20 km shear zone, hosting the Aiviq Shamrock and Kalulik prospects.

The release included summaries of Aiviq, Kalulik, and Aarluk targets. [View release](#)

**Dunnedin** updated its diamond exploration progress at its 100% owned Kahuna Diamond Project in Nunavut, and outlines its strategic plans for both its diamond and copper-gold assets.

Dunnedin expects results shortly for diamond recoveries from approximately 150 kilograms of kimberlite from pipe

KH10-11 which was newly discovered this summer. In the near future Dunnedin will also receive initial diamond indicator results from the till sampling program completed in the Josephine Target Area ("JTA") this autumn. These results will assist with the prioritization and selection of drill targets in the JTA, which will be the main focus of the Company's next drill program. [View release](#)

**Nighthawk Drilling reports drill results** from nineteen holes (4,752 metres) at its 100% owned Colomac Gold Project, in the Northwest Territories. A total of 15,952 metres of drilling was completed at Colomac including drilling results from Grizzly Bear, and Zones 3.0 and 1.5 which were previously released. Additional drilling from the Company's regional targets within its Indin Lake Gold Property is still pending and will be released as assays become available.

Drilling targeted near-surface areas within the Colomac sill considered prospective for hosting high-grade mineralization extending below the current resource at Zones 2.0, 2.5, and 3.0, all of which have had limited drilling to depth. Drilling also aimed to infill gaps in drill coverage between shallow historical holes and deeper holes drilled by the Company in 2012.

**North Arrow Minerals** updated its 100% owned Mel Diamond Project, Nunavut, including initial microdiamond recoveries from surface sampling of kimberlite ML8. The Mel Project is well located, approximately 20 km from



tidewater with exploration work conducted from a camp established approximately 140 km south and 210 km northeast of the Hamlets of Hall Beach and Nauyasat, respectively. Highlights of this update include:

Caustic fusion processing of 129 kg from ML8 has returned 33 diamonds greater than the 0.106 mm sieve size including one diamond greater than the 0.85 mm sieve size;

An additional 78 kg of ML8 has been processed with final diamond recoveries underway;

Drill core from kimberlites ML8 and ML345 is now in Vancouver and undergoing detailed petrographic logging as well as kimberlite indicator mineral (KIM) and microdiamond sampling;

Processing has started on 447 till samples collected during the summer field program. KIM recoveries will be used to better define existing and new targets within the 56,075 ha project area. [View release](#)

**NorZinc** reports its interim [financial results and development activities](#) for the three and nine month periods ended September 30, 2018. Highlights include:

- \$20M financing closes (July)
- Company repays US\$10M loan to become debt free (July)
- Cash at September 30, 2018 \$13.0M
- Positive decision to resume All Season Road permitting at Prairie Creek (July)
- Positive recommendation adopted by responsible ministers on All Season Road (Oct)
- Prairie Creek Project summer program (Aug-Oct)
- New resource at Lemarchant Newfoundland (Sept)
- Completes corporate reorganisation (Sept)
- Company renamed as NorZinc Ltd. (Sept)
- New listing symbols – NZC (TSX), NORZF (OTCQB) (Sept)
- Loss for Q3 2018 \$3.3M

Also in November the company announced the [appointment of Anita Perry](#) to the company's Board of Directors, effective today. Anita was Vice President of Communications and External Affairs at BP Canada and has held many leadership and public relations roles with corporations, as well as federal and territorial governments.

**Osisko Metals** announced it has closed its previously announced "bought deal" private placement of 9,946,369 common shares of the corporation that will qualify as flow-through shares at a price of \$0.75 per Flow-Through Share for aggregate gross proceeds of \$7,459,776.75. The gross proceeds will be used by the corporation to incur eligible Canadian exploration expenses that will qualify as "flow-through mining expenditures" as such terms are defined in the Income Tax Act (Canada) related to the Corporation's projects in Canada. All Qualifying

Expenditures will be renounced in favour of the subscribers of the Flow-Through Shares effective December 31, 2018. [View release](#)

**Seabridge Gold** [announced](#) it has secured a non-brokered private placement of one million common shares of the company at a price of \$14.00 per share for gross proceeds of \$14,000,000. No commissions are payable on this transaction. The proceeds from the financing will be used to fund general working capital requirements and a 2019 drill program at the Company's 100% owned Snowstorm Project located in Nevada. (See our June 12, 2018 news release for information on Snowstorm).

The private placement is expected to close on or about November 23, 2018 and is subject to customary closing conditions including, but not limited to, the approval of the TSX and the NYSE. The financing is being made by way of private placement in Canada and the issued shares will be subject to a four-month hold period in Canada. Seabridge has granted the private placees an option to increase the size of the private placement by an additional 250,000 common shares exercisable until December 24, 2018.

**Seabridge Gold** reported it has filed its Report to Shareholders, Financial Statements and Management's Discussion and Analysis for the three and nine months ended September 30, 2018 on SEDAR ([www.sedar.com](http://www.sedar.com)). To view the Report on the Company's website, please see: [www.seabridgegold.net/sharefinrep.php](http://www.seabridgegold.net/sharefinrep.php).

#### Recent Highlights

- 2018 KSM exploration drilling successfully extends Iron Cap Deposit
- Geotechnical, waste characterization and reserve confirmation drilling indicate KSM block model performing well
- \$14 million non-brokered private placement secured in November

During the three-month period ended September 30, 2018 Seabridge posted a net loss of \$2.8 million (\$0.05 per share) compared to a loss of \$1.5 million (\$0.03 per share) for the same period last year. During the 3rd quarter, Seabridge invested \$17.2 million in mineral interests, primarily at KSM and Iskut, compared to \$9.6 million during the same period last year. At September 30, 2018, net working capital was \$7.9 million compared to \$19.6 million at December 31, 2017. [View release](#)

**Solstice** updated results from the summer, 2018 work program at its 100% owned 920 km<sup>2</sup> Kahuna Gold Project, located near Rankin Inlet, Nunavut. The objectives of the 2018 program were to identify targets for potential drill follow up and also to prospect under-explored parts of the large project area.

This news release summarizes results of regional sampling conducted during 2018 (Figure 1) and focusses on the Westeros area where detailed sampling has now outlined a 15 km<sup>2</sup> area of gold-bearing boulders and, locally, gold in

outcrop, referred to as Qaiqtuq target (Figure 2). Highlights include:

A maximum gold value in sampled boulders of 66.6 g/t1 gold from a grab sample collected by Roscoe Postle Associates ("RPA") taken during their field inspection in September 2018 (this sample was collected from a boulder that previously assayed 17.7 g/t gold). Other significant gold values include 54.9 g/t (boulder), 34.4 g/t (boulder) and 24.4 g/t (outcrop) gold.

A grab sample of silicified iron formation in outcrop, taken within metres of the 66.6 g/t gold in boulder grab sample, returned 5.74 g/t gold. Most boulders come from areas interpreted to be locally sourced. [View release](#)

**Silver Range Resources** announced it has granted Canarc Resources Corp. ("Canarc") the [option to acquire](#) a 100% interest in the Hard Cash and Nigel properties (the "Properties"), Nunavut. The Properties are located at the western end of the Ennadai-Rankin Greenstone Belt, which extends from Rankin Inlet to southwestern Nunavut. At the eastern end of the belt, Agnico Eagle Mines Limited is currently developing the high grade Meliadine mine (proven and probable reserves of 16.1 million tonnes at 7.12 g/t gold, containing 3.7 million ounces of gold).

**Solstice** provided complete results from a 2018 [high-resolution till program](#) covering part of the extensive 920 km2 Kahuna Gold Project, located near Rankin Inlet,

Nunavut. The objective of the Hi-Res till program was to test for gold potential in several priority target areas where relatively limited outcrop exists. The survey area lies southwest of the previously described Qaiqtuq target area which contains abundant elevated gold in boulders\*\* and, locally, gold in outcrop (see news release dated November 13, 2018).

**TerraX Minerals Inc.** announced due to significant demand, the company has increased and closed its previously announced non-brokered [private placement](#) for \$1.50 Million to \$2.3 Million. The placement now consists of 5,887,500 units of the Company at a price of \$0.40 per Unit. Each Unit shall consist of one common share and one transferable common share purchase warrant. Each Warrant shall be exercisable into one additional common share of the Company for a period of three years from closing at an exercise price of \$0.60. All securities issued are subject to a statutory hold period in Canada expiring on March 17, 2019.

The net proceeds of this financing are to be used to fund the Company's general and administrative expenses and to complete targeting for the drill program planned for early 2019. Certain directors, officers and insiders of TerraX participated in this private placement. Finders fees in cash were paid on a portion of this placement.

### Calendar of events

- [Energy & Mines World Congress](#), December 10-11, 2018, Toronto
- [Association for Mineral Exploration Roundup](#), Vancouver, January 28-31, 2019.
- [PDAC 2019 convention](#), March 3-6, 2019, at the Metro Toronto Convention Centre.
- [Nunavut Mining Symposium](#), April 1-4, 2019, Iqaluit, NU

### Welcome new members!

On behalf of our members, we would like to welcome the following new members to the Chamber of Mines. We encourage your support of their business. Please join us in a warm welcome to:

- **Pure Elements Environmental Solutions.**, based in Yellowknife, offers engineering, education, employment/HR, training, and environmental services and field/operational support. Web site is [www.pure-elements.com](http://www.pure-elements.com) and contact is trina@pure-elements.ca.
- **Eavor Technologies Inc.**, based in Calgary, offers community engagement services, and consulting and research, and energy services. Web site is [www.eavor.com](http://www.eavor.com) and contact is Jeanine.vany@eavor.com.

## Member news releases this past month

- 30 November 2018 [Silver Range options Hard Cash & Nigel properties, Nunavut](#)
- 27 November 2018 [Mountain Province announces 2019 guidance, provides year-end update](#)
- 27 November 2018 [Dunnedin updates Kahuna, copper-gold strategy, appoints director](#)
- 21 November 2018 [Sabina announces new gold trend results near Goose Property](#)
- 19 November 2018 [Baffinland announces management change](#)
- 19 November 2018 [North Arrow updates NWT and Sask diamond projects](#)
- 19 November 2018 [Mountain Province announces Tom McCandless as VP exploration](#)
- 15 November 2018 [Sabina receives Type A Water License from Nunavut Water Board](#)
- 14 November 2018 [Member's Corporate Presentation: North Arrow, November 2018](#)
- 14 November 2018 [Sabina announces interim financial results for quarter ended Sept 30](#)
- 14 November 2018 [Seabridge files third quarter report and financial statements and MD&A](#)
- 14 November 2018 [Baffinland Q3 IIBA highlights – highest Inuit employment reached](#)
- 13 November 2018 [Auryn drills gold-bearing hydrothermal system at Committee Bay](#)
- 13 November 2018 [Solstice extends gold target, identifies potential source, at Kahuna](#)
- 13 November 2018 [North Arrow reports microdiamond results from kimberlite ML8 at Mel](#)
- 12 November 2018 [TMAC receives project certificate for Boston-Madrid project](#)
- 12 November 2018 [Mountain Province announces quarter results](#)
- 9 November 2018 [Seabridge Gold secures \\$14 million private placement](#)
- 9 November 2018 [NorZinc reports results for Q3 and operations update](#)
- 8 November 2018 [Baffinland Iron Mines sets 5.1 million tonne shipping record](#)
- 8 November 2018 [TMAC provides exploration update at Doris and Madrid North](#)
- 8 November 2018 [TMAC reports record Q3 operating and financial performance](#)
- 8 November 2018 [NorZinc welcomes Anita Perry to its board of directors](#)
- 7 November 2018 [Osisko Metals announces closing of \\$7.5 million flow-through shares](#)

## Members corporate presentations

- November 2018: [North Arrow](#)
- November 2018: [Sabina Gold & Silver](#)

## Chamber of Mines' Social Media

Follow via live Twitter and Facebook links.



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## Mines & promising Northwest Territories mine projects

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

Project Name	Owner(s)	Commodity	Description	Status
<a href="#">Ekati Mine</a>	<a href="#">Dominion Diamond Mines</a> , and Dr. Stewart Blusson	Diamonds	Canada's first and largest diamond mine, 310 km. NE of Yellowknife. Open pit and underground. Mine life potentially to 2041. Workforce in 2017, 1,734. 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.	Media release, 1 November 2017, Dominion Diamond announces completion of plan of arrangement which saw the private corporation, The Washington Group of Companies, acquire Dominion Diamond Corporation and its interests in the Ekati and Diavik diamond mines.
<a href="#">Diavik Mine</a>	<a href="#">Rio Tinto</a> (operator) & <a href="#">Dominion Diamond Mines</a>	Diamonds	Canada's largest producer of diamonds, 300 km NE of Yellowknife. Mine life to 2025. Became all underground mine in 2012. Workforce in 2017, 1,233. New A21 open pit development will cost US\$350m over 4 years. A21 commence ore production in the first half 2018. Reserves at Dec 31, 2017 were 15.1 million tonnes at 2.8 carats/tonne for total of 42.5 million carats.	Media release, 1 October 2018 Diavik Stars of the Arctic dazzle in rough diamond tender
<a href="#">Gahcho Kué Mine</a>	<a href="#">De Beers Canada</a> (51% and operator) and <a href="#">Mountain Province</a> (49%)	Diamonds	Located approximately 280 km NE of Yellowknife, NWT. Open pit mine with life of 12 years. Mine reached commercial operation in Q1 2017. Workforce in 2017, 483. Plan is for three open pits to mine 5034, Hearne and Tuzo ore bodies producing average of 4.5 million carats/year. Hearne began production in April 2018. Reserves at 31 March 2014 (production commenced Q3 2016) were 35.4 million tonnes at 1.6 carats per tonne for 55.5 million carats.	Media release, 27 November 2018 Mountain Province announces 2019 guidance, provides year-end update  Media release, 19 November 2018 Mountain Province announces Tom McCandless as VP exploration  Media release, 12 November 2018 Mountain Province announces quarter results
<a href="#">Prairie Creek</a>	<a href="#">NorZinc</a> (formerly <a href="#">Canadian Zinc Corporation</a> )	Zinc-lead-silver	Proposed underground mine 120 km W of Ft. Simpson. Estimated mine jobs: 220 All permits now in place to construct and operate the mine. Feasibility Study completed in 2017 supports 15-year mine life. Subject to completion of financing, and 2.5-year construction phase, production proposed for mid-2020. In 2017, the Mackenzie Valley Environmental Impact Review Board recommended approval of the proposed all season road.	Media release, 9 November 2018 NorZinc reports results for Q3 and operations update  Media release, 8 November 2018 NorZinc welcomes Anita Perry to its board of directors



			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 minesite.	
NICO	Fortune Minerals Ltd.	Cobalt-gold-bismuth-copper	Proposed open pit and underground mine located 50 km NE of Whati. Estimated mine jobs: 150. Mine life, 20 years. In March 2018, The Mackenzie Valley Environmental Impact Review Board has recommended that the Tlicho all-season 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 Whati to the territorial highway system.	Media release, 30 October 2018 Fortune reports government approvals for the Tlicho All-Season Road
Kennady North	Mountain Province Diamonds	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.	
Indin Lake	Nighthawk Gold	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, 22 October 2018 Nighthawk reports multiple high-grade gold intercepts at Treasure Island further demonstrating untapped potential of the Indin Lake Gold Camp

Pine Point	Osisko Metals	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, 7 November 2018 Osisko Metals announces closing of \$7.5 million flow-through shares
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, 14 November 2018 Seabridge files third quarter report and financial statements and MD&A  Media release, 9 November 2018 Seabridge Gold secures \$14 million private placement
Selwyn (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, 10 October 2018 Avalon provides progress report on Nechalacho Rare Earths Project, Yellowknife, NWT

## Mines & promising Nunavut mine projects

The following table describes leading mineral development projects in Nunavut.

Project	Owner(s)	Commodity	Description	Status
<a href="#">Meadowbank Gold Mine</a>	<a href="#">Agnico Eagle Mines</a>	Gold	In operation since 2010. Open pit mine located in the Kivalliq Region, 300 km west of Hudson Bay and 70 km N of Baker Lake. Mine jobs: 775 AEM announced they will develop Amaruq satellite deposit, 50km from minesite and add 6 years to mine life, beginning in 2019. Construction of the Amaruq Exploration Access Road commenced in first quarter 2016. Road construction is ongoing with nine kms completed to date of expected total length of 64kms.	24 October 2018 Agnico Eagle reports third quarter results
<a href="#">Mary River Iron Mine</a>	<a href="#">Baffinland Iron Mines Corporation</a>	Iron	In operation since September 2014; Open pit mine 936 km N of Iqaluit. Mine jobs: 602 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, 19 November 2018 Baffinland announces management change  Media release, 14 November 2018 Baffinland Q3 IIBA highlights – highest Inuit employment reached  Media release, 8 November 2018 Baffinland Iron Mines sets new 5.1 million tonne shipping record
<a href="#">Hope Bay</a> (Mine began commercial production May 15, 2017)	<a href="#">TMAC Resources Inc.</a>	Gold	Gold mine 130 km S of Cambridge Bay. TMAC's property covers the majority of the Hope Bay Greenstone Belt. Workforce in 2016: 335 First gold poured in first quarter 2017 and achieved commercial production in second quarter 2017.	Media release, 12 November 2018 TMAC receives project certificate for Boston-Madrid project  Media release, 8 November 2018 TMAC provides exploration update at Doris and Madrid North  Media release, 8 November 2018 TMAC reports record Q3 operating and financial performance
<a href="#">Meliadine</a>	<a href="#">Agnico Eagle Mines Ltd.</a>	Gold	Proposed open pit and underground gold mine, 25 km NE of Rankin Inlet. Estimated construction jobs: 1,000 Estimated mine jobs: 700 IIBA signed June 2015. Initial capital cost estimate \$911m; mine life 14 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 3.4 million ounces of gold in proven and probable reserves* (14.5 million tonnes at .32 g/t) and a large mineral resource.	Media release, 25 July 2018' Agnico Eagle reports Q2 results; production guidance, Amaruq permit, Meliadine on budget and on schedule; drilling continues to extend mineralization at multiple sites  Media release, 16 July 2018, Agnico Eagle updates Nunavut projects; water licence granted for Whale Tail, production on schedule, Amaruq exploration expands, sealift season commences at Meliadine  <a href="#">The Meliadine project was approved for development on February 16, 2017 and is now under construction.</a>
<a href="#">Back River</a>	<a href="#">Sabina Gold &amp; Silver Corp.</a>	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	Media release, 21 November 2018 Sabina announces new gold trend results near Goose Property  Media release, 15 November 2018 Sabina receives Type A Water License from Nunavut Water Board

			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, 14 November 2018 Sabina announces interim financial results for quarter ended Sept 30
Kiggavik	AREVA Resources 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	Nunavut Government announced that the Grays Bay Port and Road project did not qualify for federal Transport Corridor funding.  Company stated publicly that project needs Grays Bay Road and Port project infrastructure to become a mine.
Chidliak	De Beers	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, 13 September 2018 Peregrine Diamonds announces completion of plan of arrangement
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, 26 October 2018 ValOre secures bridge loan and announces intent to proceed with rights offering
Qilalugaq	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, 19 November 2018 North Arrow updates NWT and Sask diamond projects  Media release, 14 November 2018 Member's Corporate Presentation: North Arrow, November 2018  Media release, 13 November 2018 North Arrow reports microdiamond results from kimberlite ML8 at Mel
Committee Bay Gold Project	Auryn Resources (purchased North Country Gold Corp.)	Gold	• High grade gold endowment • Existing exploration infrastructure • 217,600 hectares with district scale discovery opportunities	Media release, 13 November 2018 Auryn drills gold-bearing hydrothermal system at Committee Bay



## Project maps

