










**Some Mineral Industry Observations for the
National Infrastructure Assessment**

*Messaging to contribute to the National Infrastructure Assessment:
[Building The Canada We Want In 2050](#)*

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Key Messages

- At 1/3 the size of Canada, the North has untapped potential
- Untapped mineral resources are an economic advantage in northern Canada,
- Mining is showing it can create significant benefits to the North and Canada
- But resource development is held back by the largest infrastructure deficit in Canada
- By providing (nation-building) transportation and power infrastructure, and other supportive northern policies, Canada can help the North become more self-reliant, increase Indigenous economic reconciliation, and increase Canadian sovereignty over its North
- Add a special Northern chapter to the NIA to align with the Arctic & Northern Policy Framework



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Some observations on the NIA report

- Quote: “We found ways to build our nation, eg, railway, St. Lawrence Seaway”
 - Comment: Hope that is not past tense for the northern 1/3 of Canada is still desperate for nation building infrastructure
- Quote: “But we will not achieve our infrastructure ambition by accident”
 - Comment: Fully agree. Canada needs some vision for Northern Canada, and significant funding too beyond per capita
- Quote: “Climate crisis means we have to redouble our efforts to reach net zero”
 - Comment: Agree, and important to remember that mineral production has to increase very dramatically to provide the minerals to do this (see [Manhattan report](#), for example)
 - If Canada is to take advantage of that, it will need more mining. Bonus is it can also address economic growth (pay our huge deficit), economic Indigenous reconciliation, sovereignty, etc.
 - The North has opportunities – and needs Federal support – to provide critical minerals needed to address the climate crisis



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Some observations on the NIA report, cont'd

- 3 Priorities (with Chamber comments following them):
 - *Assessing infrastructure needs and establishing a long-term vision;*
 - Northern Canada (NWT) is suffering from lack of vision ([See this report for CIRNAC](#))
 - Clean energy and net zero will require significant increase in mineral supply which north can supply with infrastructure and other help
 - Physical infrastructure investments can provide returns to invest in social infrastructure
 - *Improving coordination among infrastructure owners and funders;*
 - Leverage and work with minerals and industry for infrastructure
 - Federal government has a critical role especially in northern Canada where the territories are still very much wards of the state without sufficient moneys to invest in their own future growth. They need Canada's help more than the provinces do.
 - *Determining the best ways to fund and finance infrastructure.*
 - Canada has a strong role here to finance infrastructure, with long term returns on its investment (see Pine Point example later in the slides)



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Northern Principles

- Mineral resources are our economic advantage
 - Northern Canada (NWT and NU) don't have same significant economic opportunities as southern Canada, eg, forestry, farming, manufacturing, etc.
 - The North's geological potential is significant
 - However, the North is Canada's most disadvantaged region wrt Infrastructure
 - The North needs "supra-investment" (ie, not per capita) if we are to make a step change into the future. (see map overleaf on Canada's population distribution)

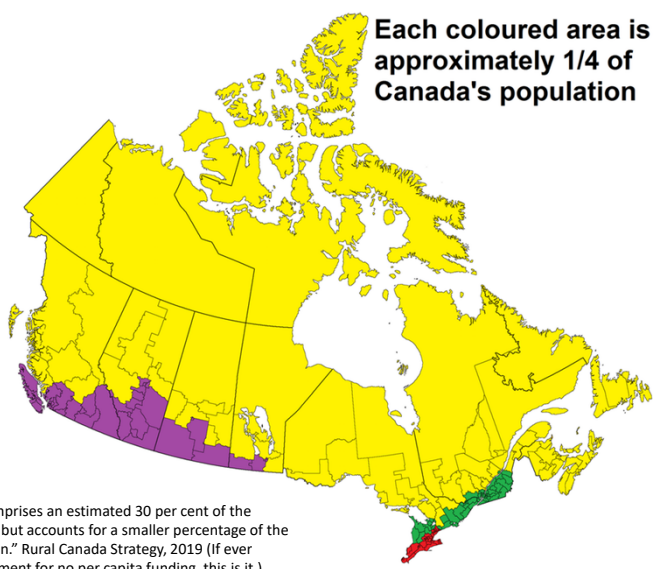


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The north can't compete under the "tyranny of the majority"

- The north, with its sparse population and huge area will suffer if only per capita funding invested in infrastructure.
- The north needs "step-changing" investment by Canada.
 - 90% of the Canadian population lives within 100km of the U.S. border – and this map by [repliers beware](#) makes it clear that any further north can get pretty remote.
 - See: <https://www.visualcapitalist.com/maps-population-distribution-visualized/>



"Rural Canada comprises an estimated 30 per cent of the national economy but accounts for a smaller percentage of the national population." Rural Canada Strategy, 2019 (if ever there was an argument for no per capita funding, this is it.)



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Mining is North's economic advantage – 80 plus years of mining history –

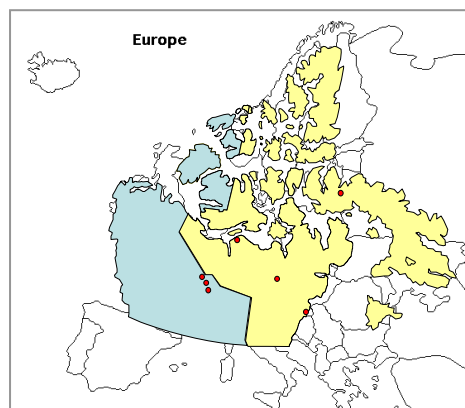
- 1930s – Eldorado (radium), Con, Negus, Rycon (gold)
- 1940s – Giant, Thompson-Lundmark (gold), Eldorado (uranium)
- 1950s – Rankin (nickel), Discovery (gold)
- 1960s – Pine Point (zinc-lead), Cantung (tungsten), Echo Bay (silver)
- 1970s – Nanisivik (zinc), Terra (silver)
- 1980s – Polaris (zinc-lead), Lupin (gold), Cullaton Lake (gold)
- 1990s – Colomac (gold), Ekati (diamonds)
- 2000s – Diavik, Snap Lake, Jericho (diamonds)
- 2010s – Meadowbank and Hope Bay (gold), Mary River (iron), Gahcho Kué (diamonds), Meliadine (gold), Amaruq (gold)



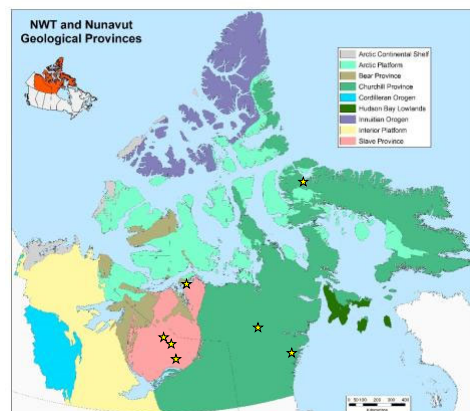
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Canada's North: Vast with barely tapped, high mineral potential

Huge Geography



Rich Geology, but barely tapped



- NWT + Nunavut = 1/3 of Canada's geography with less than 85,000 residents
- Strong mineral potential: diamonds, precious and base metals, rare earths, uranium, critical minerals
- Only 7 operating mines in an area the size of Europe: tiny mine footprint < 0.01% of area

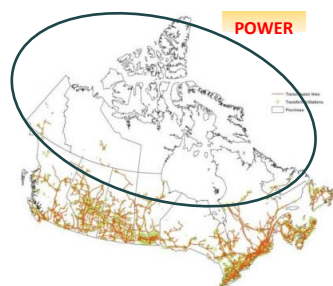
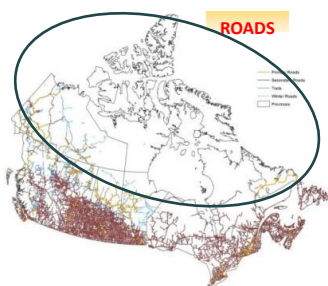


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But ... the North has Canada's biggest infrastructure deficit, thus the North is Canada's most expensive place to work

- How much more expensive?
 - Exploration costs up to 6 x higher
 - Mine capital costs up to 2.5 times
 - Mine operating costs 30 to 60% higher
- Significant reason why is lack of road and power infrastructure



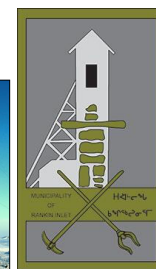
Industry Study: Levelling the Playing Field, May 2015



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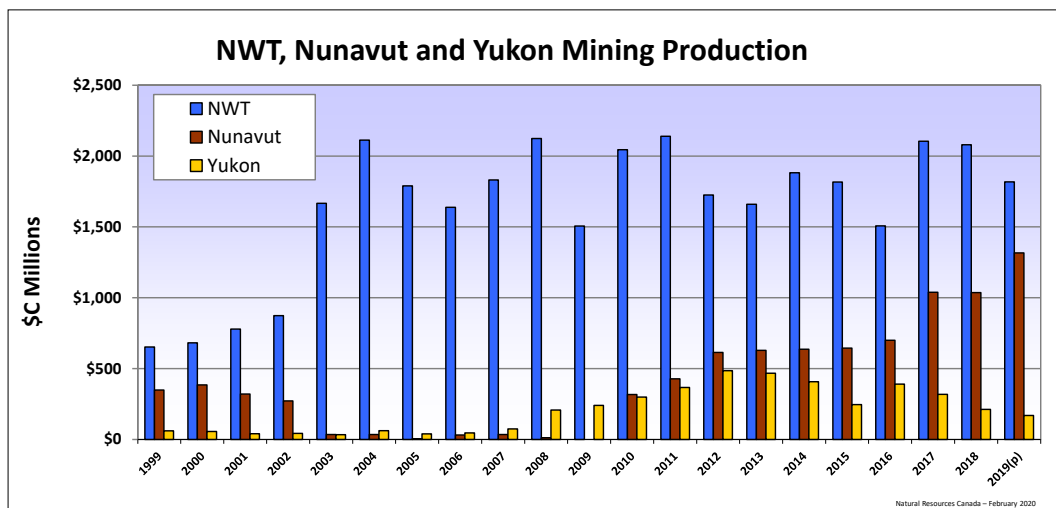
With Canada's help, mining has leveraged legacy infrastructure

- Mining Communities: Yellowknife, Rankin Inlet
- Roads to Resources, eg: highways to Yellowknife, Pine Point Ft. Resolution
- Railway to Hay River & Pine Point
- All 3 NWT hydro-electric facilities
- Marine shipping & ports
- Microwave communications
- Nunavut "highway system"



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Northern mineral production value



- Contributes to improved northern self-reliance, Indigenous reconciliation, Canada’s economy



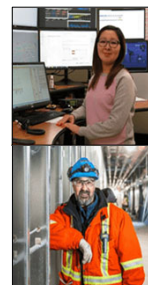
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Mining production translates into benefits (NWT+NU)

Benefits nationally, territorially, regionally and with Indigenous reconciliation

- 87,930 person-years of employment
 - 40% northern/60% southern
 - 2,143 northern workforce (26%) in 2019
- \$32.7 billion in business
 - \$20.3 billion northern (64%)
- \$Billions in taxes and royalties to public and Indigenous governments
- \$100’s million dollars to communities in IBA payments, scholarships, donations, & community wellness projects

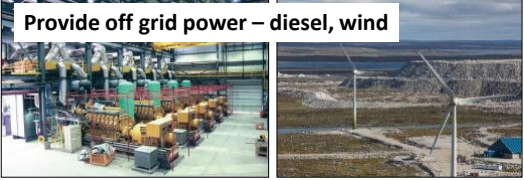
Source: Compilation of mines’ annual socio-economic data from 1996-2019




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Challenge: Northern mines today must look after their own infrastructure, adding cost burden and risk


Provide off grid power – diesel, wind



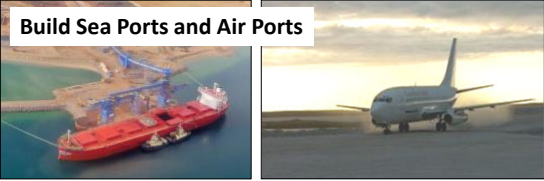
Buy & Store Annual Inventories




Build Rail & Roads – seasonal, all weather



Build Sea Ports and Air Ports



Provide room & board, medical



= \$!

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Higher costs mean northern mining has higher business risks

- Mineral deposits and/or markets are often not robust enough to support healthy northern mining
- Some symptoms over just the last 12 years:
 - Meadowbank gold mine not profitable – deposit quality, infrastructure costs
 - Snap Lake diamond not profitable & closed – deposit quality
 - Jericho diamond mine closure and bankruptcy – deposit quality
 - Ekati mine bankruptcy protection – maturing deposit quality, COVID market
 - Mary River iron mine profitability – market risk, infrastructure deficit
 - Hope Bay gold mine profitability – technology risk in Arctic


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Once there was Federal support to help the North

- Ottawa once enabled and/or partnered in northern resource development
 - 1948 – Built the Snare Hydropower for Yellowknife gold mines
 - 1957-63 – Roads to Resources program, highways to mining and resource towns
 - 1960-70s – Federal Programs for Exploration Assistance and for specific project support
 - 1961 – Great Slave Lake Railway for Pine Point zinc-lead mine
 - 1966 – Taltson Hydropower for Pine Point zinc-lead mine
 - 1974 – 18% ownership in Nanisivik zinc-lead mine: town site, marine port, airport
 - 1975 – New ice-breaking cargo ship technology to service Nanisivik & Polaris mines
- **There's been a 40 YEAR FEDERAL INVESTMENT GAP IN NORTHERN MINING**



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Example: How Federal Infrastructure support pays off – *The Pine Point Mine leveraged mineral resources into legacy* –

- **\$125 million total cost** of Pine Point Mine project, including ...
- **\$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.
- **Both the railway and hydropower continue to serve the north 55 years later**
- The Pine Point partnership between government and private enterprise returned handsome rewards to both.



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Northern mining can do it again, but needs help

- Minerals in the ground can be leveraged to create significant benefits for Canada, for northerners and for Indigenous Canadians
- Mining can also be the “anchor tenant” to support high-cost infrastructure that needs significant moneys and time to pay off



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How? Rejuvenate 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:

- *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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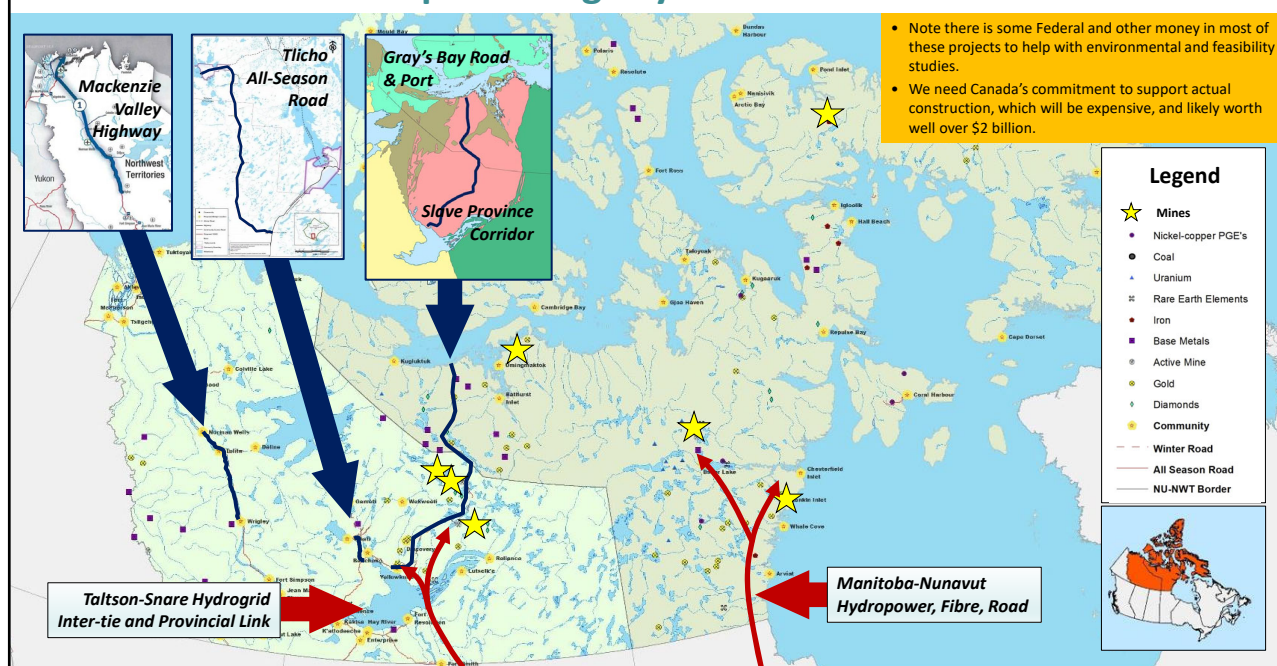
Now is a good time for help: the NWT economy is declining

- CBC reports [NWT productivity declines while other territories surge](#): Amid a historic national rise in labour force productivity, the Northwest Territories is alone among jurisdictions in Canada in seeing a significant decline. Productivity drop attributed to ‘considerable scaling back’ in mining industry. ([Statistics Canada](#))
- [Alberta's GDP plummeted most of all provinces in 2020, while N.W.T. hit hardest in country](#): GDP declined 10.4% in the Northwest Territories in 2020. Goods-producing industries decreased 15.6% and services-producing industries dropped 8.3%. Diamond mining fell 30.3%, in part because of the Ekati mine's suspension of production text ([Statistics Canada](#))
- [Economic Review 2021-2022 Northwest Territories Department of Finance](#): Expansion of the mining industry depends on successful exploration programs to identify potential new mine projects, as well as the deposit appraisal and environmental review process ...
- [NWT 2020 Environmental Audit](#) (a legislated requirement of the MVRMA): Despite the efforts of LWBs, small exploration companies continue both to struggle with the application process and to meet its requirements. If allowed to persist, this disconnect between industry and regulators will continue to affect the level of exploration activity in the territory which, in turn, will affect the NWT's socio-economic environment.
- [Conference Board of Canada June 2020 Outlook](#): The Northwest Territories' economy will contract 3.3 per cent in 2020, a downward revision from the 5.5 per cent expansion we forecast in February. Mining is also hurting the outlook for the Northwest Territories this year ...
- [Conference Board of Canada Summer 2019 Outlook](#): Weaker growth in mining in the Northwest Territories will affect other areas of the economy, notably construction activity.
- [Conference Board of Canada Autumn 2018 Outlook](#): Left behind is the Northwest Territories, where the economy is forecast to contract at an average annual pace of 1.6 per cent between now and 2025.
- [Conference Board of Canada Spring 2018 Outlook](#): The Northwest Territories' economy is about to shift into a lower gear.
- January 2016: [Choosing a Path Forward, a long term outlook for Denendeh](#) (NWT) produced for Denendeh Development Corporation: Denendeh's prolonged period of economic prosperity and stability as a direct result of the investments in the oil and gas and diamond industries ... will soon be replaced with a period of change and instability.



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Need to catch up: Seeking key infrastructure investments



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Industry is asking Canada to help the minerals industry to help with COVID emergence

- See the next slide for the 'asks' which we:
 - Are working cooperatively with Territorial Governments to advance in order to improve economic recovery and resilience
 - Presented to Deputy Prime Minister Freeland in February 2021 for consideration in the Budget
 - Presented to Northern Affairs Minister Vandal, March 2021 for ongoing discussion and advancement



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Recommend: Canada strongly support northern mineral development to benefit northerners

- Recommended actions:
 - Create an enhanced and competitive North of 60 Mineral Exploration Tax Credit of 50%
 - Support and/or participate in individual resource projects as Canada historically did
 - Support mining of NWT critical minerals for the green economy
 - Construct regional transportation, renewable energy & communications infrastructure
 - Taltson hydro and Kivalliq hydro-fibre; Slave Geological Road / Grays Bay Road and Port
 - Slow the rush to conservation, deferring to the northern co-management system
- These actions can achieve some strong outcomes:
 - Mineral exploration increases, mining and its many benefits are sustained and grow more
 - Resource development is linked to community health improvements, including housing
 - COVID economic recovery emerges stronger
 - Northern sovereignty is strengthened in the face of competing Arctic interests



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