



## **Growing the Nunavut Mining Industry**

*Presentation to the 2018 Northern Lights Conference: Session XI  
Northern Mining Development: Developing New Arctic Mines*

*By: Alex Buchan, VP-Nunavut, NWT & Nunavut Chamber of Mines, February 2, 2018*

## Key Messages

- Mining is providing significant new benefits
- Strong opportunity and need for growth
- We face opportunities and challenges
- We can best face it together
- Now is a good time to start



In broad strokes, here is what I will speak to you about in my presentation today.

## Who is the Chamber of Mines?

- Our Vision: *A vibrant and sustainable exploration and mining industry in the NWT and Nunavut which has the support of the peoples of the North.*
- Our Mission: *To provide leadership on, and advocate for, responsible and sustainable mineral exploration and development in the NWT and Nunavut*
- Represent many members with interest in a strong northern minerals industry, including:
  - Mining & exploration
  - Service & supply
  - Consultants
  - Indigenous corporations
  - Individuals
- Offices in Yellowknife, NWT and Iqaluit, NU



3

Let me just start with a quick introduction on our Chamber.

Our Chamber of Mines is the minerals industry association for both the Northwest Territories and Nunavut.

Through our Vision and Mission, we champion on behalf of our members for a strong, robust and beneficial northern minerals industry.

We've been around for awhile, and last year we celebrated our 50<sup>th</sup> Anniversary.

We encourage you to join and provide us with your added support.

## Over 60 years of Nunavut mining history

- 1950s – Rankin (nickel)
- 1970s – Nanisivik (zinc, lead)
- 1980s – Polaris (zinc-lead), Lupin (gold), Cullaton Lake (gold)
- 2000s – Jericho (diamonds)
- 2010s – Meadowbank (gold), Mary River (iron), Hope Bay (gold)



For the past 60 years, we've had mining in Nunavut.  
Here are a few examples of mining over the decades.

## Historical mineral production

– Over C\$60 billion since 1932 –

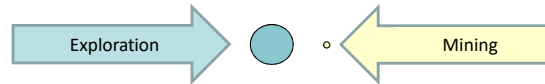
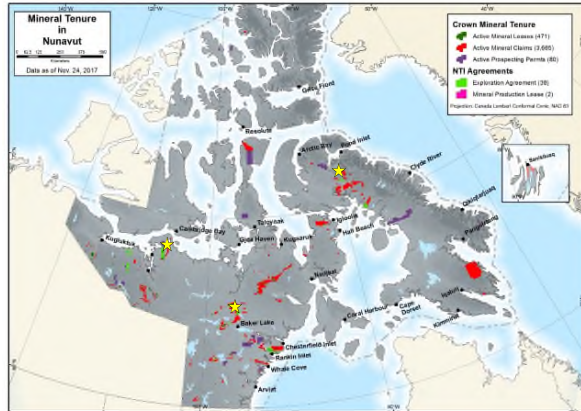


**Current & Past Producing Mines:** Ekati • Diavik • Snap Lake • Meadowbank • Con • Giant • Lupin • Polaris • Nanisivik • Pine Point • Cantung • Discovery • Rankin Nickel • Rayrock • Outpost Island • Supercrest • Eldorado • Ruth • Terra • Norex • Silver Bay • Colomac • Tundra • Camlaren • Contact Lake • Ptarmigan • Tom • Mon • Cullaton Lake • Salmita • Hope Bay • Negus • Thompson-Lundmark • Rich • El Bonanza • Rycon • Bullmoose

That mining has generated over \$60 billion in wealth for the North and for Canada.  
This is from both NWT and Nunavut, when Nunavut was part of the NWT.

## We produce that wealth from a small footprint

- Mining is a pinprick:
  - The area of all NU mines (Meadowbank, Amaruq, Hope Bay, Mary River, Meliadine) is 0.006% of the area of Nunavut.
- Exploration small too:
  - All mineral tenure (claims, leases, prospecting permits) is only about 2.6% of area of Nunavut.
  - Minimal to no impact from exploration activities



*Note, circles not to exact scale, but shows the concept*

6

And we have produced that wealth from a pretty small footprint.

Our current mines are very small footprints (the stars are way too big) at 0.006% of the area of Nunavut.

And our exploration, while larger at 2.6% of the area of Nunavut, sees very little to no impact and generally over very short periods.

If asked:

Total area of Nunavut is 2,093,190 sq.km. (land + water). That is 209,319,000 hectares (Stats Canada source)

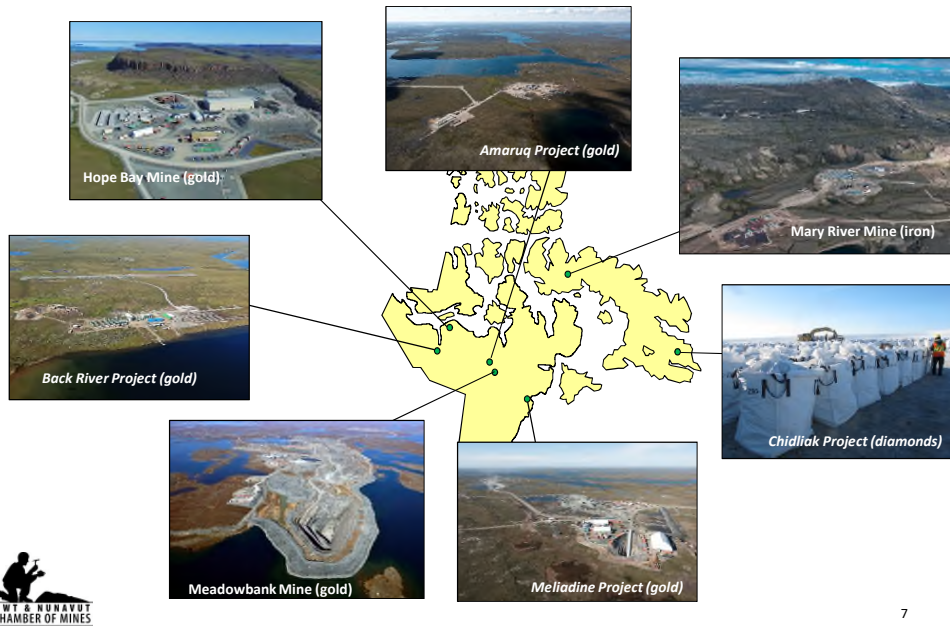
Claims: 3,598,929.6 ha (1.72% of Nunavut area)

Leases: 372,645.28 ha (0.18%)

Permits: 1,401,288.18 ha (0.67%)

Total area of Nunavut under mineral tenure is: 2.57, or 2.6%

## Today: 3 Operating Mines, Developing Projects



7

Today, we have 3 operating mines in Nunavut, and I'm proud to say, the Hope Bay mine where I work means we now have a mine in each region.

We also have three advancing projects:

- Amaruq, which will extend the Meadowbank mine life by 6 years.
- A new gold mine at Meliadine, now under construction near Rankin Inlet,
- The Back River Project which has just received its environmental approvals
- And even diamonds at the Chidliak project on Baffin Island.

For those of you who haven't seen our mines up close, let me give you a very quick tour in the following slides.



This is the Meadowbank gold mine, in Nunavut, approximately in the geographic centre of Canada.

It's in the Kivalliq Region of Nunavut.

Agnico Eagle built a 100 kilometre road to service the mine from nearby Baker Lake. That road is the longest road in Nunavut. The company also uses dike technology to allow them to mine gold that was under the lake. It's an open pit mine.





This is the Mary River iron mine in the Qikiqtani region of Nunavut.

Baffinland Iron Mines are essentially mining this hill, and because the rock is so iron rich, requires only blasting, crushing and then loading onto ships to take the ore to smelters to distant steel markets like Europe.

This is just the first ore body that they have approval to mine, and there is long term potential for a 100 year mine life here. It's also an open pit mine.

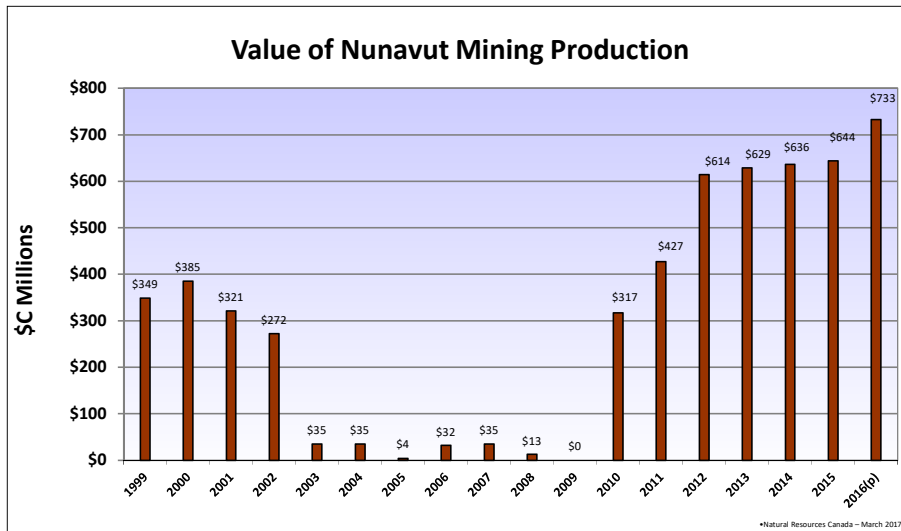


And this is my favourite 😊 the mine I work for, Hope Bay in the Kitikmeot Region of Nunavut. We also mine gold, and you can see a beautiful sample of high grade gold.

You see no open pits in the picture, as we are an all underground mine.

We hold mineral rights to an 80 km long area, and have two more deposits we plan to mine in future.

## Our Nunavut mines are growing significant value



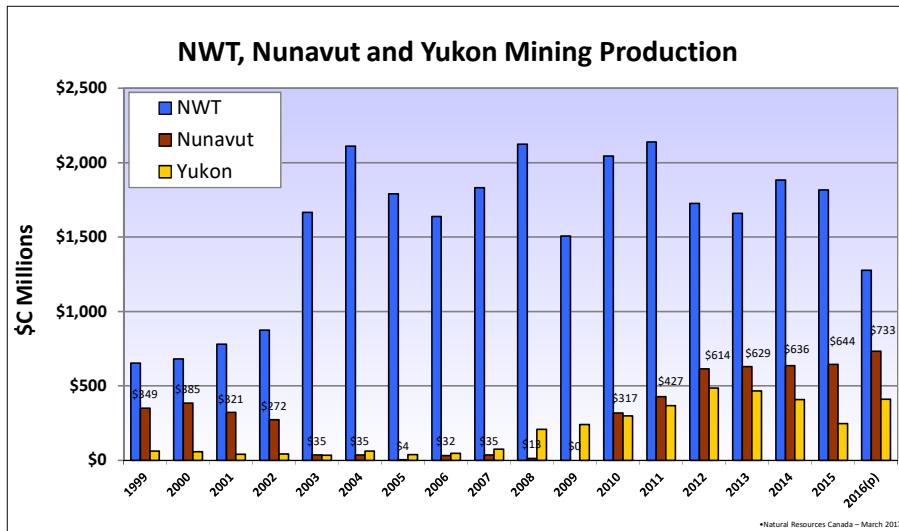
- Nunavut's mining industry is making a comeback from the 2000's
- Generating more, and much-needed, Nunavut benefits

11

Nunavut's mining industry is making a comeback from the 2000's. You'll note that in 2009, we had no mining.

This comeback is very important for the much-needed benefits mining is creating in Nunavut.

## Our Nunavut mines are growing significant value



- Nunavut's mining industry is making a comeback from the 2000's
- Generating more, and much-needed, Nunavut benefits

12

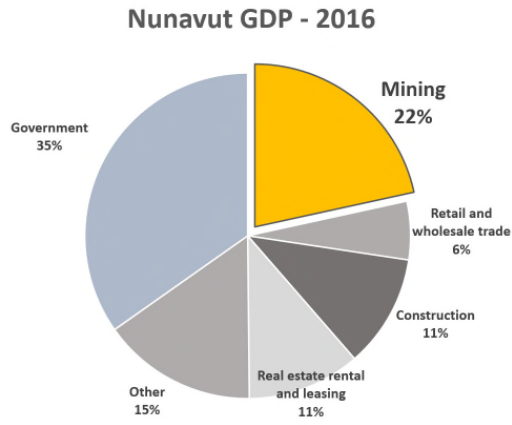
Just for perspective, we have a ways to go to reach the levels of the NWT, which is about twice as large as Nunavut.

They have done very well with their rich, world class diamond mines.

But Nunavut is stretching ahead of Yukon, also shown in yellow. And we have some good future ahead of us.

## Mining – largest private sector contributor

- **Nunavut mining's direct contributions are very large**
- **And even larger with indirect contributions in other sectors of the economy, e.g. construction, real estate, transportation, trade, etc.**



13

Nunavut mining's direct contributions are very large.

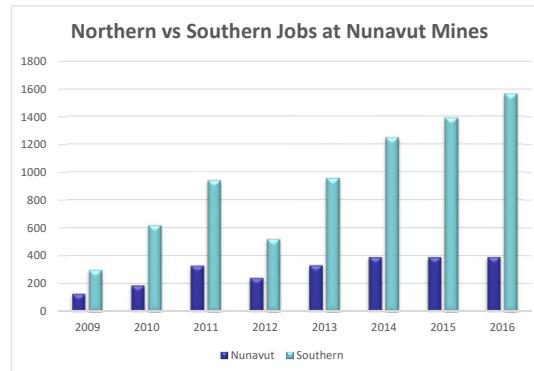
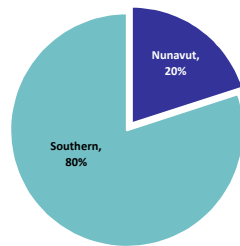
In 2016, direct mining contributions formed over 20% of our economy, which is a government dominated one.

But we make even larger contributions than this, when you consider we also benefit other sectors of the economy like construction, real estate, and transportation.

## Jobs at current operating Nunavut mines

- 2016 Employment

- Total jobs: 1,946
- Nunavut jobs: 388



Our Chamber has been assembling socio-economic data and here is our first summary of job benefits from mining, beginning with Meadowbank mine construction in 2009.

You'll see a rising trend which matches the construction and opening of three new mines since 2009.

A snapshot of 2016 employment in the pie chart shows a total workforce of nearly 2,000 workers in 2016, with 80% southern and 20% Nunavut.

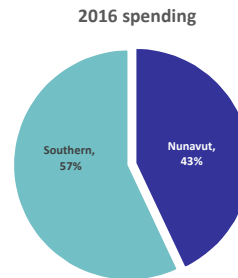
This helps remind us all that there is room for improvement here.

With industry and governments working together to promote good career opportunities, to get kids to stay in school and get better education, and to help with social issues in the communities, we can change this.

## Mining is growing NU Business Capacity, too

- \$252 million Nunavut business spend in 2016
  - \$2.2 billion spending in Nunavut since 2007

- Peter's Expediting
- M & T Enterprises
- Kusugak Consulting
- Qikiqtani Industry Ltd.
- Nuna Group of Companies
- AGLU Consulting & Training
- Kitikmeot Caterers Ltd.
- Medic North Nunavut
- Baker Lake Contracting & Supply
- Forest North Aviation & Logistics
- Eskimo Point Lumber & Supply
- Kivalliq Expediting & Storage
- Kitikmeot Blasting Services
- Kitikmeot Cementation Mining & Development
- Kasuk Exploration
- Jago Services
- Qillaq Innovations
- Toromont Arctic
- Kitnuna
- Oomilik Enterprises
- Akhaliak Consulting
- Qillaq Innovations
- Kiluk Ltd.



15

Mining is also contributing and helping Nunavut businesses to grow.

In 2016, our mines spent \$252 million in Nunavut. That was 43% of their total spend of about \$582 million.

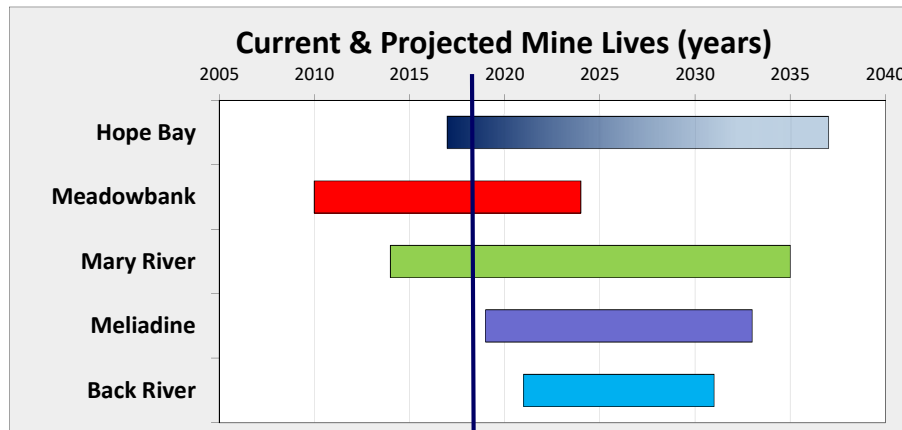
Since 2007, our mines have spent \$2.2 billion in Nunavut to construct and operate their mines.

As a result of their commitments to northern spending, we are seeing growth in Nunavut and Inuit companies working with our mining industry today.

A sampling of them is shown here. And the list is growing.

What's good is that when these companies are also committed to local hiring and spending, it further strengthens our economy.

## Looking ahead – projected Nunavut mine lives



16

The mining industry can last forever, but we all know a single mine doesn't.

So when mining is so critically important to your economy, it's important to know how long the current mines will last

Here are our projections of various mine lives.

Our future mining is looking pretty good at this point. (Touch wood – barring any unforeseen market crashes, and that sort of thing.)



## Exploration: we can't be complacent

Mine / Project Name	Commodity	Discovery	Start of Production	Discovery to Production
Nanisivik mine	Zinc, lead, silver	1911	1976	65
Polaris mine	Lead, zinc	1960	1982	22
Lupin mine	Gold	1960	1982	22
Mary River mine	Iron	1962	2015	53
Hope Bay mine	Gold	1988-99	2017	18-29
Meadowbank mine	Gold	1987	2010	23
Meliadine	Gold	1989	2020	21
Back River	Gold	1989	2021?	32
Hackett	Zinc, lead, copper, silver	1969	?	>50
Izok	Zinc, copper, lead, silver	1974	?	>45
High Lake	Copper, zinc, silver, gold	1956	?	>65

### IT IS IMPORTANT WE KEEP EXPLORATION INVESTMENT HEALTHY

- Finding a mine takes on average 10 years. And even once discovered, time to production can be VERY LONG.
- Markets and commodities change



17

But while mining is looking very good right now in Nunavut, it doesn't mean we can get complacent and turn our back on exploration.

Exploration is the lifeblood of mining, and keeping exploration investment healthy is critically important.

Here's why.

This chart shows our history of mineral discovery in Nunavut.

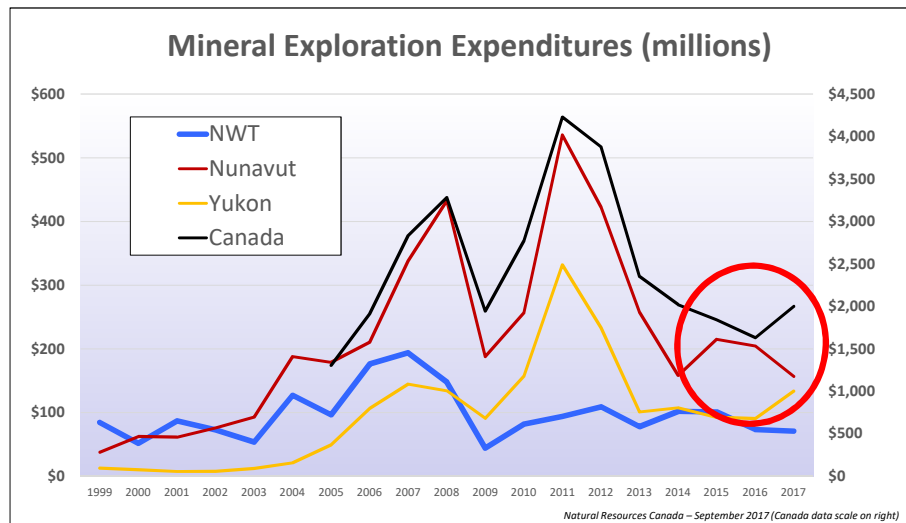
You'll see that the time from discovery to mining is phenomenally large. Some like Nanisivik took 65 years from discovery to production.

And some like High Lake are over 65 years, and still not in production.

Clearly, mines aren't light switches that we can turn on in an instant. So when one of our mines closes, we want to have something in the wings coming into production, with no interruptions.

Investment healthy, even when mining is good so that we have a bank of known opportunity.

## Worrisome: Nunavut exploration falling



- Canada and Yukon investment is increasing
- Nunavut is falling

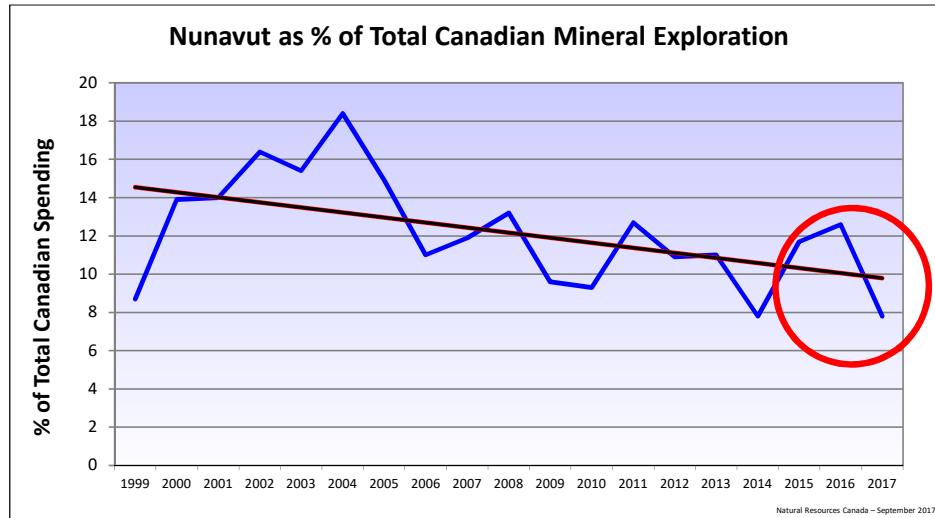
18

Because of the importance of a healthy exploration investment, it is worrisome when we see exploration investment falling in Nunavut.

We had some pretty significant spending with a record in 2011, but we have fallen since and projections for this year is another decline.

Shown another way, in the next slide, we are also losing out to other provinces in Canada.

## Nunavut's Share is falling, too



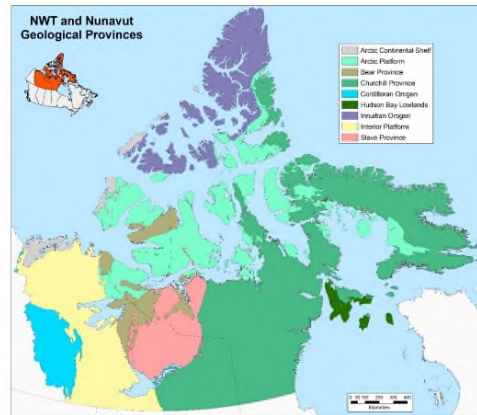
- Nunavut's share of Canadian exploration investment is projected to decrease significantly in 2017.

19

Our share of total Canadian exploration is falling too.

## Nunavut's mineral potential is certainly there

- Mining is a sunrise industry in Nunavut.
- Many geological provinces mean tremendous untapped mineral potential
- Changing markets and new technologies mean exploration is a “renewable industry”



We certainly can't blame the falling exploration investment on our mineral potential for it is very, very high.

Geologists have identified a variety of geological provinces in Nunavut, and each one has great potential.

## Where we need to focus efforts

- Reduce growing land access concerns for exploration
  - Land use planning, conservation initiatives, IOL's
- Invest in infrastructure – largest deficit in Canada
  - Gray's Bay Road and Port; Manitoba-Kivalliq road & power
- Reduce the northern cost of living & business
  - Infrastructure will help; carbon tax won't
- Increase Nunavut employment
  - Increase public awareness of mining opportunities
  - Better education outcomes and career choices
- Positive marketing (in Nunavut and outside)



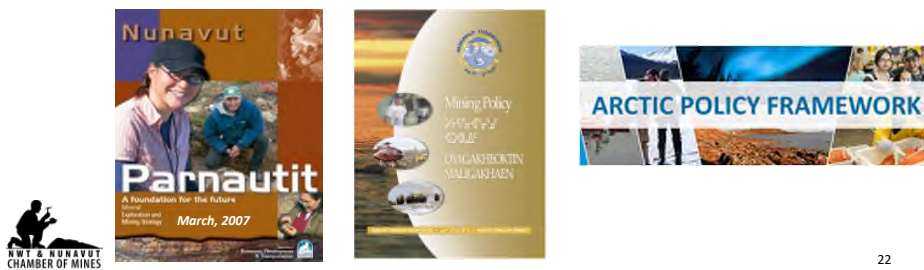
21

So looking at some of the key indicators in our industry, here is where we think we need to all focus our efforts:

- First, is to help exploration by addressing land access concerns
  - our members are flagging issues around the draft NU land use plan, around increasing conservation initiatives, and on some Inuit Owned lands.
- Second, invest in infrastructure. Nunavut suffers the biggest deficit in Canada. We need help with roads and ports and power.
  - Two good ones under discussion are Gray's Bay Road and Port, and the Manitoba-Kivalliq road and power link
- Reduce the northern cost of living and doing business
  - Infrastructure can help with this, but the proposed carbon tax won't given we just don't have great alternatives yet
- Increase Nunavut employment. This is important, particularly given we have such a high birth rate adding more kids to the employment line.
  - Increasing public awareness of our industry and all the great career and business opportunities it provides will help
  - So too will getting our kids to stay in school, to achieve higher levels of education, and selecting mining as something they want to do
- Finally, we do also need to get out and market ourselves. That is to investors to come and explore and help sustain our mining industry. But we also need to market internally to our own people. They need to understand that our industry can be very good for our future, and that we mine responsibly under stringent regulations.
- That is, after all, what the vision was of our land claim negotiators too, 25 years ago.

## Governments – public and Inuit – can help

- All three landlords must help
  - Nunavut Tunngavik Inc.
  - Government of Nunavut
  - Government of Canada
- They have policy and other tools that can help
- The Chamber of Mines and its members are here to help ...  
**... TO TURN ROCKS INTO BENEFITS FOR NUNAVUT AND CANADA**



22

In Nunavut, we have three landlords who can influence our industry: the Government of Nunavut, the Government of Canada, and Nunavut Tunngavik Inc.

All three need to work together with industry address the challenges we face so as to reap the opportunities we can create.

All of them have powerful policy tools and laws and regulations that can help. Three of them are shown here.

Our Chamber and our members are here to help, so that together we can turn rocks in to benefits.

## Now is a good time – 25 Years!



- 25 years ago we signed our land claim agreement. Now's a good time to take stock of what we've accomplished and make changes where needed.



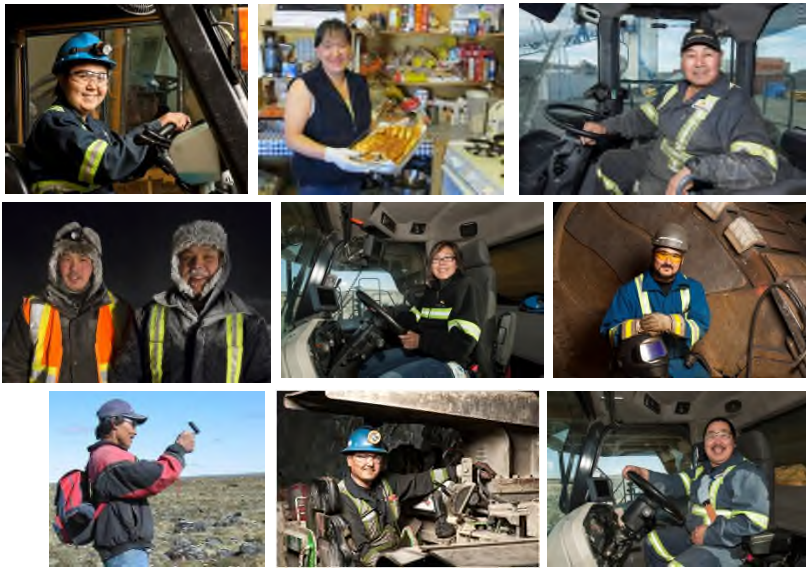
23

There's no better time to start.

This year, we celebrate a milestone – It's 25 years since we signed our land claim agreement. Since we became the largest private land holder in the world. Since we set the vision of using non-renewable resources to make our Inuit lives better.

This year could be a good year for us to take stock of what we've accomplished in our vision, and make changes where needed.

# Why it's important: our people's success!



At the end of the day, this is why it's important. Our people and their success!