

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

We have a few slides to share to set the stage for our discussion.

I'll let Tom walk you through these, and then I'll conclude them and we will be eager to take your questions.

At the back end of our deck are a few extra slides that complement our messaging, and which we encourage you to look at when you get a chance.

Key Messages

- Mining is good for the North and for Canada
- Our mining industry is underdeveloped
- What's holding us back
- The infrastructure example
- Strengthening the government-industry partnership
- The time is right for vision and action
- Recommendations



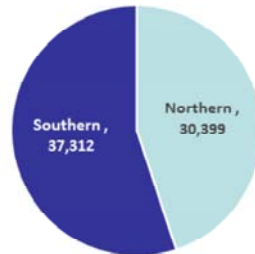
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These are the key messages that we want to leave you with today.

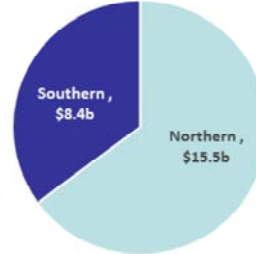
- Mining is good for the North and also for Canada
- Our mining industry is underdeveloped and thus could be doing more
- We'll talk about what's holding us back
- We'll speak to one specific example, infrastructure
- We need to strengthen the government-industry partnership
- The time is right for vision and action
- And we will close with Recommendations

Northern mining creates significant benefits (1996-2017)

Mining Jobs – NWT + Nunavut
(68,000 person-years)



Mine Spending – NWT + Nunavut
(\$24 billion)



- What's good for the north is good for Canada – significant Northern **and Southern** benefits
- Indigenous benefits – 14,000 person years, \$6 billion business spend
- Significant taxes & royalties to public & Indigenous governments
- **IT'S A BUSINESS THAT MUST BE SUSTAINED AND GROWN**



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Our mining industry is creating very significant benefits.

Over the last 20 years, we have created nearly 70,000 person years of employment in Nunavut and the NWT and for Canada.

And our mines have spent nearly \$24 billion in construction and operations costs.

These are significant figures.

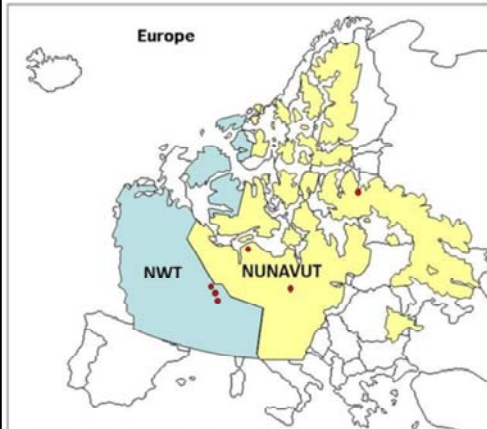
What's important too as shown here, **what's good for the north is good for Canada** with much benefit flowing south.

We are making **significant contributions to Indigenous reconciliation**, with jobs, business and tax and royalty revenues too.

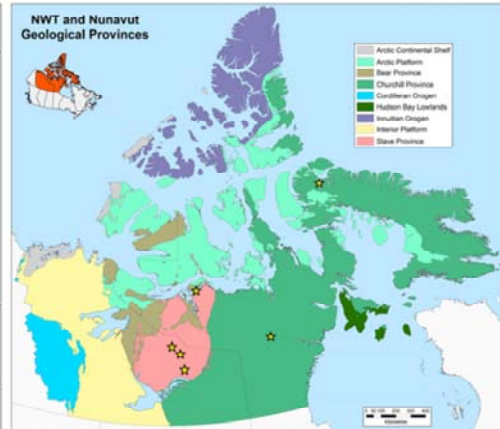
This is a business that must be sustained and even grown.

Huge potential but mining is underdeveloped

Huge Geography



Rich Geology, but barely tapped



- Only 6 operating mines in an area the size of Europe
- Their footprint is tiny: < 0.006% of area of NWT + Nunavut

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But our mining industry is under developed.

We have a huge geography, 1/3 the size of Canada and the size of Europe.

We have tremendous and enviable geology.

In that huge expanse, we have only 6 operating mines, with a very tiny footprint.

What's holding mining development back

- Cost pressures
 - Infrastructure deficit
 - Regulatory costs, eg, carbon taxes, cost recovery, timeliness
- Access to land & Investment uncertainty
 - Unsettled Indigenous land claims
 - Conservation Initiatives
 - Incomplete land use planning
 - Over 30% of the land is off limits to development
- Low public awareness, at government level as well
 - “If it can’t be grown, it has to be mined”



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What's holding mining development back can be categorized into three areas here:

Cost pressures:

The north is huge, remote and cold, with little infrastructure. The biggest infrastructure deficit in Canada. And companies are on their own to be self-sufficient.

We have regulatory cost pressures, eg, carbon taxes (plus clean fuel standard), regulatory cost recovery, and regulatory timeliness (eg, projects missing market window due to regulatory timelines).

We need access to land if we are to explore and find mines. And we need a climate that provides certainty.

Currently over 30% of the land is off limits to mining for a variety of reasons.

- Unsettled land claims in the NWT create landlord uncertainty, and access to land issues
- Conservation pressures in this huge land are seeing over 30% of our lands unavailable to explore and mine
- We have land use plans that are incomplete adding to access and uncertainty issues

Low public awareness – at all levels of society, even government

- We face a time when not enough people know where their “stuff” comes from, or that Canada was built on, and still has a strong potential for resource development. This includes many of our own government representatives.

Example: The Infrastructure Challenge

- The North has Canada's largest infrastructure deficit
- Lack of northern infrastructure hinders growth with:
 - Capital costs up to 2.5 times
 - Exploration costs up to 6 x higher
 - Significantly higher operating costs
- Our competitiveness is affected
- We need help to "Level the Playing Field"



Industry Study: Levelling the Playing Field, May 2015



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Let's focus on the infrastructure example.

The north has Canada's largest infrastructure deficit and it's hindering our growth.

An industry study we partnered in reveals how lack of infrastructure raises costs for our industry:

- Our mine capital costs are up to 2.5 times more expensive
- Exploration costs up to 6 times higher.

And higher operating costs means we have a harder time being competitive.

We need help to level that competitive playing field.

Today, mines supply their own costly infrastructure



Today, our remote mines must supply their own costly infrastructure.

- With no power grids to our remote mines, they must provide their own diesel generated power, or wind in the case of Diavik.
- Being off the highway system, they must build their own roads – whether seasonal ice roads, or all weather roads. (Note the ice road melts every year and must be rebuilt annually for \$25 million. Note NU has no highway system, and this mine road at 110 km is Nunavut's longest road.)
- Some of our mines must build their own sea ports and all provide their own airports.
- Mines must provide camps for their workers, with recreation and medical facilities too.
- And they must buy their entire year's consumables inventory ahead of time which brings carrying costs. Of course they must also store all that inventory on site, which costs them more for storage facilities.

It all adds up to significant extra costs to mine in the north.

And it challenges our mines' competitiveness in the global marketplace.

It wasn't always this way ...

Federal Government partnership in Northern mining Infrastructure

- 1948 – Snare Hydropower for Yellowknife gold mines
- 1959 – Roads to Resources, highways to mining towns
- 1961 – Great Slave Lake Railway for Pine Point zinc-lead mine
- 1966 – Taltson Hydropower for Pine Point mine
- 1974 – Townsite, dock, airport for Nanisivik zinc-lead mine
- 1975 – Ice-breaking cargo ship to service Nanisivik & Polaris mines
- **40 YEAR FEDERAL INVESTMENT GAP FOR NORTHERN MINING**
- 2017 – Tlicho road with indirect benefit for NICO mine project



It wasn't always this way.

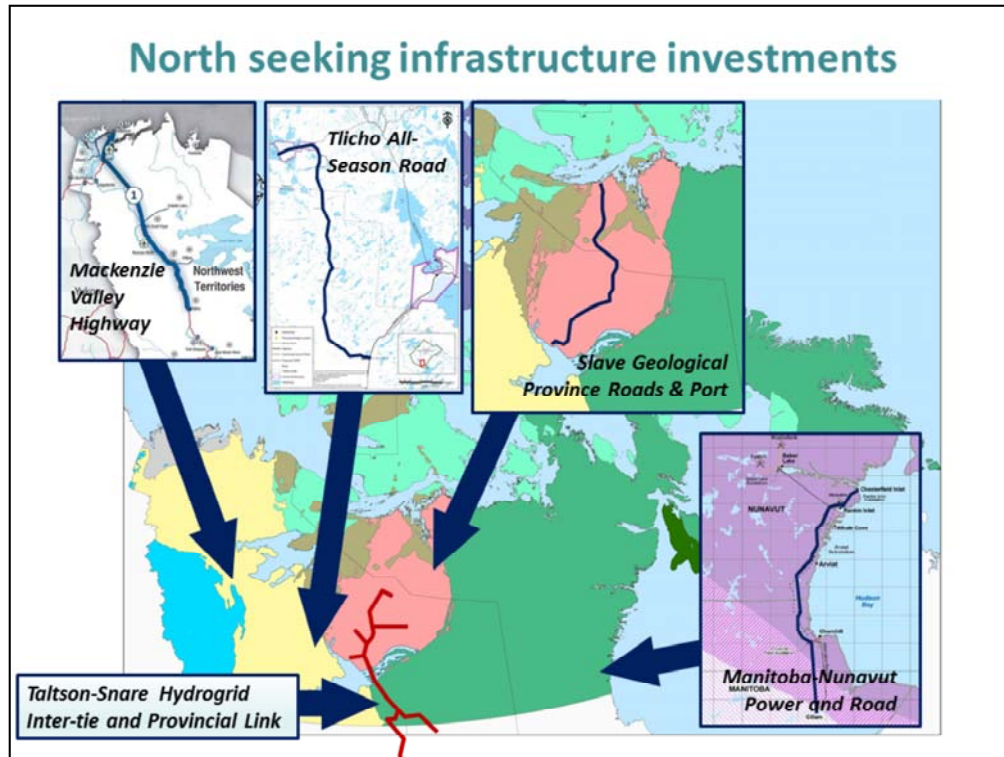
Years ago, the Federal government was a major partner in providing infrastructure for the mining industry.

You can see the many examples here:

- In 1948, the Federal government built the Snare Hydropower system for Yellowknife and its gold mines
- In 1959 – Roads to Resources, highways to mining towns
- In 1961, Canada built the Great Slave Lake Railway for Pine Point zinc-lead mine
- And in 1966, the Taltson Hydropower plant for the Pine Point mine.
- In 1974, Canada took an 18% ownership in the Nanisivik mine and provided the townsite, dock, and airport for the zinc-lead mine
- And in 1975, the partnered in the Canarctic Shipping partnership with industry to build the world's first ice-breaking cargo ship to service the Nanisivik & Polaris mines.
- Unfortunately, we haven't seen any other investments until 2017 with the Tlicho road which has some benefits for one mining project.

We have suffered a gap of 40 years without federal investment in infrastructure for northern mining.

We need help to catch up.



With a 40-year gap, there is no shortage of needs. We have a big ask now.

Today, public and Indigenous governments are rallying for these infrastructure investments.

- In the west is the Mackenzie Valley Highway project, in a region with significant potential for oil & gas and also minerals.
- The Tlicho all season road, a road that will help one mining project, **is the only fully funded project at this time.**
- Of really high priority is the Slave Geological Province where our world class diamond mines are located, and where there are known deposits of precious and base metals, rare earths, and even more diamonds. This mineral rich region is similar to the famous Abitibi region of northern Ontario and Quebec that has created significant wealth for those provinces and for Canada. To really harness the economic power of the Slave Province, it needs road and port access, as well as cheap, green power. Of special concern too is that infrastructure could help sustain our world class diamond mines in that region.
- A geologically similar and high mineral potential region is found in the Kivalliq region of Nunavut where there is discussion about road, power and fibre optic access from Manitoba.

The Mining Industry – Government Compact

- **Government has invited Industry 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
- **Industry has accepted governments' challenge**
 - But Industry can't do it alone: we need governments' help
- **We need to rejuvenate the Government – Industry partnership**



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It's important to speak about partnership.

Government has invited industry to come and do what government cannot do:

- 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, and our industry has accepted government's challenge. But we can't do it alone.

We need governments' help too, particularly with infrastructure if we are to fully realize the north's mineral potential.

Can we reignite a similar Vision?

Speech by: The Honourable Arthur Laing, Liberal Minister of Northern Affairs & National Resources to the Canadian Institute of Mining – Edmonton, May 1966

- *It is inconceivable that all lands north of the 60th parallel, representing 35% of Canada's land area, which we believe contain a great resource potential, will remain as an undeveloped portion of Canada.*
- *Very often the discovery of one mine ... will lead to more, but as long as we continue to do nothing to replace that activity during the time allowed we will continue to experience the social upheavals and personal hardships that result when the resource comes to an end.*
- *We welcome those searching for the resource wealth of the North ... **and my government is endeavouring in many ways to assist private industry on to the road to success.***



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We need to reignite a strong resource Vision for the north.

Here are some excerpts from a speech Liberal Minister of Northern Affairs Arthur Laing delivered 50 years ago to the mining industry in Edmonton:

- *It is inconceivable that all lands north of the 60th parallel, representing 35% of Canada's land area, which we believe contain a great resource potential, will remain as an undeveloped portion of Canada. **Hmmm ... how far have we developed the great north?***
- *Very often the discovery of one mine ... will lead to more, but as long as we continue to do nothing to replace that activity during the time allowed we will continue to experience the social upheavals and personal hardships that result when the resource comes to an end. **This speaks to sustaining and growing the industry.***
- *We welcome those searching for the resource wealth of the North ... and my government is endeavouring in many ways to assist private industry on to the road to success.*

We would observe that today, 50 years later, we are very much in need of renewed vision.

The time is right for Vision and Action

- Industry is proving it can provide significant benefits: northern, southern and Indigenous. We need to grow them.
- Indigenous governments and organizations are increasingly supportive to participate and to take equity interests.
- Provincial governments should be supportive.
- Timely opportunity to rejuvenate the Government(s) – Industry partnership:
 - *Arctic Policy Framework*
 - *Canada Mineral & Metals Plan*



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For several reasons, the timing is right for new northern vision and action around resource development.

- Industry is proving it can provide significant benefits.
- Indigenous governments and organizations are increasingly supportive to participate and to take equity interests.
- Provincial governments should also be supportive given the significant benefits they realize from northern resource development.
- Timely opportunity to rejuvenate the Government(s) – Industry compact. There are two significant policy instruments in play that could be used:
 - *The Arctic Policy Framework*
 - *The Canada Mineral & Metals Plan*

Some Recommendations for Canada

- Enunciate and strengthen partnership with the minerals industry for northern success
- Provide significant annual Federal investment into game-changing infrastructure over long term
- Improve access to land – settle land claims, less conservation focus, good land use planning
- Double mineral exploration tax credit for the North
- Remove carbon tax in our diesel-dependent North
- Link mining success to social investment like housing, cheaper power, etc.



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We want to close with some specific recommendations to you to recommend for Canada:

- First, enunciate and strengthen the partnership with the minerals industry for northern success
- Provide significant annual Federal investment over the long term to provide game-changing infrastructure
- Improve access to land – settle land claims, less formal conservation focus (recognizing that the majority of the north is already strongly protected by its inaccessibility, lack of human pressures, and rigorous regulatory regime), and build supportive land use plans
- Double mineral exploration tax credit for the North – currently we get the same as the rest of Canada.
- Remove carbon taxes in the North where we have few options to diesel for heat and power
- Link mining success to social investment like housing, cheaper power, etc.

Thank you very much. We would be pleased to take questions.

Appendix: Additional slides

- Mining is the largest private sector contributor
- Mining's small but valuable footprint
- Mining is doing its work responsibly
- Where Public & Indigenous governments can help
- Infrastructure Success Story: Federal Partnership with Pine Point Mine
- Historical Federal Mining Support Programs
- Mining has successes, but challenges too

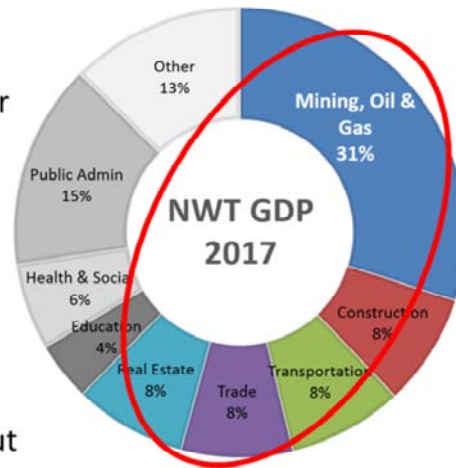


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The attached slides build on those before, and provide additional information.

Mining is the largest private sector contributor

- Mining is the north's economic advantage
- The largest direct private sector contributor to the NWT economy
- And, it contributes more through other sectors of the economy, eg, construction, transportation, trade, real estate
- Mining contributions in Nunavut are similarly large and growing



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

Our small number of mines are making a big difference.

This is the contribution of three mines in the NWT. Directly, the three diamond mines contribute about 30% of the GDP, and indirectly through transportation, construction, and other sectors, increase their contribution to about 40%.

Contributions are similar in Nunavut.

Mining is the north's economic advantage, since we have fewer other economic opportunities as in the south, eg, forestry, farming, manufacturing, etc.,

Mining's small but valuable footprint



- Diavik's ~ 15 sq.km. footprint will generate over \$15 billion in diamond wealth
- That's about \$1 billion per sq.km. that translates into jobs, business, taxes and profits.
- The site will be reclaimed and returned to government after mining



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But oh what valuable footprints we have been able to create.

This is Diavik. The total value of the diamonds Diavik will produce is a whopping \$15 billion. And its footprint is less than 15 sq.km. That's a whopping new wealth created of \$1 billion per square kilometre.

And when they're done, they will reclaim the land and return it to the owners, the government.

Mining is doing its work responsibly

- Northern resource management is based in Indigenous land claims, and shared by public and Indigenous governments
- Various environmental co-management boards
- Environmental management to ISO 14001 standard
- Community involvement and oversight
- Traditional and scientific knowledge used
- Fully secured reclamation liabilities



Our Industry is doing this work responsibly too

- Northern resource management is shared by public and Indigenous governments
- Variety of environmental co-management boards
- Mines manage their work to the ISO 14001 international environmental management standard
- We have community involvement and oversight in our mines
- Traditional and scientific knowledge is used
- And our mines' reclamation liabilities are fully secured today

Where Public & Indigenous governments can help

| Some actions Public and Indigenous Governments can take to improve the economic climate, and their Status | | Government |
|---|--|-----------------|
| Reduce Cost pressures | Say NO to regulatory cost recovery (MVRMA, NUPPAA, YESA) | Canada |
| | Prevent small early exploration undergoing Environmental Assessment (MVRMA) | Canada |
| | Neutralize Carbon Tax when no alternatives to diesel exist | Canada |
| | Assess and address potential costs and effects of upcoming New NWT Legislation | NWT |
| Improve Access to Land | Settle Indigenous Land Claims and open withdrawn lands to exploration | NWT, Canada |
| | Complete land use planning process and revisit existing land use plans | NU, NWT, Canada |
| | Reduce land conservation initiatives – federal, territorial | Canada, NWT |
| | Invest in more science for caribou protection plans | NWT, NU |
| Build Infrastructure | NWT: Tlicho Road funding & construction | NWT, Canada |
| | Advance Nunavut's Grays Bay Road & Port (Slave Province) | NU, Canada |
| | Advance NWT Slave Geological Province road | NWT, Canada |
| | Advance cheaper hydropower | NWT, Canada |
| Provide Exploration Incentives | Double MIP (Exploration Incentive Program) | NWT |
| | Extend the 150% assessment credit | NWT |
| | Invest in Geoscience | All |
| | Federal 15% Mineral Exploration Tax Credit – double to 30% for North? | Canada |
| Increase Public Awareness & Support for Mining | Canada Mineral and Metals Plan | Canada |
| | Support Increased Public Awareness Program | NU, NWT, Canada |
| | NWT Regional (Indigenous) Mineral Development Strategies | NWT |
| | Prospector & mine training funding | NWT, NU |
| Public & Indigenous Governments Market North | "Unlocking Our Potential" investor messaging | NWT |
| | Indigenous government marketing of investment | NWT |

Status: Red problematic to investment, Green is good and Yellow is questionable or in flux.

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At the Chamber of Mines, we have developed a more comprehensive list of threats and opportunities for our industry.

These are all areas where governments – public and Indigenous – can help its industry.

We have coloured it as a report card: Red is problematic, green is good and yellow is somewhere between.

Note there is limited green under infrastructure, which we really need in the north.

Infrastructure Success Story: Federal Partnership with Pine Point Mine

- \$125 million total cost of project, including mine development, railway, hydro-power and town site construction.
- \$88 million Federal Government investment for railway and hydropower
- \$1.8 **billion** return over 25 year mine life (1964-1988):
 - \$339 million in dividends;
 - \$176 million in taxes;
 - \$400 million estimated freight charges paid to the Federally-owned Canadian National Railway;
 - \$246 million in wages and salaries;
 - \$500 million estimated spending on supplies and services; and
 - \$100 million to the Northern Canada Power Commission.
- The Pine Point partnership between government and private enterprise returned handsome rewards to both.



Source: Canadian Mine Hall of Fame, Neil Campbell, Pine Point Mine,
http://www.mininghalloffame.ca/inductees/a-c/neil_campbell

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Historical Federal Mining Support Programs

- Northern Roads Program, 1965
 - Long range, 20-year program to bring permanent roads to within 200 miles of all potential areas of resource development
 - Area development roads – Financed 100% by Federal Government
 - Mine development roads – Financed 100% by Federal Government
 - Mine access roads – Financed 2/3 by Federal Government
 - Mine tote roads – Financed by government if sufficient funds available
- Northern Resource Airports Program, 1965
 - Exploration airstrips – Financed 50% by Federal Government
 - Production airstrips – Financed 50% by Federal Government
- Northern Mineral Exploration Assistance Program
 - Up to 40% grants for approved exploration programs in North



Sources: Report: Mining in the North 1961, Department of Northern Affairs and National Resources
Report: North of 60, Mines & Minerals Activities 1971, Department of Indian Affairs & Northern Development

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Since the late 1940s, the Federal Government provided assistance with infrastructure for mining, beginning with paying for construction of the Snare Hydro plant and grid to power the growing mining town of Yellowknife and its newest gold mine, the Giant mine.

In addition Canada funded the Taltson hydropower grid and the Great Slave Lake Railway for the Pine Point mine.

This slide shows Federal mining and exploration support programs that Canada had in place from the early 1960s to mid-1970s.

Those programs no longer exist.

Mining has successes, but challenges too

- Northern mining has successes, but challenges too as experienced by these projects:
 - Meadowbank mine profitability – infrastructure, cost issues
 - Snap Lake mine closure – cost issues, market risk
 - Mary River mine profitability – market risk, infrastructure costs
 - Nechalacho – regulatory delay and market risk
 - Mackenzie Gas Project – regulatory delay and market risk
 - Upper Thelon uranium exploration – unsettled land claims, no land use plan
 - TNR Gold – unsettled land claims, regulatory process
 - Chedabucto sand – no land use plan, regulatory process

