

Mining and mineral exploration in the NWT – *Overcoming the challenges to strengthen the NWT* –

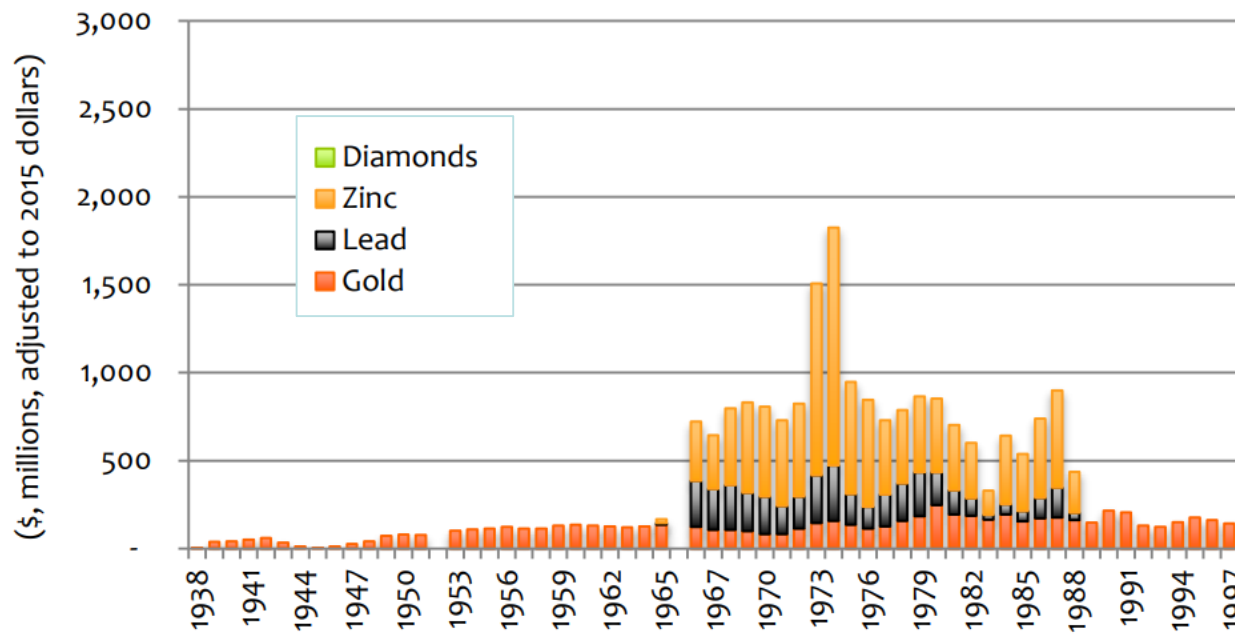
To: Members of the 19th Legislative Assembly – 22 October 2019

Key messages

- The minerals industry is socio-economically important to the NWT
- Consequences of maturing diamond mines are not pretty and will leave a serious hole in the NWT economy
- What are the problems?
- What are the solutions?

Perspective: Mining has responded significantly to NWT needs:

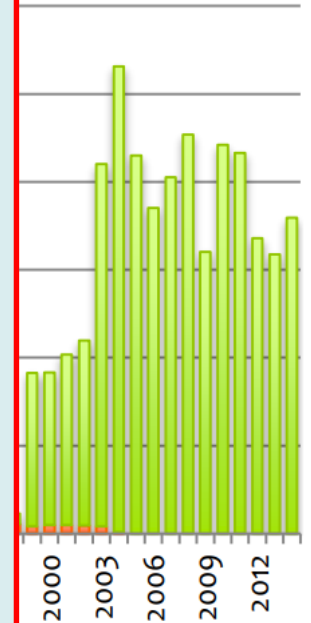
– *It's not our grandparents' or even our parents' industry* –



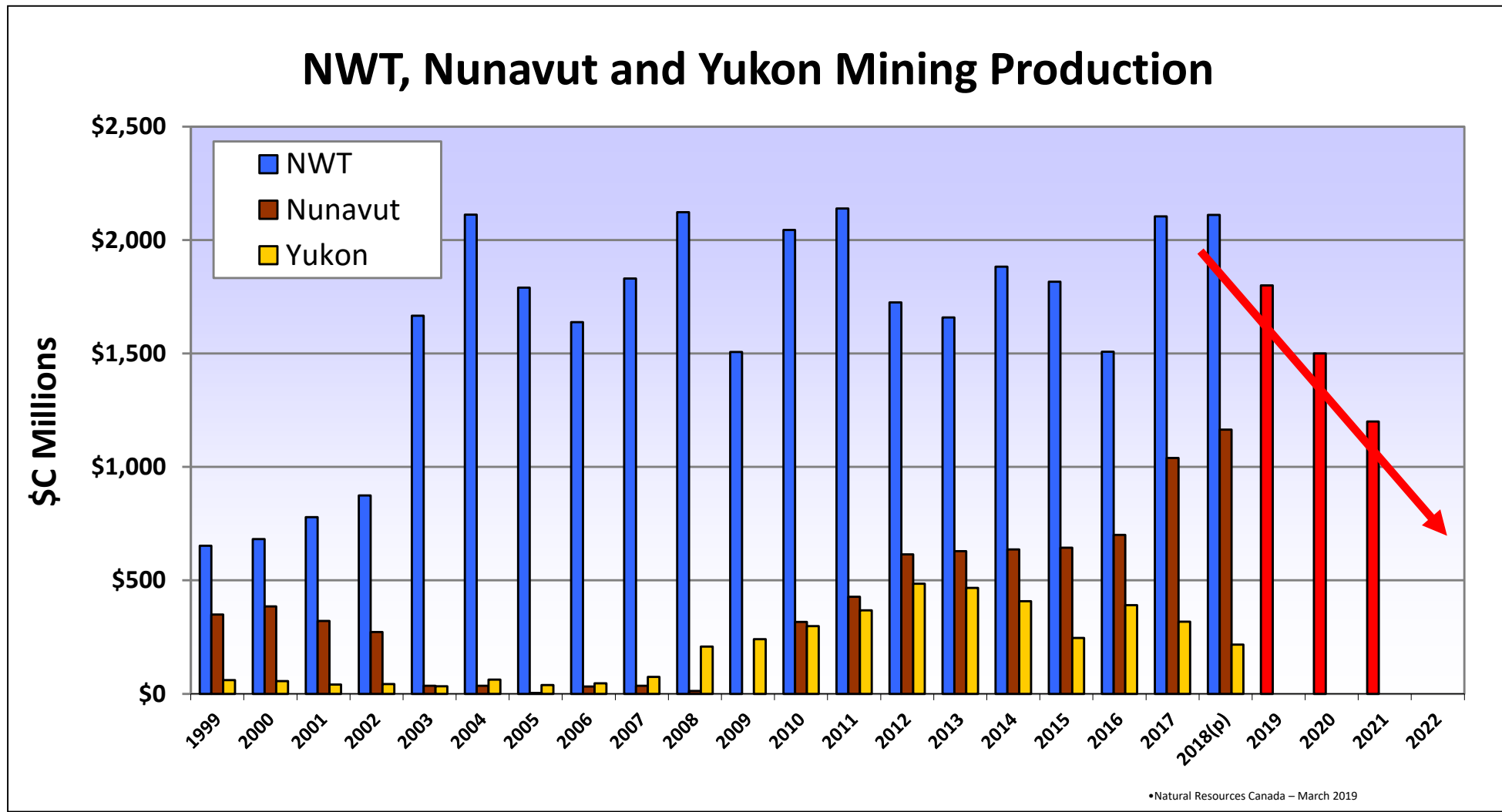
Source: NWT Bureau of Statistics, *Mineral Production*; Statistics Canada, *Inflation Rate*.

Significant improvements in 25 years

- Operate to new land claims based legislation under co-management boards
- Environmental management systems to international ISO14001 standards
- Oversight from individual mine environmental monitoring boards
- Closure planning even before construction
- Mines and exploration fully secured for clean up
- 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
- Indigenous equity starting to be proposed



Diamond production has been game changing



- Production will decline in coming years and affect all NWT

NWT diamond mine benefits are significant (Chamber of mines data since 1996)

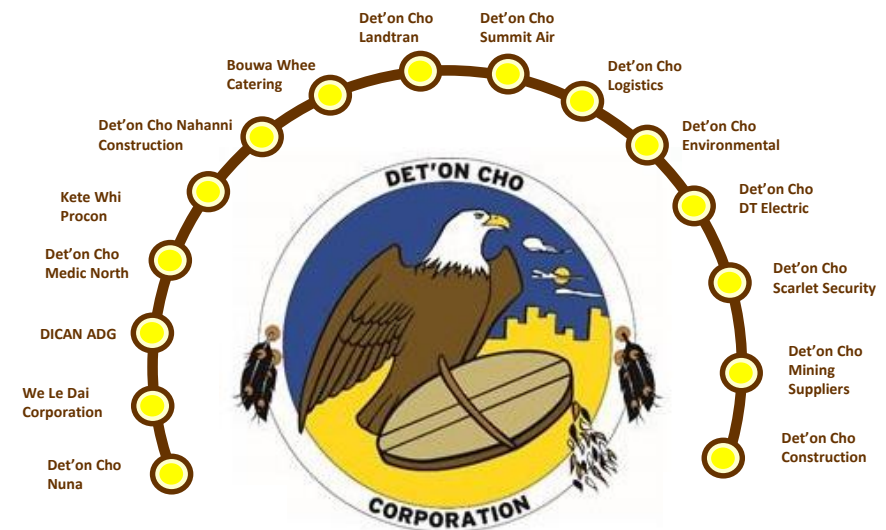
- 61,495 person-years of employment
 - 48% northern/52% southern/24% Indigenous
 - 1,540 northern workforce
- \$21 billion in business
 - \$14.6 billion northern (69%) of which \$6.3 billion is Indigenous
- Well over \$200 million to communities in IBA payments, scholarships, donations, & community wellness projects
- \$billions in various taxes & royalties to governments (public and Indigenous)

Myth: the mining industry is subsidized by government and all workers are from the south



Det'on Cho example: benefits to this one Indigenous corporation

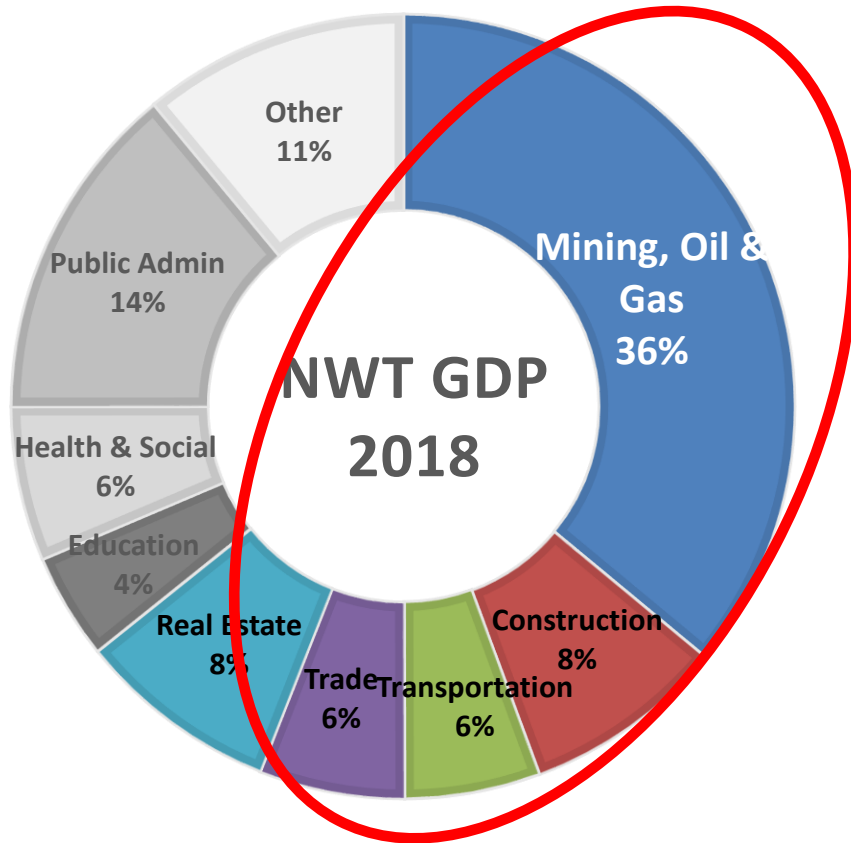
- **Approximate YKDFN employment**
 - 100 members are employed directly by the mines and another 100 members indirectly (through companies such as DCC, etc.)
- **Det'on Cho Corporation employment**
 - DCC has approximately 220 direct employees with an additional 660 workers through partnerships and JVs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



Data courtesy Det'on Cho Corporation



NWT's largest private sector economic contributor



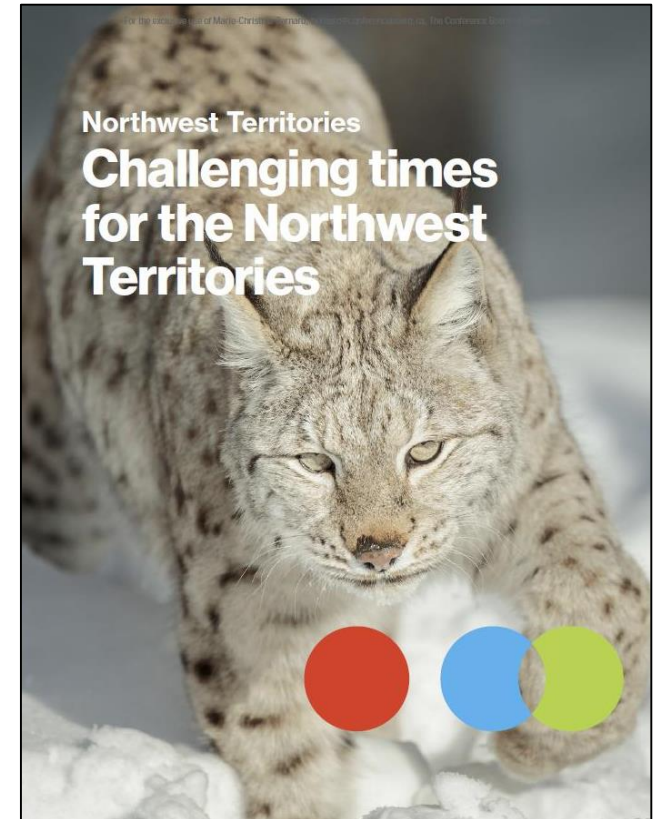
“Over the past 3 years, diamond mines contributed 41% of the GNWT's corporate income, fuel, property and payroll tax revenue”

... GNWT Spokesperson

- The largest direct private sector contributor to NWT economy
- And even larger with indirect contributions to other sectors, eg, construction, transportation, etc.
- Tourism, fishing, etc. fits within the smaller slices of the GDP pie

But ... Maturing mines are putting NWT economy at risk

- *Modest economic growth over the near term, hovering in the 2% range; will subsequently slump sharply over the long term due primarily to weaker investment in the mining sector.*
- *Diamond production has reached its peak and will decline for most of the forecast period. Two new metal mines will open, offsetting some, but not all, of the losses in the mining sector.*
- *More tepid growth in mining will have repercussions on other areas of the economy, notably construction activity.*
- *Weaker economic growth will encourage more workers to exit the territory, leaving a smaller working-age population to cover the costs that come with growth in seniors.*
- *Only sector of the economy that will record employment growth is non-commercial services, which includes the health care sector.*



Conference Board of Canada,
Territorial Outlook Economic Forecast,
Summer 2019

GNWT Economic analysis from Inuvik economic symposium

- Economic scenario resulting from closure of the NWT diamond mines, with no new mines
 - NWT economy shrinks by **\$1.1 billion** or **23%**
 - **3,300** NWT jobs lost, including **1,960 direct mine jobs** and **1,350 indirect jobs** in industries like transportation, retail and wholesale trade, construction, etc.
 - Total NWT employment loss **2,300 jobs**, more than **10%** drop
 - **3,200** residents would leave impacting economy further with lost household spending impacts on businesses and other sectors
 - GNWT would lose **\$162** million revenues annually, or **10%** of operational expenditures



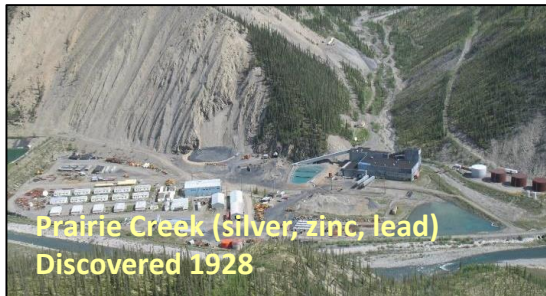
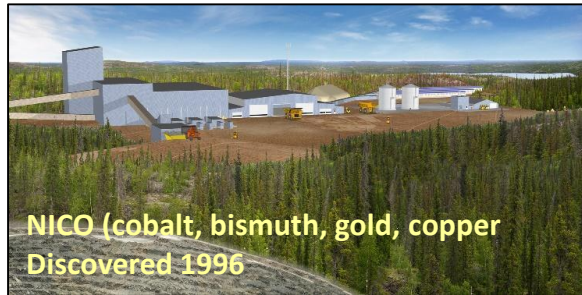
CMHC Report: Weaker growth in NWT mining will likely affect housing market

- **Weaker growth in the mining industry will likely cause job losses**, especially in the construction sector. This will probably affect the housing market, since construction projects provide some support for the market in Yellowknife.
- **The decrease in demand from the mining industry** may have affected the resale market, since sales fell 25% in 2018. We expect sales to increase in 2019. However, they could remain lower than 2017 levels, because of mortgage rate increases and ***uncertainties in employment from the mining industry.***



Concern: How many northerners are using their homes as pension plan?

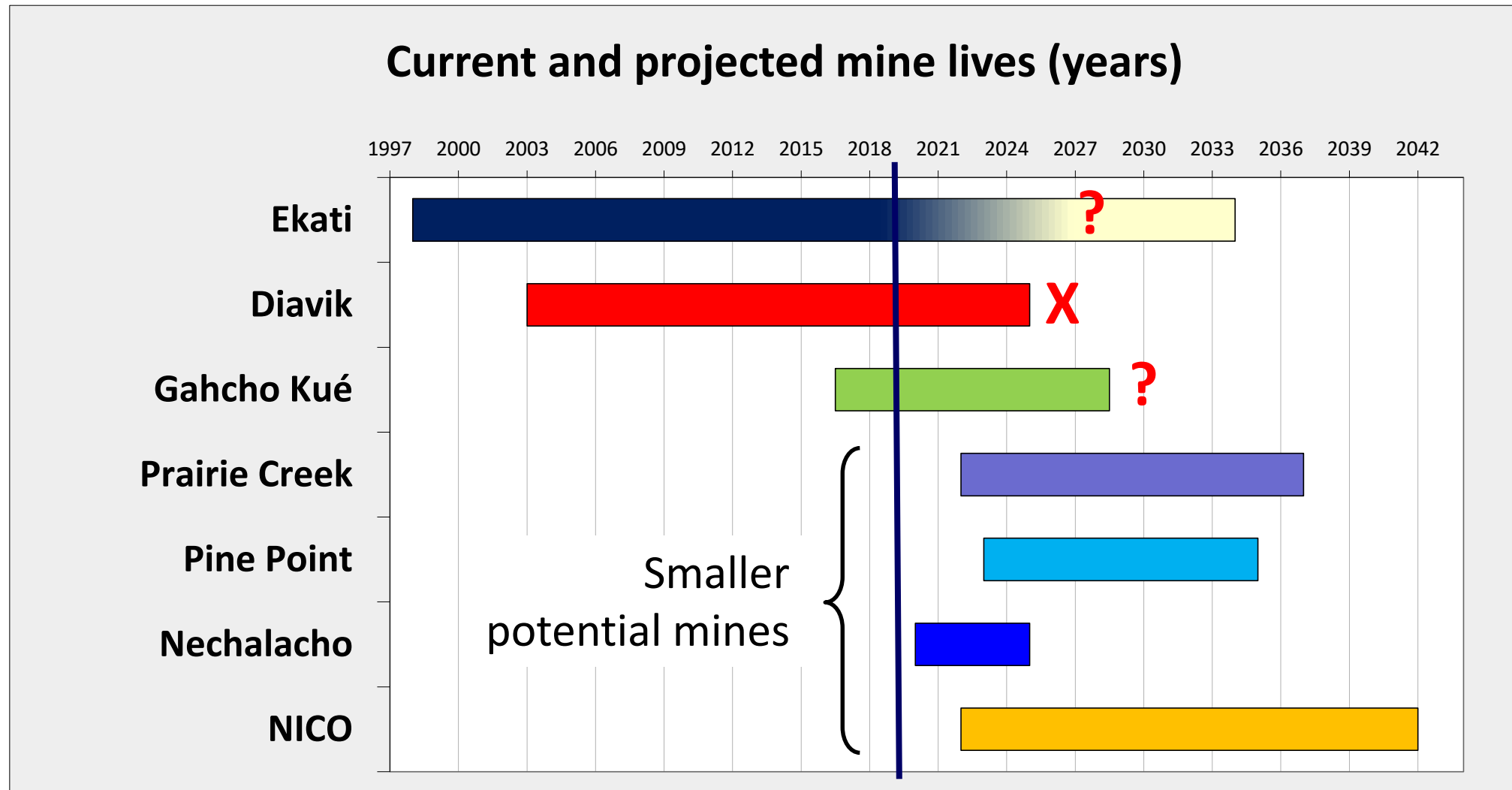
We have some potential* mines in our future



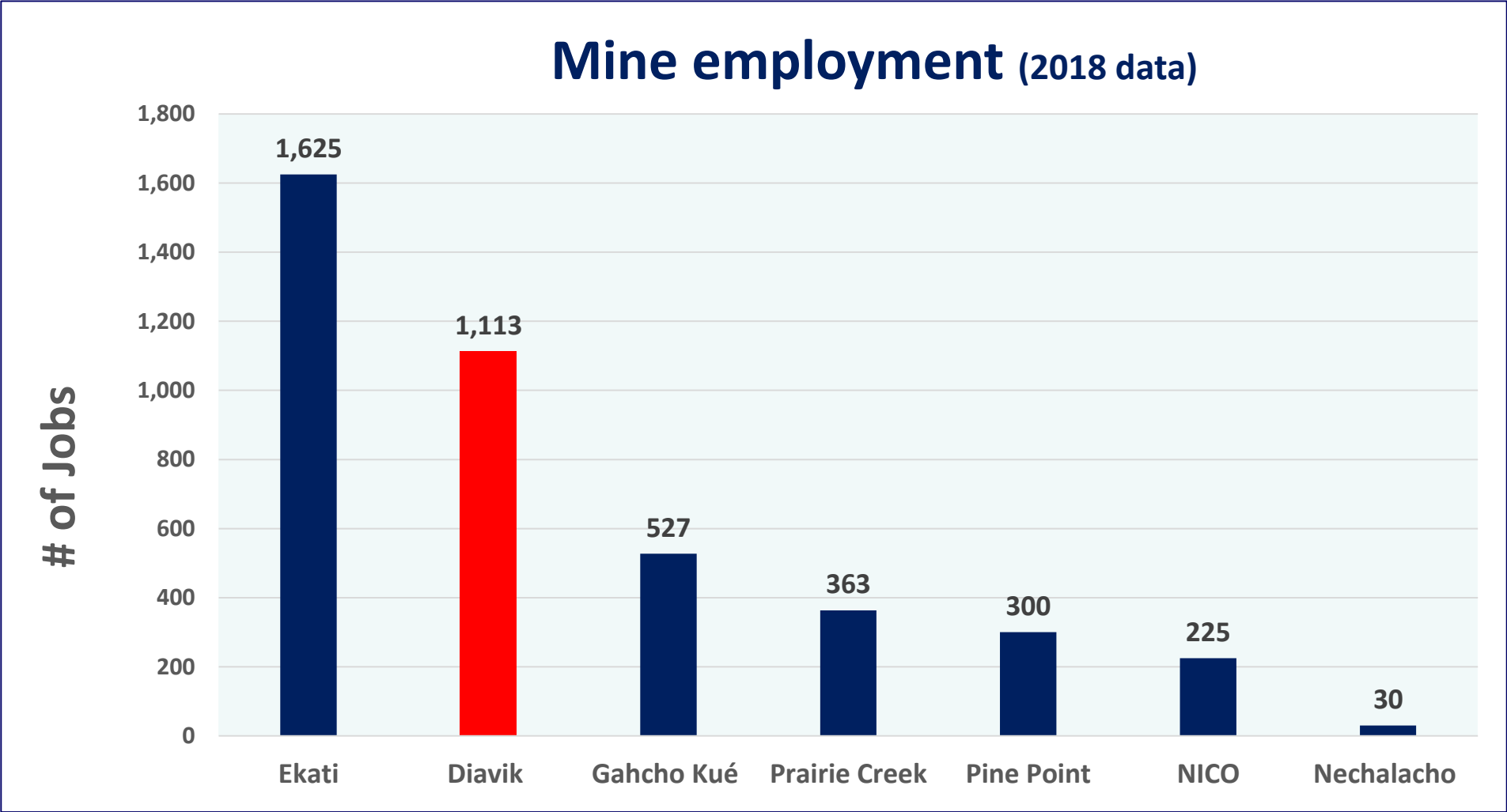
- Four projects advancing to investment and mining decisions
- They would be smaller mines
- All discovered years ago
- Insufficient to offset Diavik mine closure in 2025

* **Note: All are not guaranteed mining operations, yet**

But ... new mines will not replace diamond benefits



Remember, not all mines are equal, eg, Jobs

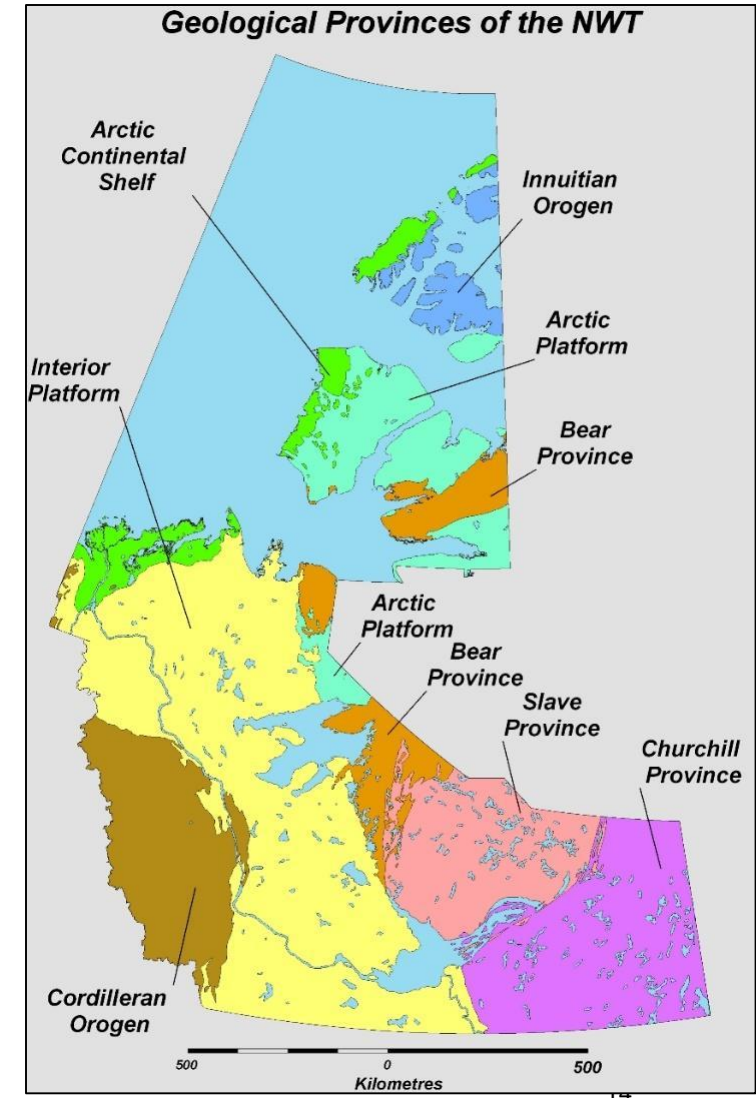


Exploration can help: We have fantastic untapped mineral potential

Myth: We've found it all

- 8 geological provinces
- Diverse mineralogy
 - Gold, silver, diamonds, lead, zinc, uranium, tungsten, rare earths, cobalt, bismuth, nickel, copper, iron, etc.
- Under-mapped and remote means under-explored
- This equals tremendous mining opportunity

1988 Queen's University economic study: *The Slave Province stands out in our study as a high priority locus for government investment in infrastructure. Given the provision of regional road and power facilities, there is little doubt that the Slave Province will be an important part of Canada's long-term mining future.*

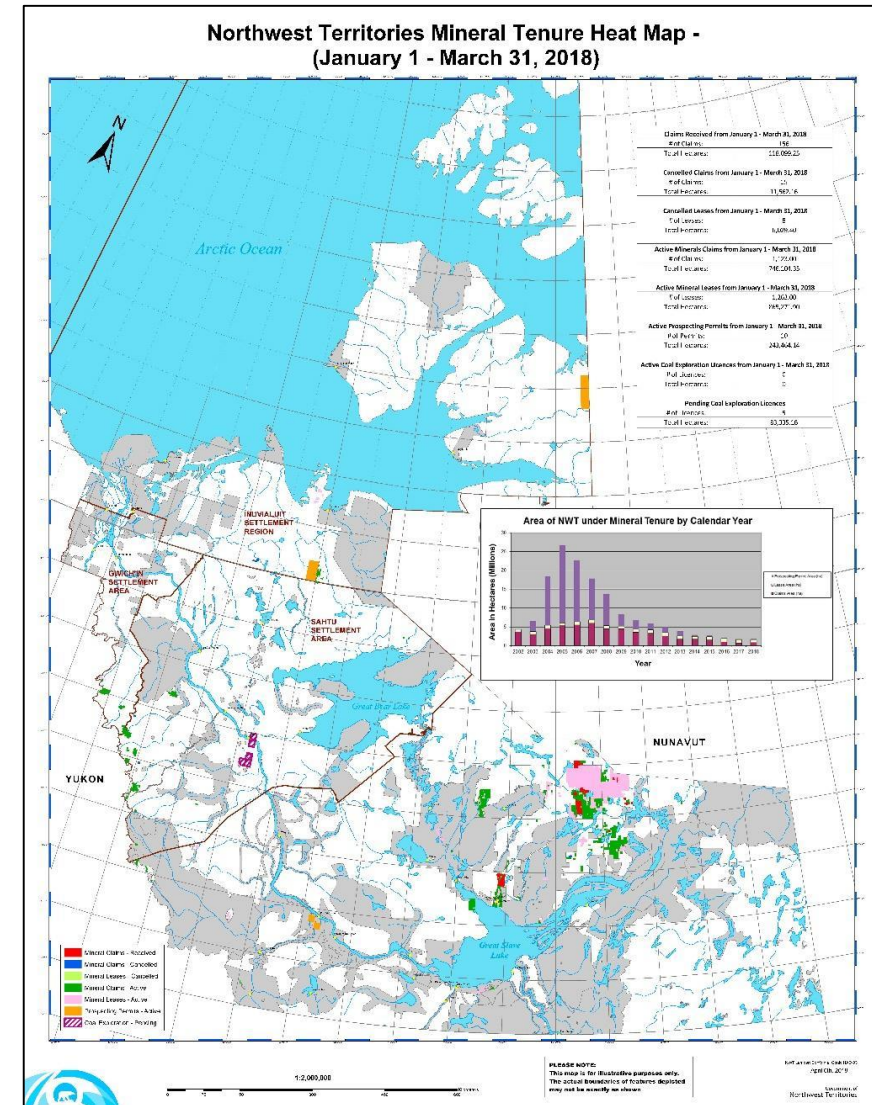


But, we've closed over 30% of the NWT to exploration

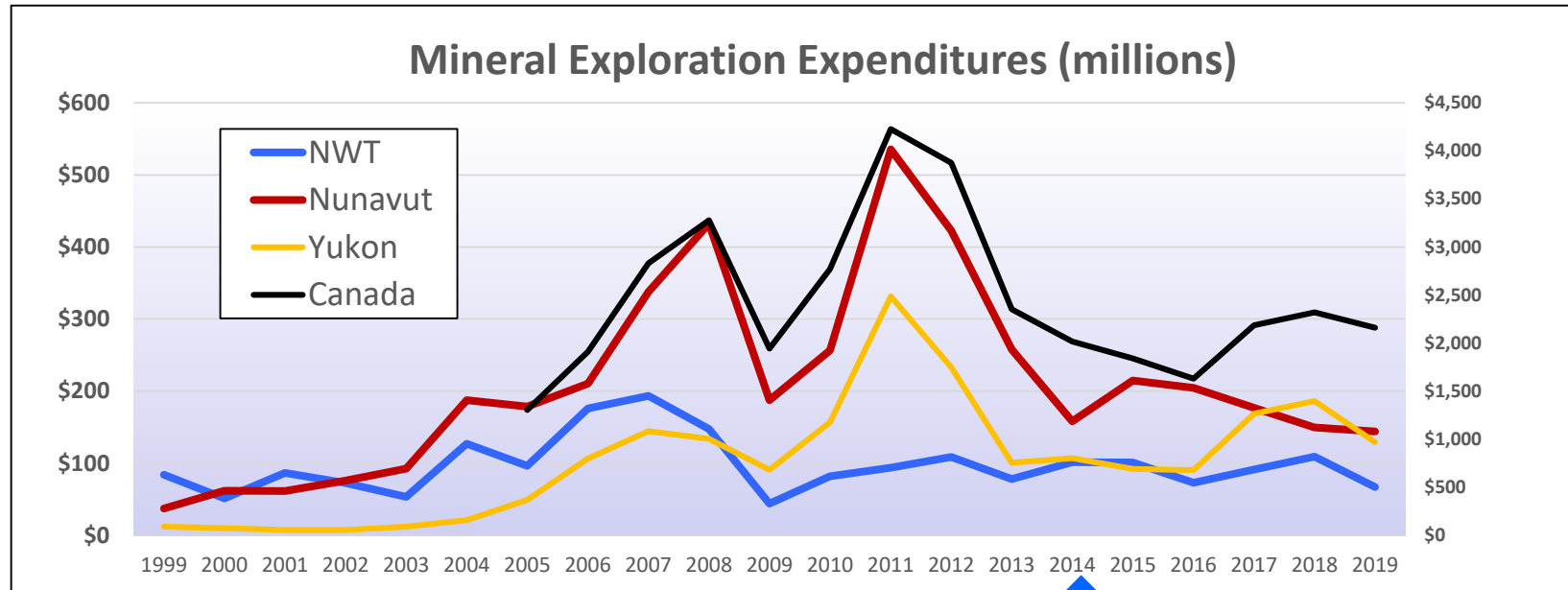
- All the grey is off limits to exploration
 - Conservation, eg: parks, candidate protected areas
 - Unsettled land claims
 - Land use plans
- And some 'open' areas are effectively closed
- Industry is increasingly challenged for access to land to explore

Myth: Mines take huge amounts of land.

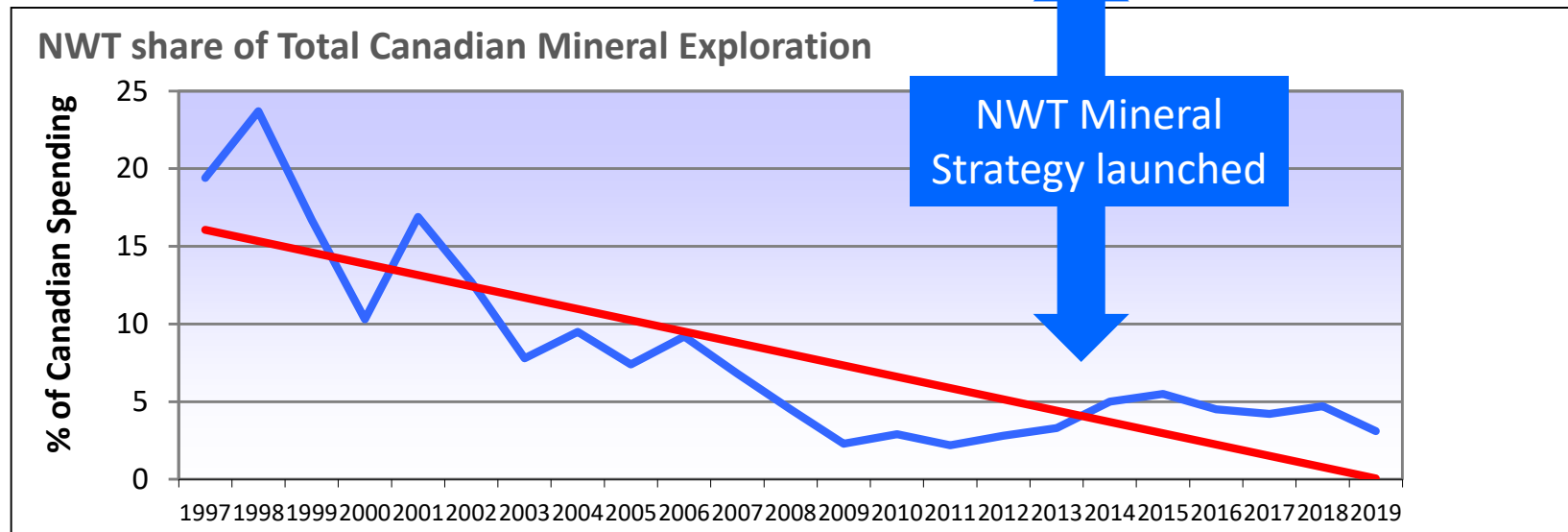
In fact, all the mines today are only 0.005% of the area of the NWT, and the boards heavily regulate them,



And ... exploration investment continues to underperform



- Exploration continues to languish and we continue to lose investment share
- We've missed out on over \$1 billion in exploration investment compared to Yukon, NU since 2007
- **The 2014-19 Mineral Strategy has not been enough to increase investment:** Other factors are trumping it



Myth: The markets are to blame

So why are so few looking for new mines in the NWT?

- Increasingly onerous, uncertain exploration permitting requirements
- Shrinking access to geologically prospective lands – over 30% off limits
- Indigenous governments have ‘diamond mine’ expectations from all mines
- Industry faces much higher costs in the North
- Significant infrastructure deficit
- Silo’d government departments, and often in defensive mode with industry
- Legislative / policy pressures: new Mineral Resources Act, protected areas, etc.
- Low public awareness (We don’t even teach our kids about mining and its opportunities – is it any wonder we have so many fly in workers?)
- Marketing that we’re open for business is risky – we’re ‘prickly’ to investors

Government infrastructure investment pays off

The Pine Point Mine example

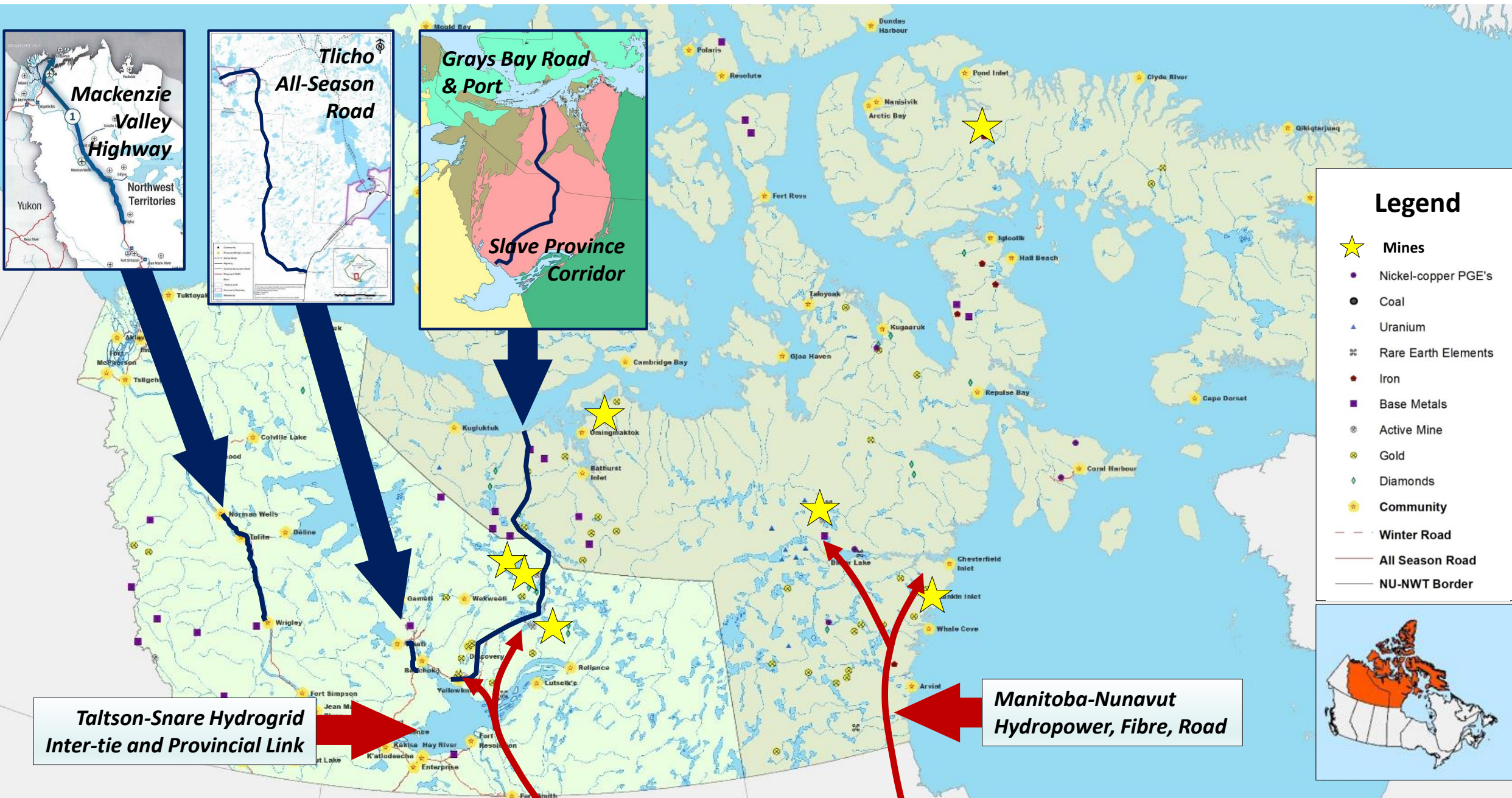
- **\$125 million total cost** of Pine Point Mine project, including ...
 - \$88 million federal government investment for railway and hydropower
- **The mine provided a \$1.8 billion return** over 25 year mine life (1964-1988), as per:
 - \$339 million in dividends
 - \$176 million in taxes
 - \$400 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
 - \$100 million to the Northern Canada Power Commission
- **The Pine Point partnership between government and private enterprise returned handsome rewards to both**
- **And, the Pine Point legacy infrastructure continues serving the NWT**

Historically strong federal infrastructure investment/support

- 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 – Town site, dock, airport for Nanisivik zinc-lead mine
- 1975 – Ice-breaking cargo ship technology to service Nanisivik and Polaris mines
- **40 YEAR FEDERAL INVESTMENT GAP FOR NORTHERN MINING**



Key infrastructure investments needed to catch up



Untapped opportunity in closure and reclamation projects

- Enough opportunities to build significant Canadian expertise in the NWT
- Building skills through the polytechnic school:
 - Characterization of mine wastes
 - Legislation, policies, and regulations
 - Site prep and revegetation
 - Environmental management
 - Water quality assessment and treatment
 - Land use planning and environmental impact assessment
 - Wildlife and rangeland management
 - Climate change modelling – currently conducted on permafrost
- Quantify the benefits, identify the skills, build a strategy



A wide-angle photograph of a frozen body of water, likely a lake or river, under a dramatic sky at sunset or sunrise. The sky is filled with horizontal bands of orange, red, and pink, with some darker clouds. The horizon is a thin line of dark land with silhouetted trees. The foreground is a vast, flat expanse of white snow or ice, with some faint tracks visible. On the left side, a large, dark evergreen tree is partially visible, its branches extending into the frame. The overall mood is serene yet powerful, with the vibrant colors of the sky contrasting sharply with the dark silhouettes and the white foreground.

Sunrise or Sunset the NWT's minerals industry?

The 19th Assembly can take the lead to turn this around

NWT needs a new plan

- Can the 19th Assembly take concrete actions to make rejuvenation of the mineral industry a major plank in its mandate?
- What is your vision?
- What solutions do you propose?
- What questions do you have on the minerals industry?
- Open discussion