

Draft Nunavut Land Use Plan Technical Meeting 4 Recommendations on Caribou Protection

March 7 – 9, 2016

Part I

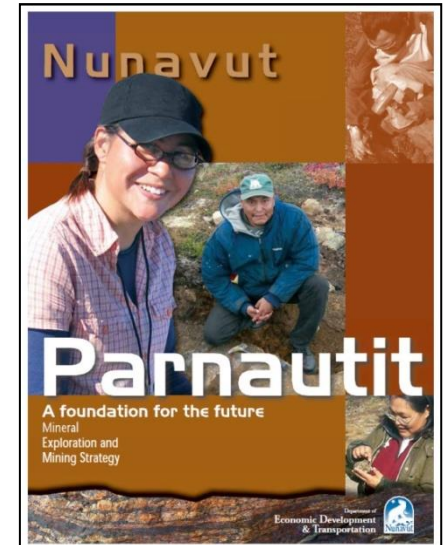
Chamber of Mines Opening Remarks – Proponent Perspectives on Caribou Protection

Opening Remarks

- The Chamber of Mines is very concerned about the health of the caribou herds in Nunavut and understands how important caribou are to Nunavummiut
- Caribou conservation is *not just a wildlife management issue*. Many organizations and individuals have key roles to play in ensuring the effective management of Nunavut's caribou herds, including Nunavut's mining and exploration industry
- Nunavut's regulatory regime, based in the NLCA, requires that industry work collaboratively with, and take direction from regulators, specifically the NIRB and the Department of INAC, to ensure that the effects of exploration and development on caribou are minimized.
 - Includes assessment of project effects, cumulative effects (always including caribou) and development of mitigation and management measures that apply the best science and build on past experience in the North.
- Long term viability of caribou herds can successfully coexist with a sustainable and beneficial mineral development industry

Opening Remarks (cont.)

- NLCA Article 11 - in developing planning policies, priorities and objectives, factors such as ***economic opportunities and needs***, should be taken into account
- Parnautit Mineral Development Strategy –
“A strong and sustainable mining industry will have operating mines throughout the territory providing employment and business opportunities. This will require a high level of exploration activity resulting in new mineral discoveries and developments with new mines coming into production as older mines are closed and reclaimed.”



March, 2007

Technical Review of GN Caribou Protection Measures

- The Chamber contracted EDI to conduct a review to analyze the GN's proposed "core calving area and key access corridor" and other geographically-based land use restrictions being proposed for the DNLUP
- Following is a summary of industry's key concerns, with recommendations to the GN revisions including analytical refinement
- Intent is to provide a critical review of the protected areas proposal and, where possible, constructive suggestions for the GN and the DNLUP process so that the Chamber can move forward as an engaged partner in the maintenance and recovery of Nunavut's mainland tundra migratory caribou herds

Comments on GN Approach

- **The recommendations require a supporting biological rationale** — As it stands now, the proposed protected areas are based solely on the presumption that excluding all industrial activity from calving grounds is “critical” to herd productivity, yet no supported rationale is provided
- **The proposal seemingly lacks a peer review** — It is not apparent if the GN’s approach has been peer reviewed or if there is general acceptance of the approach
- **The GN is presenting an exaggerated disturbance effects model** - there is no acknowledgement of existing cumulative effects assessments already conducted for caribou
- **The protection measures lack strategy** — The GN is proposing an infrequent review period to revise areas, and there is no documentation of how calving ground habitat protection will be integrated with other population management tools (e.g. harvest monitoring, collection of population demographics, population modeling, etc.)

Chamber Technical Recommendations

- Follow methods described in Gunn et al (2007) that look at individual caribou movement rates, and reduced movement when calving to determine which caribou were likely calving before including them in the caribou core calving area dataset
- Consider using annual data to determine extent of habitat use, and layer annual ranges to determine “core” habitats
- Provide a biological rationale for the buffers used; or do not buffer the data.
- Provide complete description of methods including biological rationale for analytical methods and reference literature
- Consider a habitat modeling process that incorporates habitat attributes of caribou locations, and not simply collar locations. Consider using habitat information described in the “Kivalliq Ecological Land Classification Map Atlas: A Wildlife Perspective “(Campbell et al 2012)

Chamber Technical Recommendations (cont.)

- Consider reviewing on an annual, or at least on a 5-year basis to either match the *Nunavut Wildlife Act* or the presumed frequency of review of the final land use plan
- Consider re-analysis of data and examining individual movement rates to determine if caribou were likely calving;
 - identify the sample size and years upon which each area is based and determine if supported by other evidence (e.g. IQ, other survey data, field observations)
 - consider other attributes about caribou ecology and presence to better describe what would qualify as a “core calving area”, or provide distinct criteria to identify areas

Chamber Suggestions Specific to the DNLUP

- Boundaries of core calving areas and key access corridors be reconsidered
 - Consider alternative methods of defining caribou core calving areas and other seasonal ranges
 - Consider refining the data used to define the areas, and justify the ~ 30 individual polygons identified as “core areas” for eight herds
 - Have the information and analyses reviewed by peers — make the data available to interested parties
- The boundaries of the seasonal ranges should be made available to land users
- To ensure that the management recommendation remains relevant, a regular timeline to review and update the boundaries has to be in place, either through the Land Use Plan process or through statutory reporting from the GN on the *Nunavut Wildlife Act*
- The GN Recommendation: “Caribou Core Calving Areas and Key Access Corridors” and other recommendations for seasonal ranges and land use restrictions should be supported by a detailed and peer-reviewed biological rationale

Part II

Mobile Protection Measures

Mobile Protection Measures

- Mobile protection measures are practises industry currently has in place
- Project specific mitigation measures are mainly specified in a Project Certificate at the end of a NIRB EA process and cover mine development, operations and closure
- Industry has demonstrated the ability to minimize impacts on caribou while benefitting Inuit with jobs
- New techniques and technologies for monitoring (e.g. GPS collars – real time data, UAV surveillance and motion-activated cameras) make monitoring and adaptive management much more responsive and much more effective at mitigating effects to wildlife
- Predictability is paramount to successful exploration and investment certainty
- How mobile protection measures are incorporated into NUPPAA legislation is a regulatory role, not an industry role

Part III

Discussion of Areas of High Mineral Potential in Caribou Calving Grounds

The Need to Recognize High Mineral *Potential*

- Current mining claims may underestimate mineral potential in an underexplored region and in a depressed commodity market. What needs to be recognized within the land use plan is the areas of high mineral potential
- So much of Nunavut is yet to be explored. Sterilizing these areas will not allow for future discoveries. Premature to identify these areas in the land use plan
- Inuit organizations used high mineral potential as a selection criteria in the lands they chose, so reducing access to these areas means reducing the value of land they selected
- Mineral potential assessments are only as good as the knowledge of the time. Future generations and technologies may identify new minerals that are essential to society, and new technologies that can allow access to them with minimal disturbance. This may alter our understanding of what constitutes high-medium-low mineral potential
- Should preserve flexibility as much as possible in land use designation so as to reduce the amount of land taken out of circulation permanently, so that future generations have the ability to benefit from mineral resources and technologies that we can't imagine today

Part IV

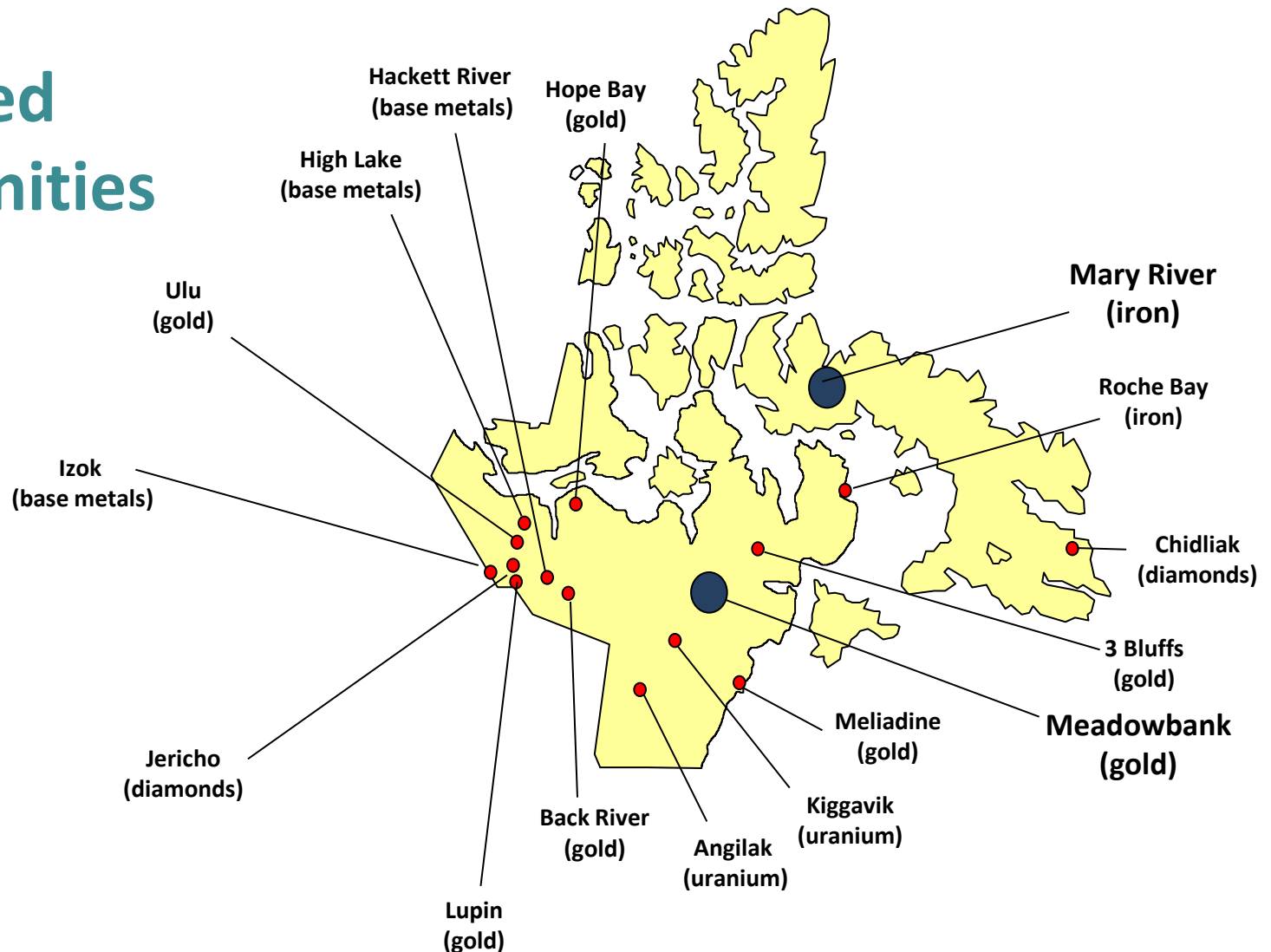
Additional Background Slides

Role of the Chamber of Mines in Nunavut

- Monitor Nunavut developments and issues relevant to industry
- Provide information to industry, Nunavummiut and others on exploration and mining in Nunavut
- Provide input to government on policy and legislation
- Community outreach

Establishment of Nunavut office - 2011

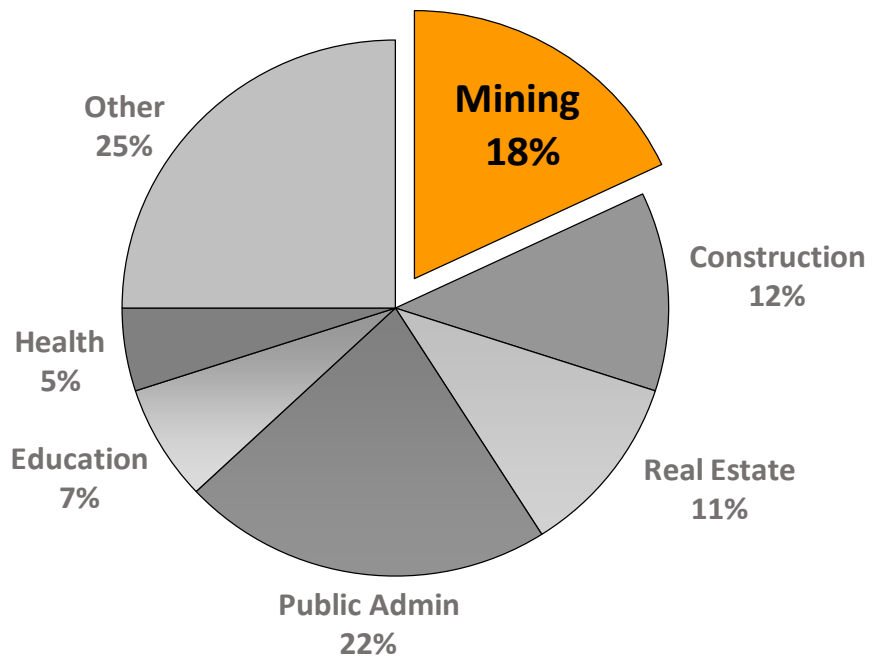
Nunavut's *Potential* Mines Provide Diversified Opportunities



Mining is the Largest Private Sector Contributor in Nunavut

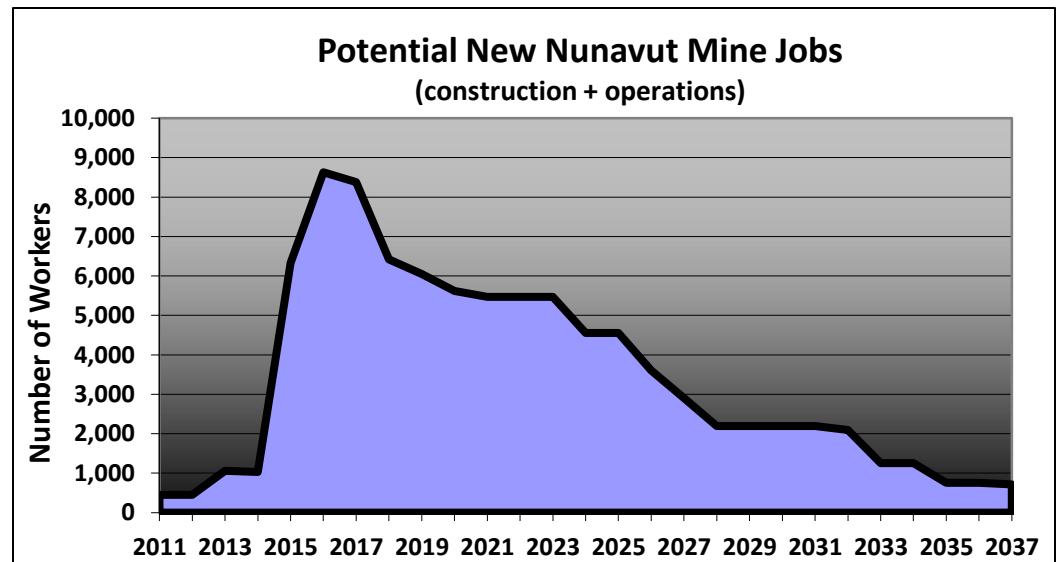
- One mine in Nunavut already makes largest private sector economic contribution
- And this does not include exploration
- Exploration and mining also contribute to other sectors, e.g. real estate, transportation and construction

NUNAVUT GDP (2014)



Our Industry Creates Significant Benefits

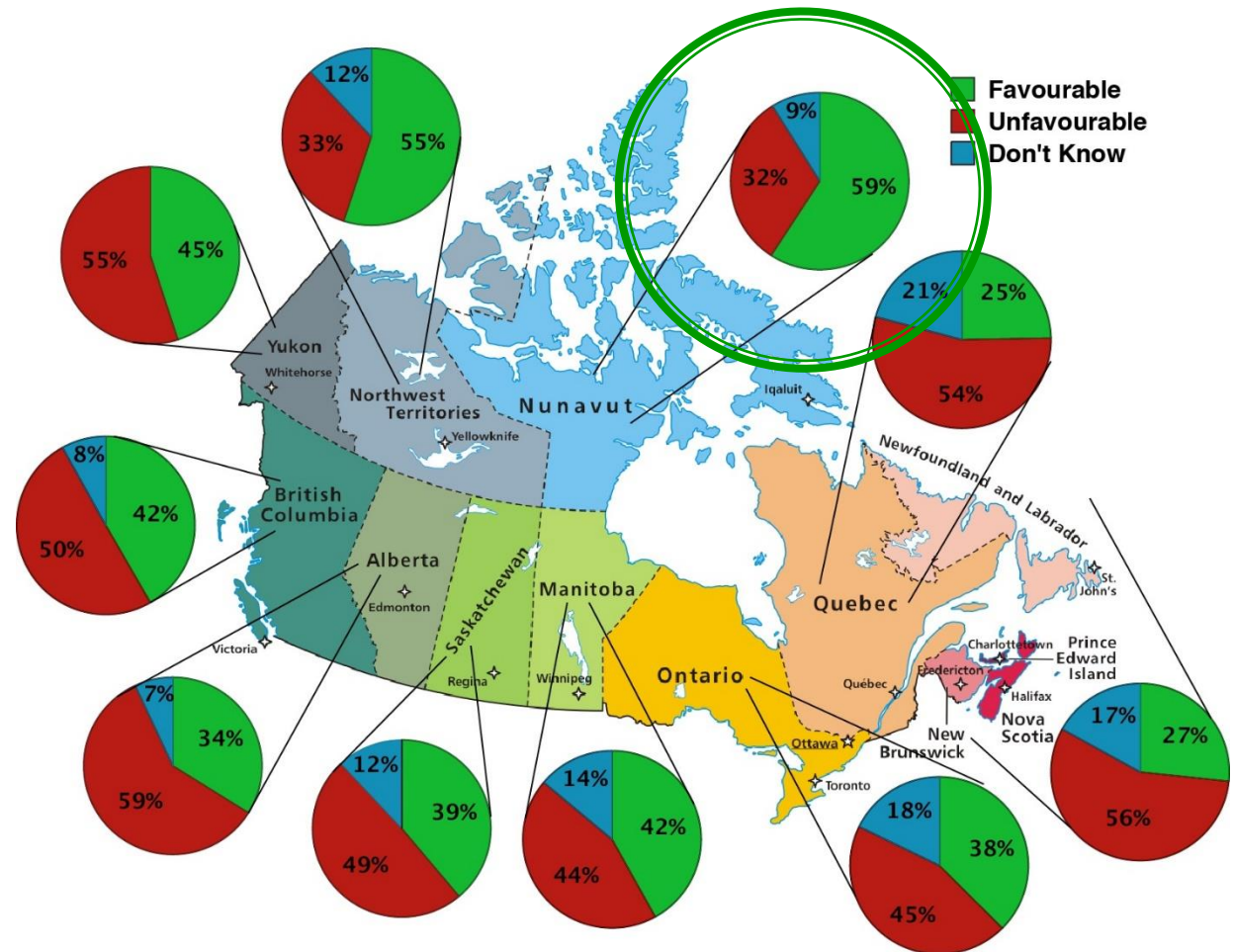
- Mining is the largest employer of Aboriginal people
- Mining in Canada is projected to need 120,000 workers by 2024 *
- Nunavut Mining Jobs needed at peak (overlap) – over 8000
- Total person years employment – nearly 100,000



* Mining Industry Human Resource Council, 2014

We're Doing Pretty Well Compared to Canada

- Nunavut has the highest Aboriginal approval rating for mining in Canada
- Why?
- Because of high Aboriginal participation



Aboriginal Canadians and Their Support for the Mining Industry: The Reality, Challenges and Solutions:

PR Associates, 2014: www.prassociates.com

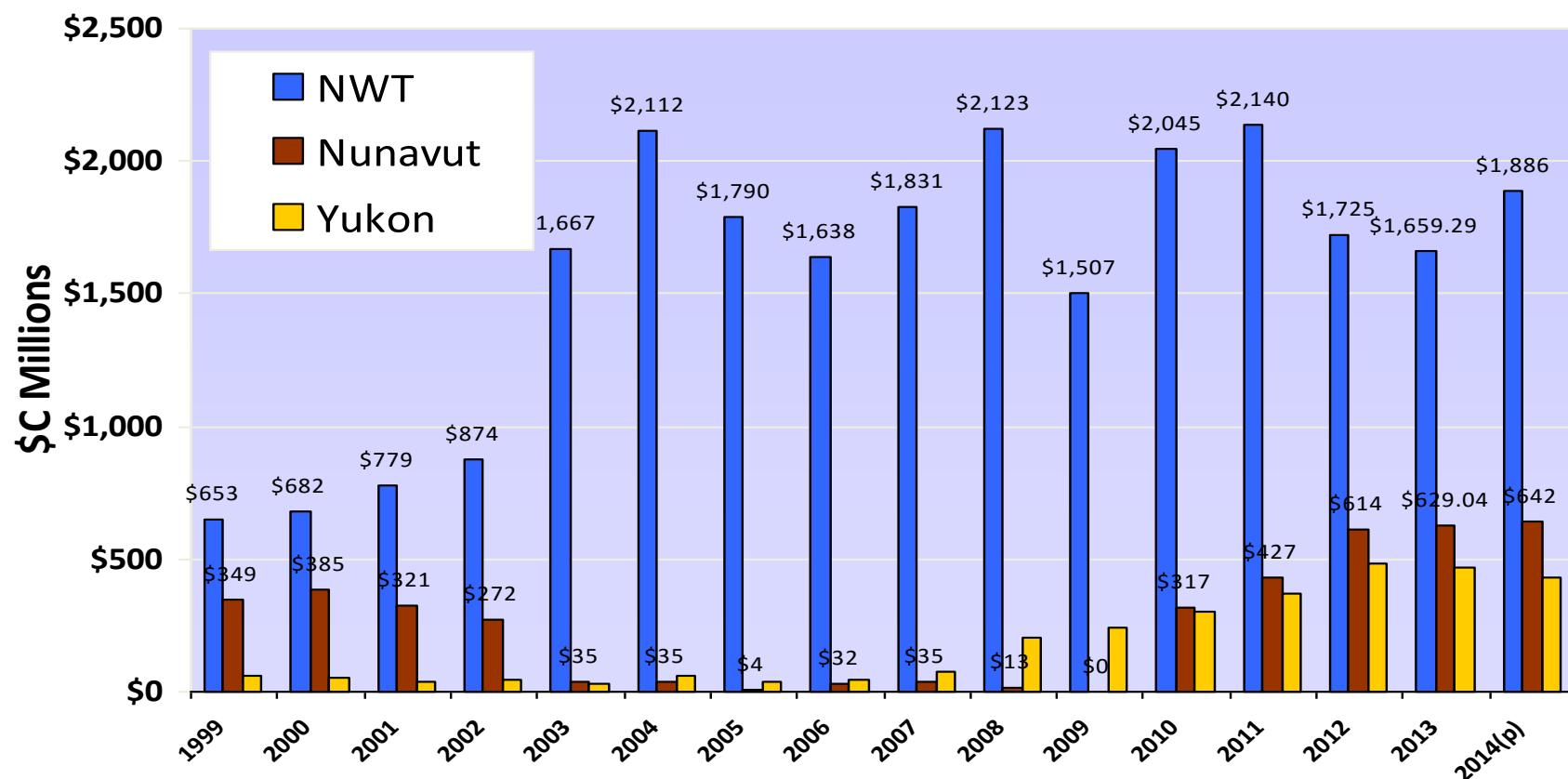
Mining Helping Inuit Businesses Grow

Selection of Inuit companies now able to support the mining & exploration industry in Nunavut

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

Value of Mineral Production, 2014(p)

NWT, Nunavut and Yukon Mining Production

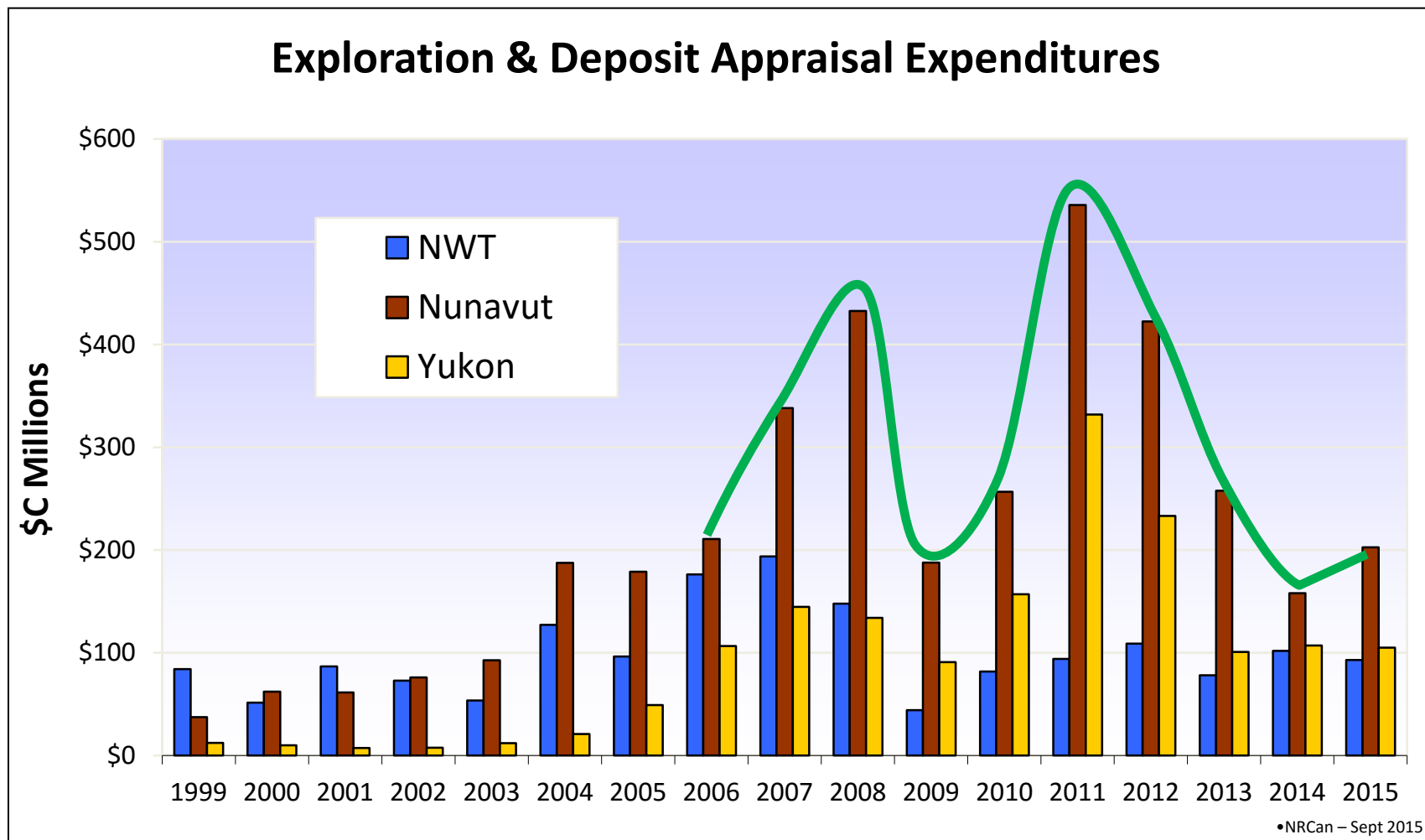


• Natural Resources Canada – March 2015



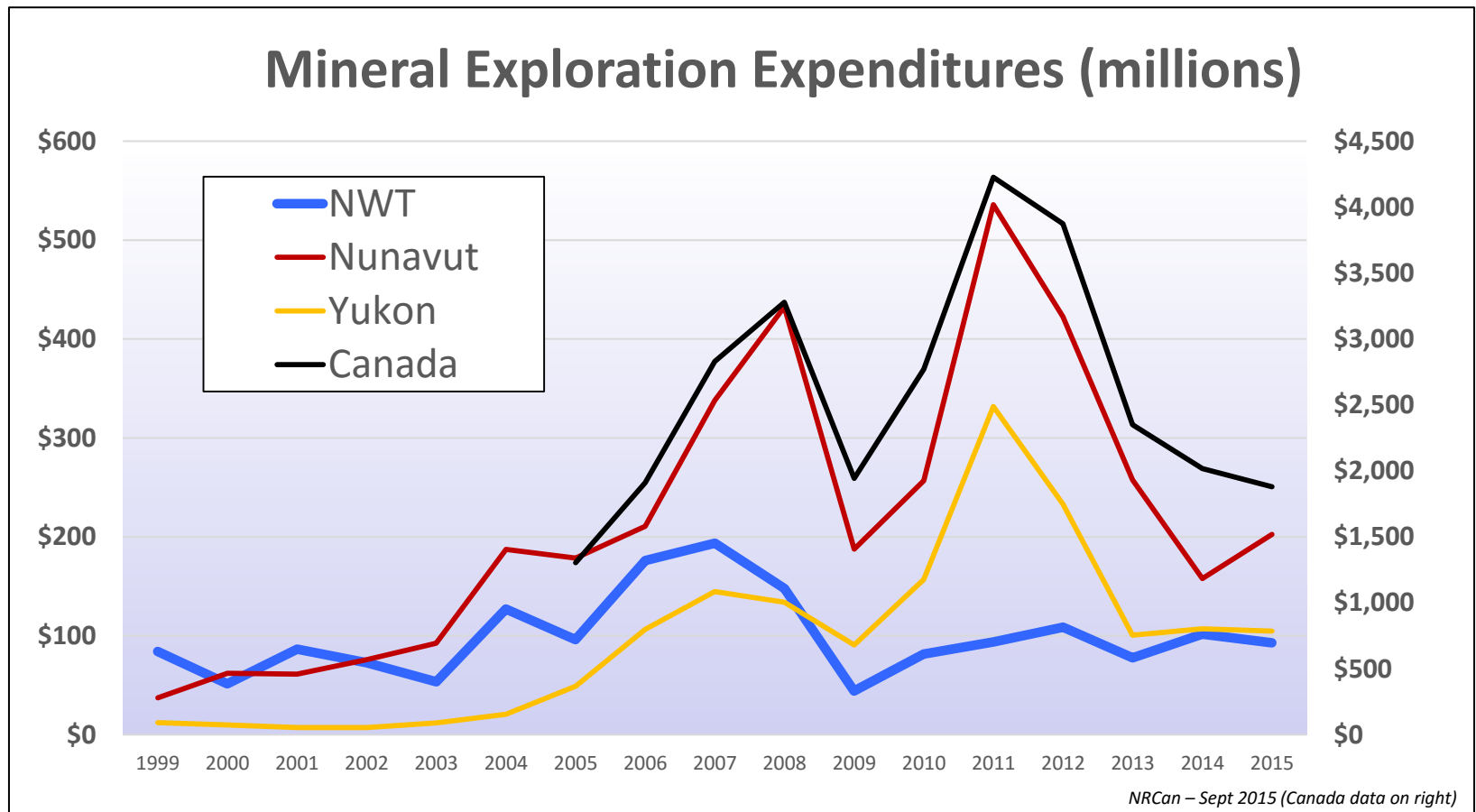
- NRCan March 2015 - <http://sead.nrcan.gc.ca/prod-prod/2014p-eng.aspx>

We Have Some Control of Our Fate



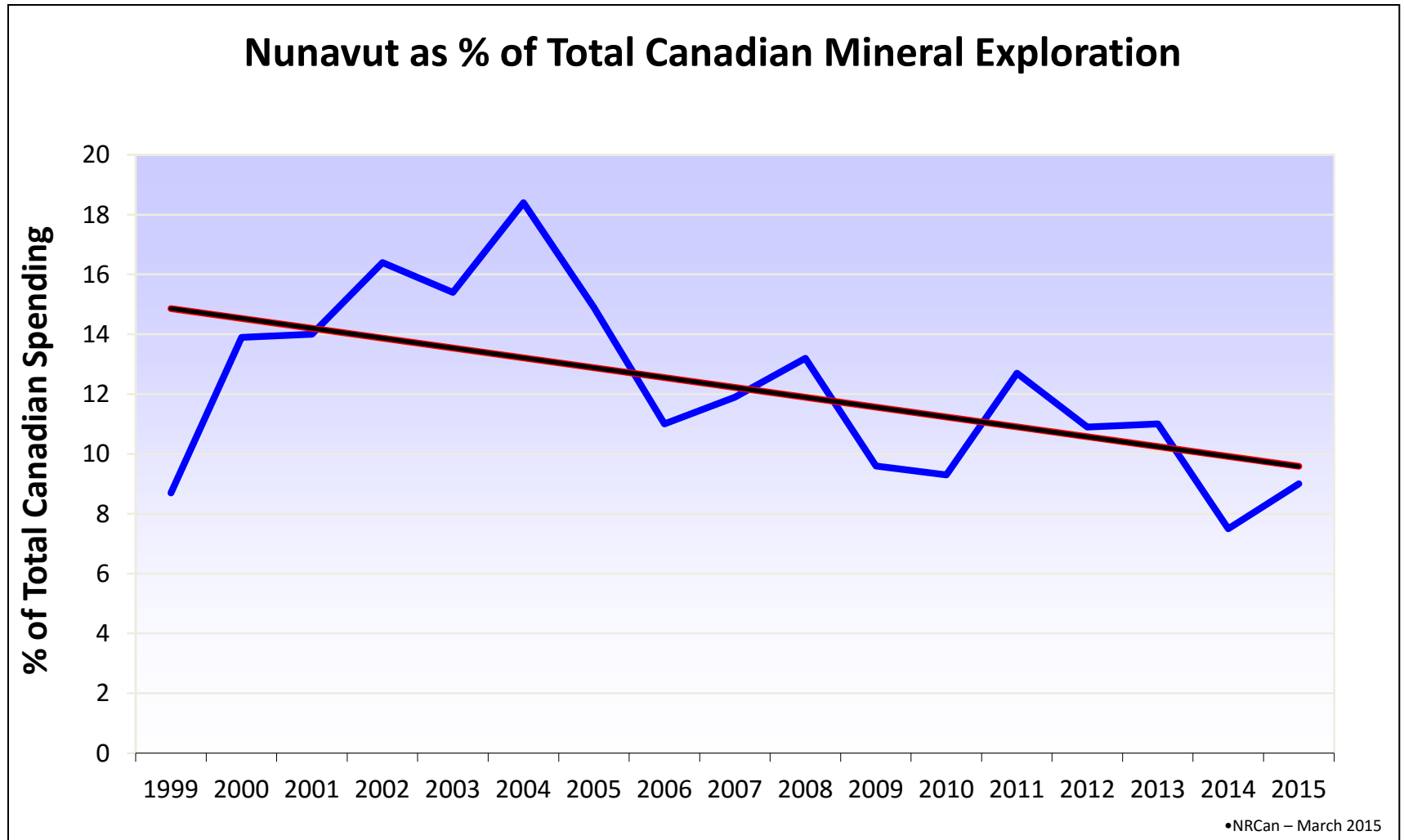
- Yukon and NU exploration investment followed the markets
- NWT Exploration spending was out of synch = means self-inflicted

Exploration Financing Challenges



- Exploration investment is challenged.
- Land access uncertainties in the NWT saw it lose **\$1.7 billion** in investment compared to Nunavut over the period 2007-2014.
- Nunavut too must protect exploration access for the future.

Nunavut Exploration Share



NUNAVUT

Mineral Exploration, Mining and Geoscience

Active Projects

0 50 100 200 300

Kilometres

Projection: Canada Conformal Conic, NAD 83

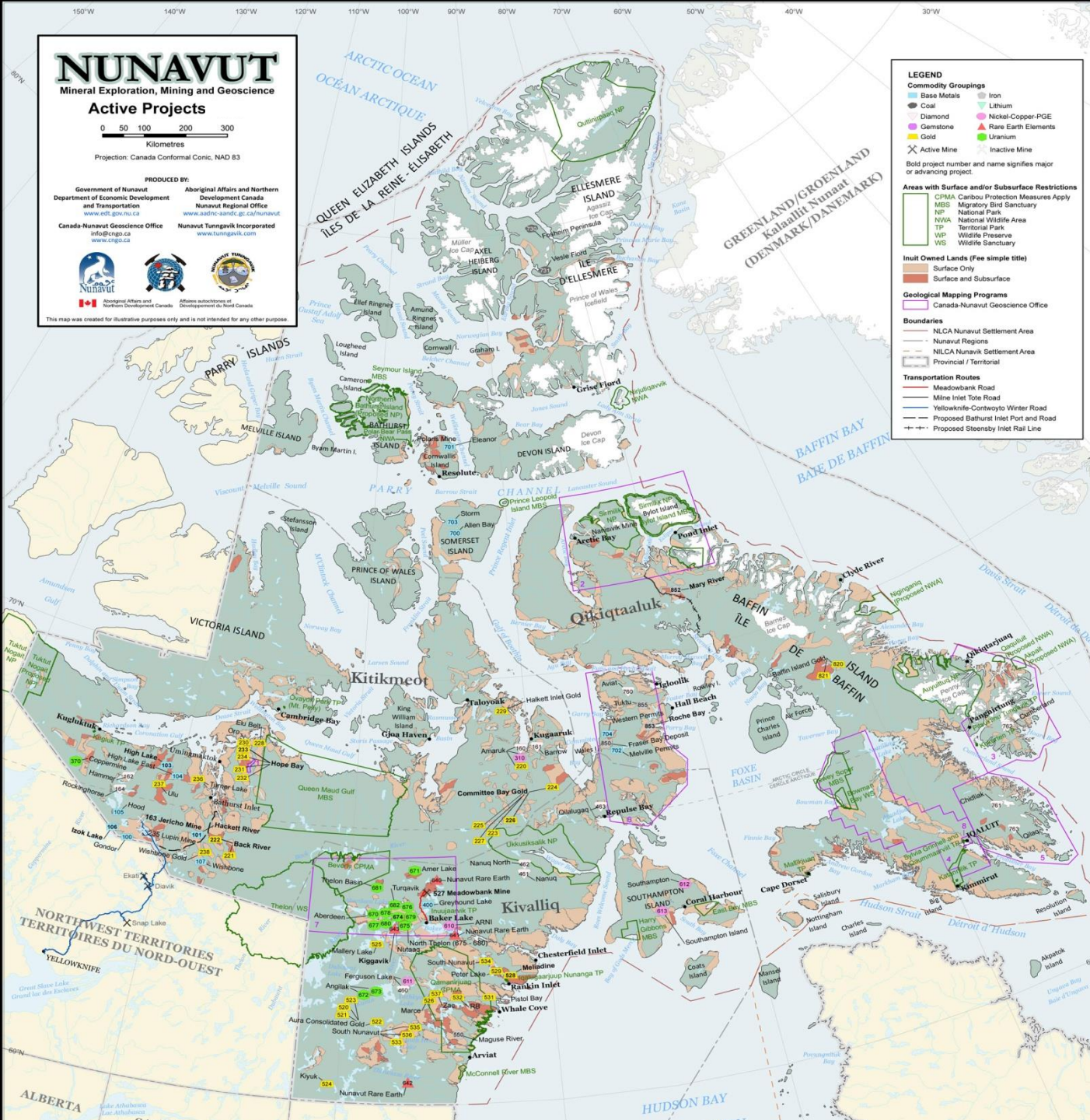
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www.tunguvik.com



This map was created for illustrative purposes only and is not intended for any other purpose.



- **In 2015**
- **30 active projects**
- **3 advanced**
- **11 Gold**
- **4 Base Metals**
- **3 Uranium**
- **11 Diamonds**
- **1 Iron**

