



Mining support is needed to help the NWT economy – Land use planning can help –

*Presentation to: GNWT Land Use Planning Workshop – May 15, 2019
By: Tom Hoefer, Executive Director*

Thank you very much for the invitation to speak to you today.

The minerals industry is the largest contributor to the NWT economy today,

Exploration and mining are land based businesses, so naturally planning around lands is a natural fit with what we do.

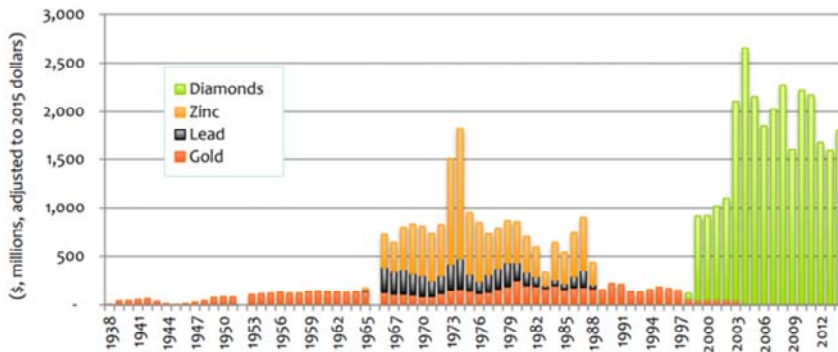
Key Messages

- Mining today is not the industry of my father's
- Mining benefits are significant and worth protecting
- Our minerals industry is ailing, current benefits are not sustainable
- Factors contributing to loss of investor confidence (It's our fault)
- A few facts about mining land use to guide ...
- How land use planning might help



These are the key messages I want to deliver to you today.

Significant changes in our minerals industry



- 4 diamond mines have brought unprecedented new value to NWT
- Ushered in a new era of “modern mining”

Source: NWT Bureau of Statistics, *Mineral Production*; Statistics Canada, *Inflation Rate*.

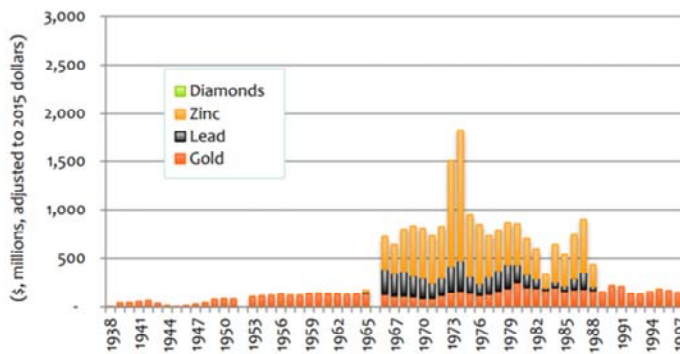


This chart shows mineral production in the NWT since gold production began in the 1930s up to diamond production. You can see that diamond mining began at just the right time to offset the loss of the gold mines.

You will note too the very large value that 4 diamond mines have brought the NWT in comparison.

Diamond mining ushered in a new era of what I have called “modern mining” to differentiate it from the mining of my father’s, for example.

Mining is not my father's industry

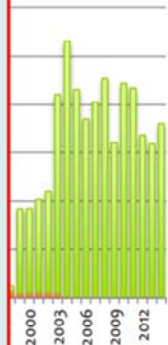


Source: NWT Bureau of Statistics, *Mineral Production*; Statistics Canada, *Inflation Rate*.



Significant improvements

- New land claims based legislation with co-management boards
- Mine environmental management systems to ISO14001 standards
- Individual mine environmental monitoring boards
- Closure planning even before construction
- Mines and exploration fully secured
- Socio economic agreements for each mine
- IBA's (with scholarships, business, etc.)
- Indigenous training
- Indigenous businesses
- Mines spreading benefits: flying workers in from all over the North
- Significant taxes and royalties to public, and for first time, Indigenous governments

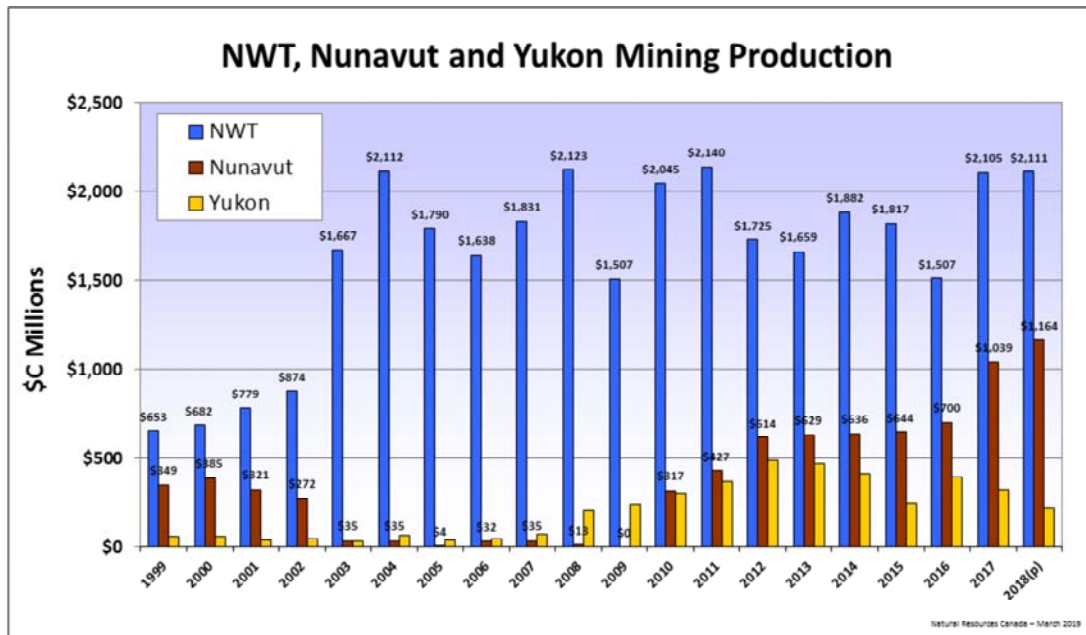


Diamond mining came at a time when much was changing with land claims negotiations and settlements, increasing recognition of section 35 Indigenous rights, sustainable development, corporate social responsibility, etc., a topic for another day's discussion.

I've identified here what this changing world brought to create a new industry environment and new actions by industry. This list is not fulsome.

- Regulated by new land claims based legislation with co-management boards
- Mine environmental management systems to ISO14001 standards or meet and exceed
- Each mine has an independent environmental monitoring agencies / boards created for oversight.
- Closure planning is done now even before construction
- Full security – meaning that in the unusual event that a mining company goes into receivership, there is sufficient security in place for government to reclaim the mine sites. Exploration too today.
- Socio economic commitments and agreements for each mine signed with the NWT Government.
- IBA's (impact benefit agreements aka participation agreements) negotiated by all mines with Indigenous governments.
- Indigenous training – Leading training programs in place now.
- Indigenous businesses - unprecedented Indigenous business success.
- Mines spreading benefits far: flying workers in from all over the North – Virtually all communities have the opportunity to work in mining.
- Significant taxes and royalties to public, and for first time, Indigenous governments – Not only flowing to public governments but for first time to Indigenous governments too.

A closer look at diamond production value



Let's zoom into our diamond production.

These are federal government statistics for the three territories.

You can see that the NWT is far ahead of the other two territories and many years production is over \$2 billion.

What's important is how those production values translate into benefits, in the next slides.

Note: Nunavut is interesting too in that its seeing a rebirth of mining beginning in 2010, and in a similar position as NWT when diamond mining began in 1998.

Mineral production = significant socio-economic benefits

- 60,000 person-years of employment
 - 48% northern / 52% southern / 25% Indigenous
- \$20 billion plus in business
 - \$14 billion northern business of which \$6 billion Indigenous
- Well over \$100 million to communities in IBA payments, scholarships, donations
- \$Billions in various taxes, royalties to governments (public and Indigenous)

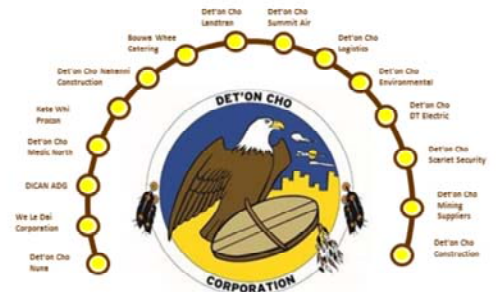


From that diamond production value, the diamond mines have created significant benefits. These figures are since 1996.

They've been a real game changer for the NWT when you look at jobs, business, community benefits, and taxes, as described here.

How mining benefits Indigenous corporations – Det'on Cho

- **Approximate YKDFN employment:**
 - 100 members are employed directly by the mines and another 100 members indirectly (through companies such as DCC, etc.)
- **Det'on Cho Corporation employment:**
 - DCC has approximately 220 direct employees with an additional 660 workers through partnerships and JVs (Approximately 70% NWT residents)
- **Bouwa Whee Catering:**
 - 160 employees, 90% are NWT residents, 50% are Indigenous
- **DCC contribution to local economy:**
 - Average \$90,000+ / year (higher earning than National avg)
 - \$54M in wages (\$90K * 600) spent in local economy
 - Transfer payment: \$17,650,000 (600 * \$29,431)



If you look at just one Indigenous development corporation, the Yellowknives Dene First Nation's Det'on Cho Corporation, you'll get an idea of just how important the industry has been.

It's important to corporations like this that benefit are sustained and even grown.

(Slide provided by Det'on Cho Corporation)

Training is facilitating success, eg, NWT

Mine Training Society's Results: 1,471 people employed

- 7% of the entire NWT working labour force

Recipe for Success:

- Influential Partners
 - Aboriginal Governments
 - Industry
 - Public Government
- Partner funding: Over \$53 million since 2004
- REAL JOBS after training



A few quick slides to show how success has been created and what it looks like.

With a training partnership between Aboriginal and public governments and industry we realized great success, with nearly 1500 northerners employed.

That's a whopping 7% of the labour force.

It's an award winning program in Canada.

Significant Indigenous mining business – \$6 Billion

Mining has spawned a new generation of Indigenous businesses in NWT and Nunavut

- Tli Cho Logistics Inc.
- Tli Cho Landtran Transport Ltd.
- Tli Cho Air Inc.
- Tli Cho Road Constructors Ltd.
- Tli Cho Blasting Services Inc.
- Denesoline Western Explosives
- Aboriginal Engineering Ltd.
- Tli Cho Engineering & Environmental Services Ltd.
- Ventures West Transport Ltd.
- Metcrete Services Ltd.
- Metshaw Freighters Ltd.
- Kete Whii Ltd.
- Kete Whii Procon J.V.
- Sodexo Alliance
- Exploration Medical Services
- Kitikmeot Cementation Mining & Development
- Lac De Gras Constructors
- Nishi Khon SNC Lavalin Inc.
- North Slave Logistics
- Nuna Logistics
- Malca-Amit (NWT) Ltd.
- Nishi Khon / SNC Lavalin Inc.
- Tundra Site Services North
- KBEX
- Ekati Services
- De'ton Cho Earth Energy
- De'ton Cho DNX
- Bouwa Whee Catering
- De'ton Cho Foraco
- De'ton Cho Hazco
- De'ton Cho Nahanni Construction
- De'ton Cho New North
- De'ton Cho NUNA
- De'ton Cho Pure Earth Elements Environmental Solutions
- De'ton Cho Scarlet Security
- De'ton Cho Stantec
- De'ton Cho Training & Conference Centre
- De'ton Cho Logistics
- De'ton Cho Medic North
- De'ton Cho Mining Supplies
- DICAN / ADG
- Kete Whii / Ledcor
- Kete Whii / Procon
- Akaitcho Helicopters
- Dene-Emco Ltd.
- Denesoline/Air Tindi Joint Venture
- Denesoline/Arcan Construction
- Denesoline/De Beers Labour Contract
- North Slave Freighters Ltd.
- Northcan Freighters Ltd.
- Denesoline/Discovery Mining Services – Logistics Expediting
- Denesoline/Deton Cho/Procon
- Denesoline/Deton Cho/Ledcor
- Denesoline/Dyno Nobel
- Denesoline/ESS Compass
- Denesoline/McCaw Drilling & Blasting
- Denesoline/Nuna Logistics
- Denesoline/Tli Cho Logistics
- Lutsel K'e Air Services
- A.T.B. Construction
- Trinity Helicopters
- Nuna Logistics (on there already)
- Kitnuna
- Kitikmeot Caterers
- Kitikmeot Cementation Mining & Development
- Geoteck Ekutak
- Medic North Nunavut
- Nunavut Sealink & Supply
- Nanami Stantec Ltd
- Toromont Arctic Ltd
- Kitikmeot Blasting Services
- Kitikmeot Tire



Business success has been phenomenal.

Of the \$20 billion spent from 1996 to 2017, 70% of the moneys spent on the diamond mines has stayed in the North.

That means \$14 billion in northern business.

And of this, \$6 billion was with a brand new generation of Aboriginal businesses that never existed before. Before diamonds, there were perhaps a handful of Aboriginal companies that could do work with mining.

This is huge. Imagine if no diamonds had been discovered. We'd be a lot poorer in the north.

Taxes and Royalties – now paid to Indigenous governments, too

- Taxes
 - \$ Billions paid to governments of Canada, NWT, Nunavut in various taxes
 - Tlicho Government now collects 95% of income taxes in their land claim region
- Royalties
 - Canada has been the main recipient, and shares with settled land claimants
 - Under Devolution, Canada now shares 50% of royalties with NWT Government
 - NWT Government shares 25% of the royalties with Indigenous governments



There have been billions paid in taxes and royalties.

That is significant, and what is new is that the Tlicho Government now also receives income taxes. Mining jobs are high paying and deliver high taxes to government.

Royalty sharing is now with Indigenous governments, through land claim agreements and through devolution.

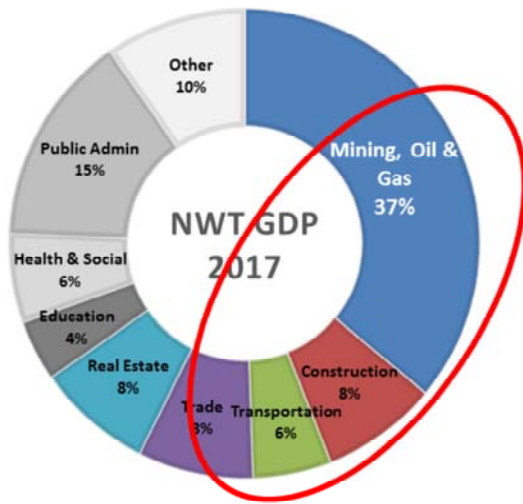
Today – Mining is increasingly becoming more Indigenous

- Training Indigenous workers
- Employing more Indigenous mine workers
- Conducting more business with Indigenous companies
- Providing benefits to Indigenous communities
- Providing taxes and royalties to Indigenous governments
- **INDIGENOUS NORTHERNERS ARE BECOMING THE INDUSTRY**
- Trending up: Indigenous equity participation in projects and infrastructure



Today our northern mining industry is become more Indigenous than it ever was.
In Canada, we are starting to see participation evolve now to ownership.

Largest private sector economic contributor



- Mining is the north's economic advantage
- It's the largest direct private sector contributor to the NWT economy
- And, contributes more in other sectors of the economy, eg, construction, transportation, trade, real estate
- There is nothing in non-government activity that will match this, or replace it.



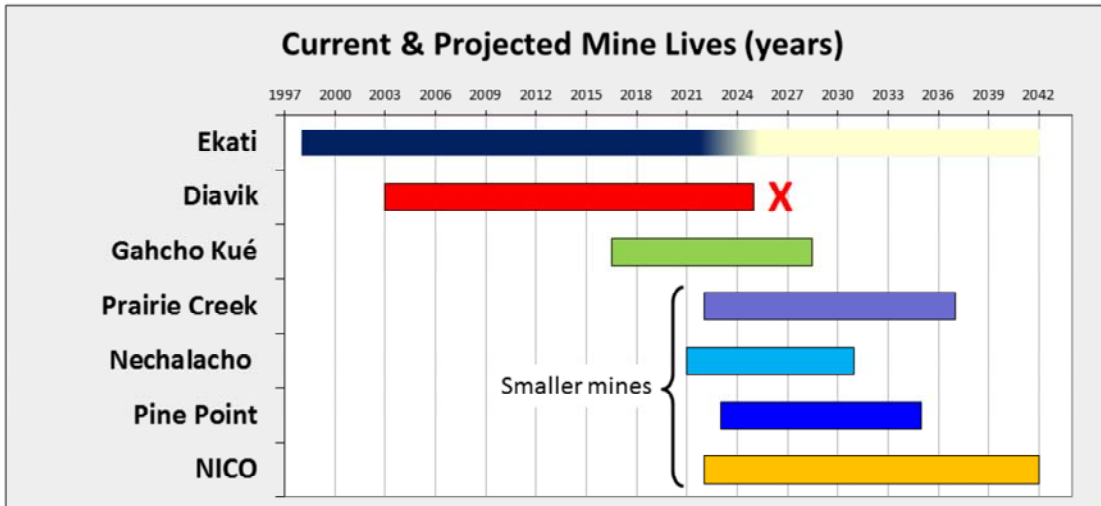
- *"Over the past 3 years, diamond mines contributed 41% of the GNWT's corporate income, fuel, property and payroll tax revenue" ... GNWT Spokesperson*

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With all of those benefits, one can understand why the minerals industry is the largest direct private sector contributor to the economy. And with indirect benefits even bigger. It's worth protecting, given there are not other sectors with this kind of benefit.

Note. There was no oil production in 2017 due to the pipeline shut down, so most of that slice of the GDP was mining.

Mining benefits are at risk – NWT mine lives



- Diavik employs approximately 1,000 workers
- Workforce for all potential new mines will not replace Diavik



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So this is where our problem is coming from.

At first blush, this looks good.

While Diavik will close in 2025, we have some new mines in the works.

While we have 4 potential mines, they are much smaller than the one Diavik mine, and even much smaller than the Ekati mine. They won't offset the closure of the large Diavik mine.

We need more mines.

Economic projections not healthy

The Conference Board of Canada / Le Conference Board du Canada

NORTHWEST TERRITORIES

Economic Prospects Grim

Chapter Summary

- Peak diamond production has passed in the Northwest Territories. Diamond production will begin to fall, and all three operating mines will close by 2035.
- Two new metal mines will open in the next five years, but that will not make up for the decline in diamond production, leaving mining output to fall for most of the next 23 years.
- Almost all sectors of the territory's economy will suffer as a result of declining diamond production. Employment will contract, resulting in higher outmigration and unemployment.
- As a percentage of the territorial population, the number of seniors by 2040, putting pressure on the government's finances.
- Real economic growth will contract by 2.9 per cent this year and before falling for most of the rest of the forecast period.



Government of Northwest Territories



Leaders make commitment on the path towards northern prosperity at the Northern Strengths, Northern Prosperity Economic Symposium in Inuvik

Inuvik — October 4, 2018 Comeniusaqat

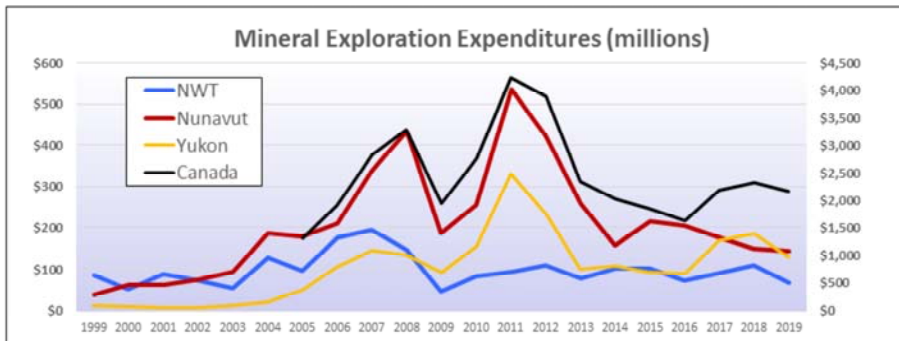
Leaders from the Government of the Northwest Territories (GNWT), Indigenous governments (IGOs), Katlodeeche First Nation (KFN), their economic development representatives and a representative from the Government of Canada concluded meetings in Inuvik yesterday where they had discussions focused on identifying concrete ways to work together to create a prosperous and strong territory, while still respecting the Aboriginal, Indigenous and individual rights, legal authorities and priorities of each government.

... the NWT is facing significant economic challenges and steps need to be taken immediately

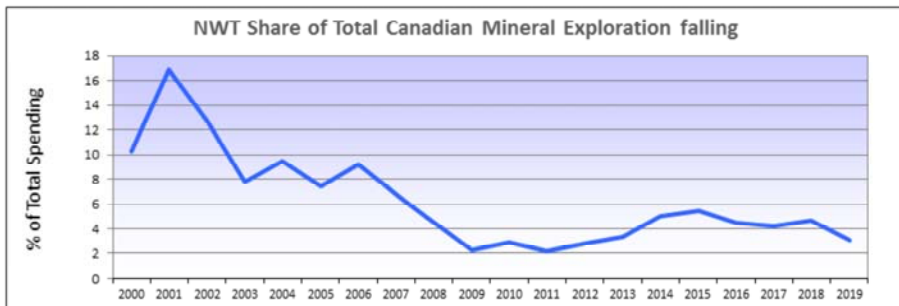
Economists with the Conference Board of Canada say the maturing diamond mines will create a downturn in the NWT economy.

Our leadership – public government and Indigenous – now agree and recognize the NWT is facing an economic problem.

At the heart of the problem: exploration investment underperforming



- NWT mineral exploration investment continues to be problematic and below what we need to increase discovery success
- Compared to our neighbours, we have lost over \$1.4 billion in exploration opportunity
- It's not the markets or geology
- **It's our fault**



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We count on exploration to find new mines and sustain the mining industry.

We need to be exploring today to replace mines in the future.

However, the NWT has lost much opportunity since 2007, and we are feeling the loss of discovery today. Exploration investment is not coming here.

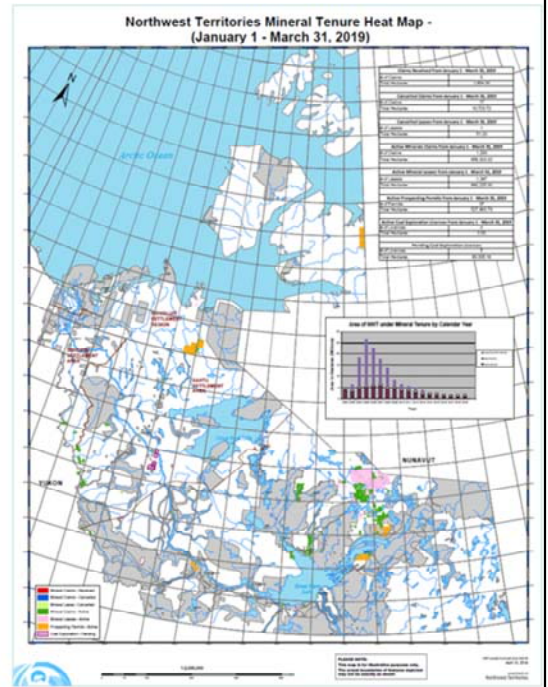
We've also lost share to other jurisdictions.

It's not geology or the markets that are at fault.

It's our fault, here at home in the NWT.

We've closed over 30% of the NWT

- All the grey is off limits to exploration
 - Conservation, eg: parks, candidate protected areas
 - Land claims
 - Under land use plans
- And some “open” areas are effectively closed
 - Upper Thelon
 - Tsa Tse Biosphere Reserve?
- Industry is increasingly challenged for access to land to explore and develop



But despite all of our great geological and mineral potential, and our strong benefits from mining, we've put over 30% of the NWT off limits to exploration.

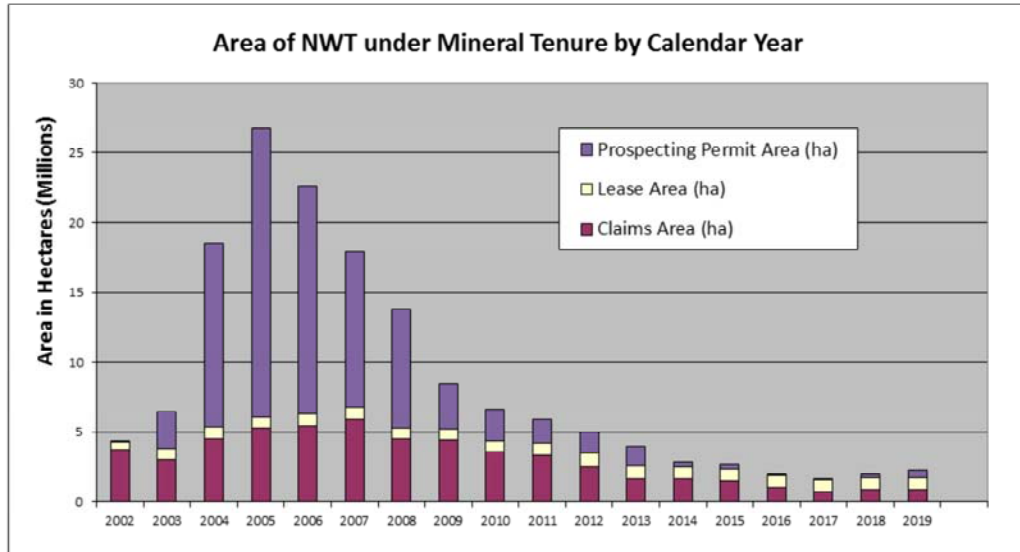
All the grey areas on this map are off limits to exploration today.

Even some areas which supposedly are open to exploration, have been effectively closed by communities. (eg, Upper Thelon shown in white colour on the map). Some areas like the huge 93k sqkm UNESCO biosphere reserve around Great Bear Lake will likely also contribute to investment uncertainty, if investors are reluctant to put money into a region with a global protection name to it.

If we limit access to land, we reduce the probability of exploration success.

There is increasing reduction in lands available to explore.

Mineral tenure reflects that poor investment interest



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This declining investor investment is seen in the mineral tenure statistics too. This is the area of land where there has been exploration interest. It has declining significantly as investors left.

What contributed to low NWT attractiveness?

- These events increased investment uncertainty, reduced land access, added costs
 - **2000-2018:** Unsettled land claims affect land access, create uncertainty
 - **2000-2014:** NWT Protected Areas Strategy – over \$25 million campaign sees 60,000 sq.km. withdrawn
 - **2007:** Akaitcho land claim 62,000 sq.km. interim withdrawal
 - **2007:** Thaidene Nene land withdrawal of 33,000 sq.km.
 - **2007:** 18,000 sq.km exploration blocked Upper Thelon, costs industry \$25 million lost investment
 - **2008:** New Akaitcho requirement for onerous Exploration Agreements
 - **2009:** North Arrow Minerals grassroots exploration challenged in court
 - **2010:** Akaitcho ‘public concern’ triggers EA for TNR Gold grassroots project
 - **2015:** ‘Public concern’ triggers EA for grassroots sand exploration
 - **2016:** UNESCO biosphere reserve over 93,000 sq.km. around Great Bear Lake
- And more on the horizon?
 - **2019:** Protected Areas Act proposes donations to help conserve land from development
 - **2019:** Same act proposes no mineral resource assessments on lands proposed for protection
 - **2019:** \$500 million Canada Nature Fund to match philanthropic funding to close lands to development



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What caused this, you ask?

Investor confidence has fallen for a variety of reasons and a number of events, shown here.

They include unresolved land claims, strong conservation initiatives creating land access challenges, and regulatory issues.

Many of these have still not been resolved.

There appear to be more things on the horizon which will make more lands off limits to development.

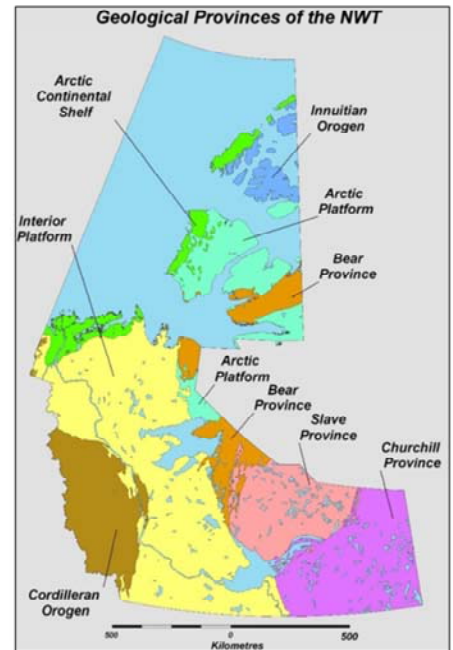
A few facts about mining land use to guide ... LUP'g



Before I move on to some recommendations with regards to land use planning, let me provide a few facts that are important to that planning.

The NWT's geological potential is fantastic

- 8 geological provinces
- Diverse mineralogy
 - Gold, silver, diamonds, lead, zinc, uranium, tungsten, rare earths, cobalt, bismuth, nickel, copper, iron, etc.
- Under-explored
- This equals tremendous mining opportunity
- Geologically, the NWT is one of the highest rated in the world in the annual Fraser Institute mining survey



First, we have tremendous mineral potential because we have great geology. Great geology is why mining is our economic advantage.

The colour scheme here represents regions of distinct geology, or geological provinces.

In our huge area, we have 8 geological provinces.

- This geological variety means great variety in mineral deposits and therefore mining opportunities.

- We are also under-mapped, meaning we have some of the poorest maps in the country.

- And because we are so big and remote, our infrastructure is underdeveloped and it is expensive to work here.

- This means we are under-explored compared to the rest of Canada.

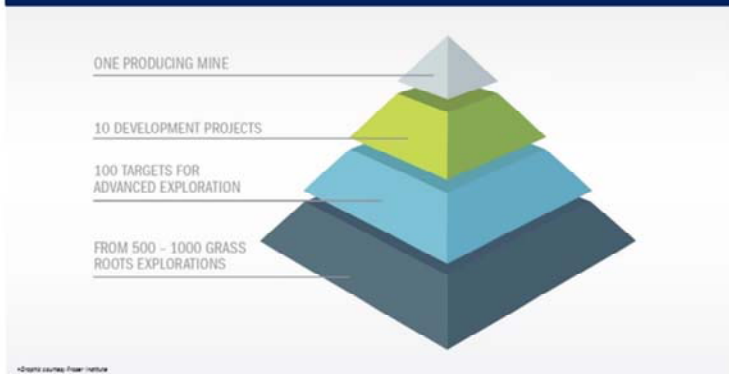
It means we have tremendous untapped mining potential.

Annually, in the Fraser Institute survey of mining companies, the NWT scores high for its geological potential.

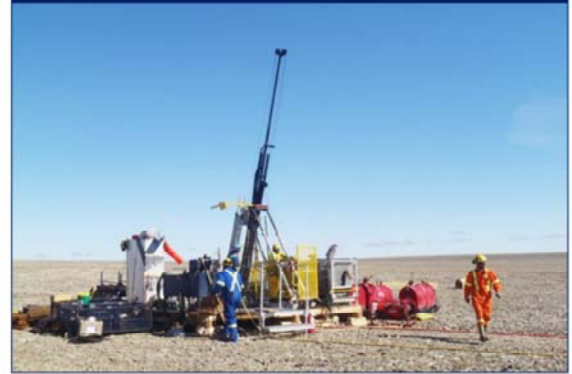
Failure odds, and physical footprint very small

- Not every exploration finds a mine; the odds are very much against success
- And Exploration footprint is small, and it is also reclaimed

Only 1 in 1,000 exploration projects becomes a mine



And exploration affects very little land



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But finding a mine is not easy.

In fact, explorers will fail most of the time; the odds of finding a mine are 1,000 to 1 against success.

That means it takes on average, 1,000 projects to create one mine.

This also means that you should never assume an exploration project will become a mine.

In addition, or exploration projects have a very small footprint, and has little effect on the land.

This picture on the right is of a diamond drill, and you can see how small it is.

Even exploration projects today have security to ensure they are cleaned up.

Bingo has better odds – many players, many cards

- We need “more players, more cards”
- Mining success improves with lots of exploration investment and multiple projects



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Bingo has better odds.

Bingo players increase their odds by playing many cards.

Just like bingo, we can increase exploration success if we have many projects. We need to increase investment to increase project numbers.

Mining has higher impacts on the land, but uses very little of it – And produces the highest value, responsibly –

- Diavik footprint about 15 sq.km.
- Will generate over \$15 billion
- That's \$1 billion per sq.km.
- And after mining will be reclaimed and returned to government as per approved plans
- Note:
 - Area of all current mines = ~ 0.005% of the NWT



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Mining, on the other hand, has a much bigger impact on the land, but it's on a relatively small areas.

This is the Diavik mine. The total value of diamonds it will produce is at least \$15 billion. And it's footprint is less than 15 sq.km. That's a whopping new wealth created of \$1 billion per square kilometre, one of the highest economic values per land area.

And when the mining is finished, Diavik will reclaim the land and return it to the owners, the government as per the plans they had to get approved by the regulatory system.

Note too, that the area of all the mines in the NWT is very tiny at 0.005% of the total area of the NWT

We need to sustain and even grow industry benefits – How can land use planning help? –

- Use a risk assessment approach to determine level of protection required
 - NWT and its development pressures are not the Amazon rain forest – be surgical not scattergun
- Don't permanently protect lands wherever possible
 - Leave options open for future generations – use land use planning tools
- Advance land use planning in the NWT
 - The dilemma is land claims not all completed, so the order might be problematic
- Conduct values mapping before drawing “no go” lines
 - K'at'l'odechee Atlas approach perhaps
- Provide Balance
 - Incent mining in each region as is proposed with new conservation areas
- Raise understanding of industry, how it works, how it is regulated, land use, etc.
 - Provide accurate information on new practices, not outdated examples like Giant



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So how can land use planning help?

- Use a risk assessment to determine the level of protection required. The threats to the environment in the NWT are not the same as the Amazon rain forest. So use different tools here then, more surgical ones.
- Don't close lands to permanent protection wherever possible. Once closed, the land is forever gone. Leave future generations some opportunities. Needs and attitudes change, as does technology, commodities needed, etc. Land use plans can be used to temporarily close lands, and decisions can be revisited regularly.
- Complete land use planning in the NWT. Much of the NWT is not covered with land use plans. Can we do them ahead of land claims settlement or wait until after?
- Conduct values mapping as the first step, in the absence of a completed land use plan, this will inform sensitivities and allow better land use decisions.
- Provide balance. Conservation is being incented; look at incenting exploration in each region too.
- Raise understanding of the minerals industry and how it works. This will help with better land use planning when the risks and opportunities are well understood by governments and land planners and regulators.

Switch the narrative too from “them vs us”

Why is industry here?

- At Government’s invitation to do what governments cannot do
 - Turn rock into benefits – jobs, business spending, taxes
 - Assume the risks of exploration, mining and the markets
 - Bring money to do the job
 - Bring expertise to share and build capacity & wealth
- We can do a fine job, but ...
- We aren’t magicians – we can’t do this alone
- **We need all governments’ collaboration and support**
 - Territorial, Federal & **Indigenous**



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There is often an oppositional “them vs us” narrative that is based in history, when mines were built on traditional lands with no consultation or participation. People have a defensiveness around industrial development given the past. As I’ve tried to show you in this presentation, the past has changed. Today, many northerners are active participants in, and beneficiaries of, mineral development. We will benefit from less defensive approaches.

Today, industry will come here because of governments’ invitation, to do what governments cannot do themselves.

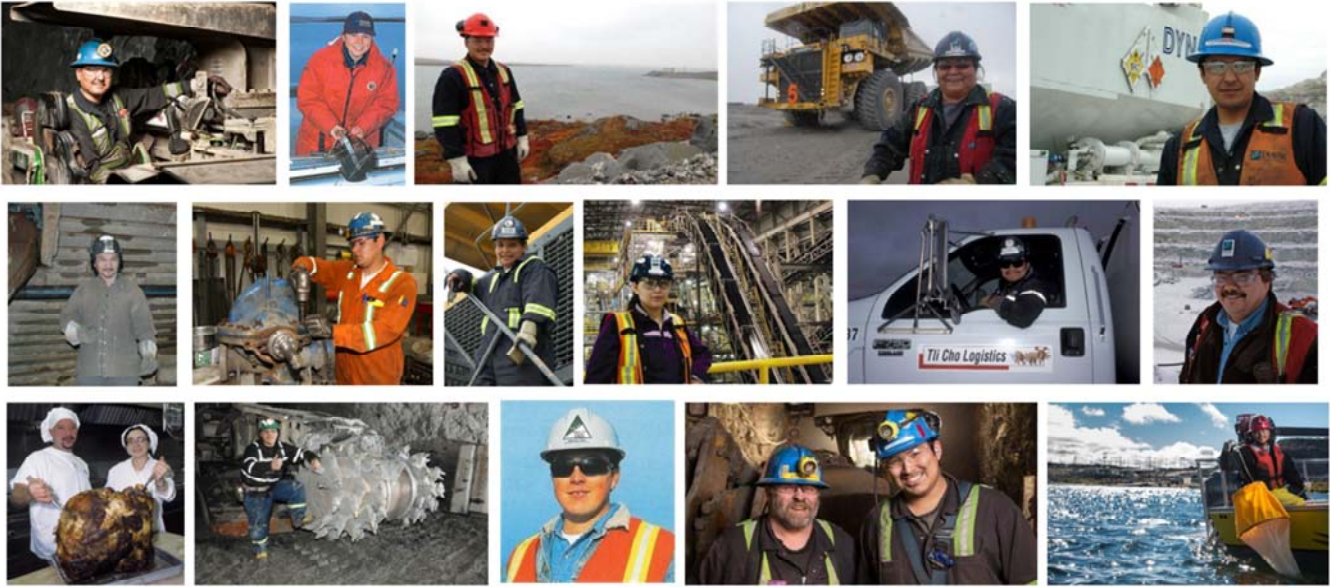
That is:

- To turn rock into jobs, businesses, training, community benefits, and revenues.
- To take on the risks associated with exploration, mining and the global markets.
- To bring millions and even billions of investment dollars.
- And to bring expertise that is free for the sharing.

A tall order to be sure.

Companies will accepted government’s challenge. But they can’t do it all alone. Industry also needs governments – NWT, Canada, and Indigenous – to help.

Why it's important – people success!



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For, at the end of the day, this is why the minerals industry is important: It's all about people success!

People success leads to community success and territorial success.

Our mineral industry is helping creating much people success.

We must sustain and grow them.



I'd like to leave this closing message.

Sunrise or sunset? That is our collective choice.

We have tremendous mining potential in the North. What we do with it is very much in our control.

Can we make the sun rise on our industry again, by taking actions to improve investor confidence and discover and grow new opportunities before us?

Or do we continue on the path we are on, and let the sun begin to set on our number one industry?

It's our job – people in this room, in the business community, in the Indigenous community – to help governments to understand what they can do to help, and why.