

# James Bay Niobium Project

## *Project Description*



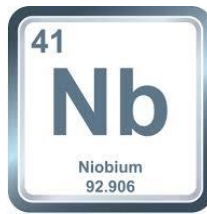
SEPTEMBER 2019

*Moose River, Moose Factory*

# NIOBAY METALS

- Public company listed on the Toronto Venture Exchange (symbol "NBV"). Head office located in Montreal, QC.
- **Engagement Team:** Claude Dufresne (CEO), Jacquelin Gauthier (VP Geology), Harry Rickard (Senior Aboriginal Advisor), Derek Teevan (consultant)
- **Board of Directors:**
  - **Serge Savard** – Chairman of the Board – Ex-NHL player (Montreal Canadian).
  - **Dawn Madahbee Leach** – Director – GM Wautebek Business Development Corp.
  - **Claude Dufresne**, P.Eng – President & CEO – 15 years in the niobium business.
  - **Jean-Sébastien David**, Geo – Director – COO Arianne Phosphate Inc.
  - **Raymond Legault** – Director – Retired Financial advisor.
  - **Jacques Bonneau**, Geo – Director – Ex co-owner of Niobec mine.
- **Focus** on the James Bay Niobium Project acquired in June 2016.

# WHAT IS NIOBIUM ?

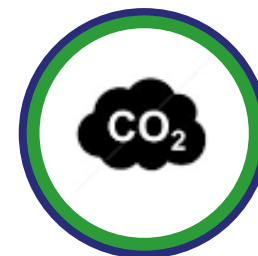


a metal added to steel to make it:

**Stronger & Lighter**



**Niobium**  
Helps to reduce  
emissions of  
**Greenhouse gases/  
Carbon footprint\***



\* In the USA alone, Niobium contributes to a yearly reduction of 62 megatons CO<sub>2</sub>, equivalent to half of Ontario CO<sub>2</sub> emissions per year.

Niobium helps to make lighter and safer vehicles & bridges, which contributes to reduce global carbon footprint



\$10 of Niobium in a mid-size vehicle



~150 kg  
lighter & 5%  
liters / km  
economy



0.02% of Niobium in steel (bridge)

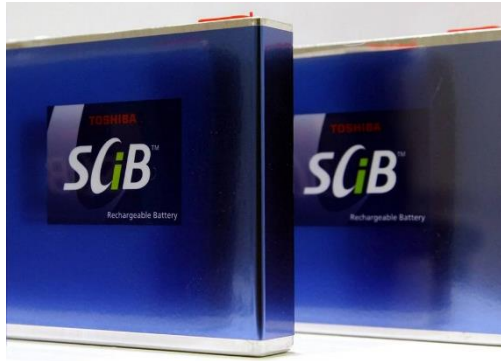


\$25M & 15,000  
tons of steel  
savings





## Toshiba Electric Vehicle Battery



Toshiba – New EV battery with possible range of **320 km** with a **6-minute** charge.

→ **Anode** made of a niobium-titanium oxide (TNO), replacing graphite.



## Niobium in jet turbine



Improve the efficiency & safety while reducing the **Nx** gas



Aerospace  
(jet engine, rivets)

Niobium is consider as a **GREEN** metal  
due to its positive impact on the CO<sub>2</sub> reduction



Automotive  
(structure, body)



Bridges  
(beams, rods)



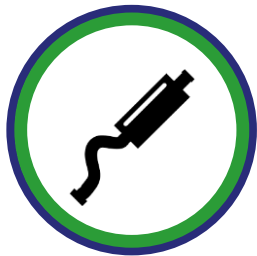
High-rise  
buildings



Wind Turbines



Aerospace  
(jet engine, rivets)



Stainless steel  
(Exhaust)



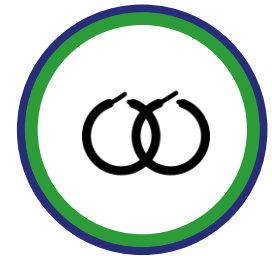
Tools



Medical  
(MR, implants)



Electronics  
(semiconductors)



Jewelry



# JAMES BAY NIOBIUM PROJECT

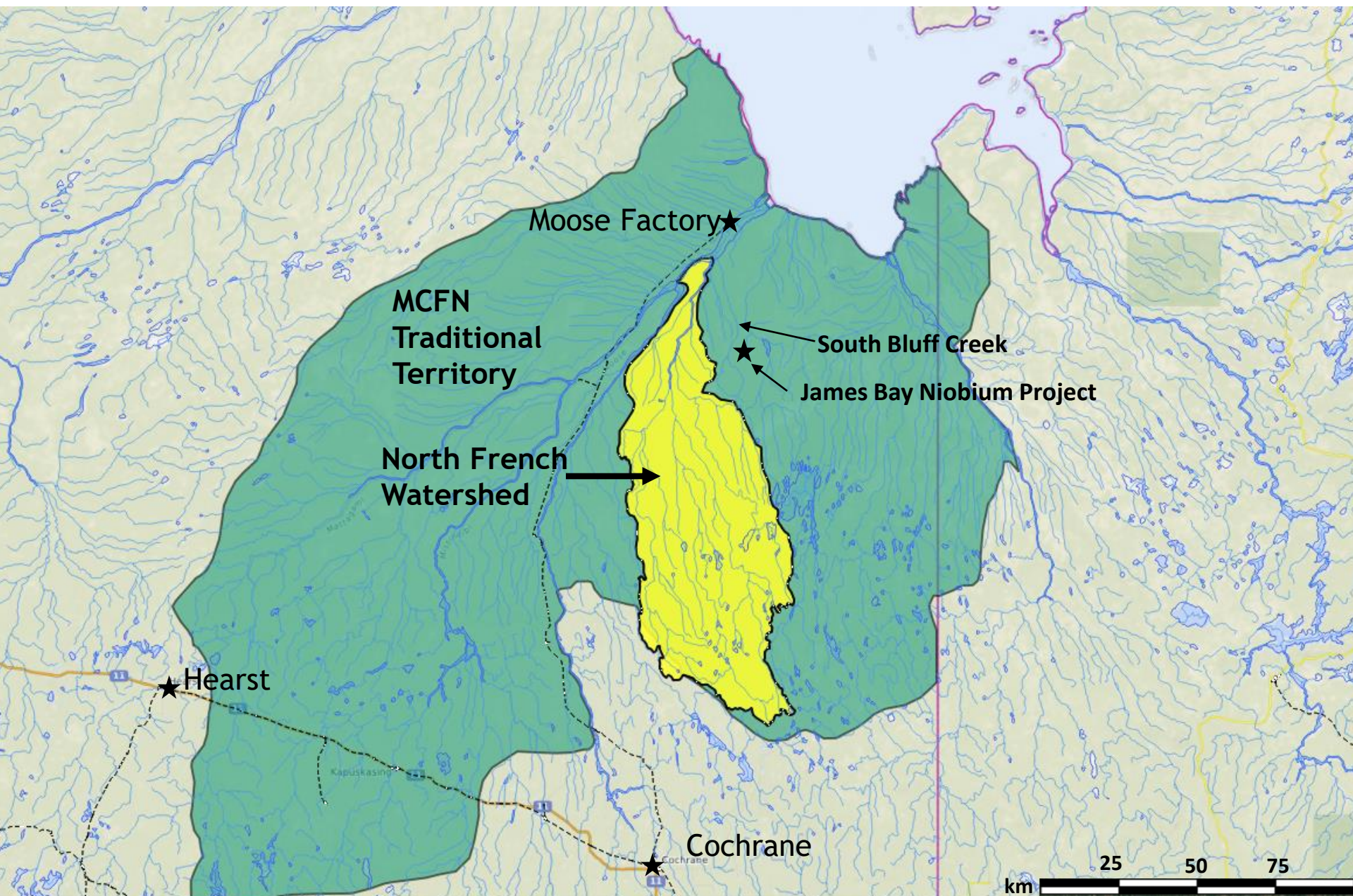
- Discovered in 1966 by **Consolidated Morrison Explorations** in a three party agreement that also included Argor Explorations & Goldray Mines;
- Explore in 1966 & 67 with 85 drill holes on the property;
- Major exploration work carried out in 1968 & 1969;
- Resource to sustained an operation for +20 years.



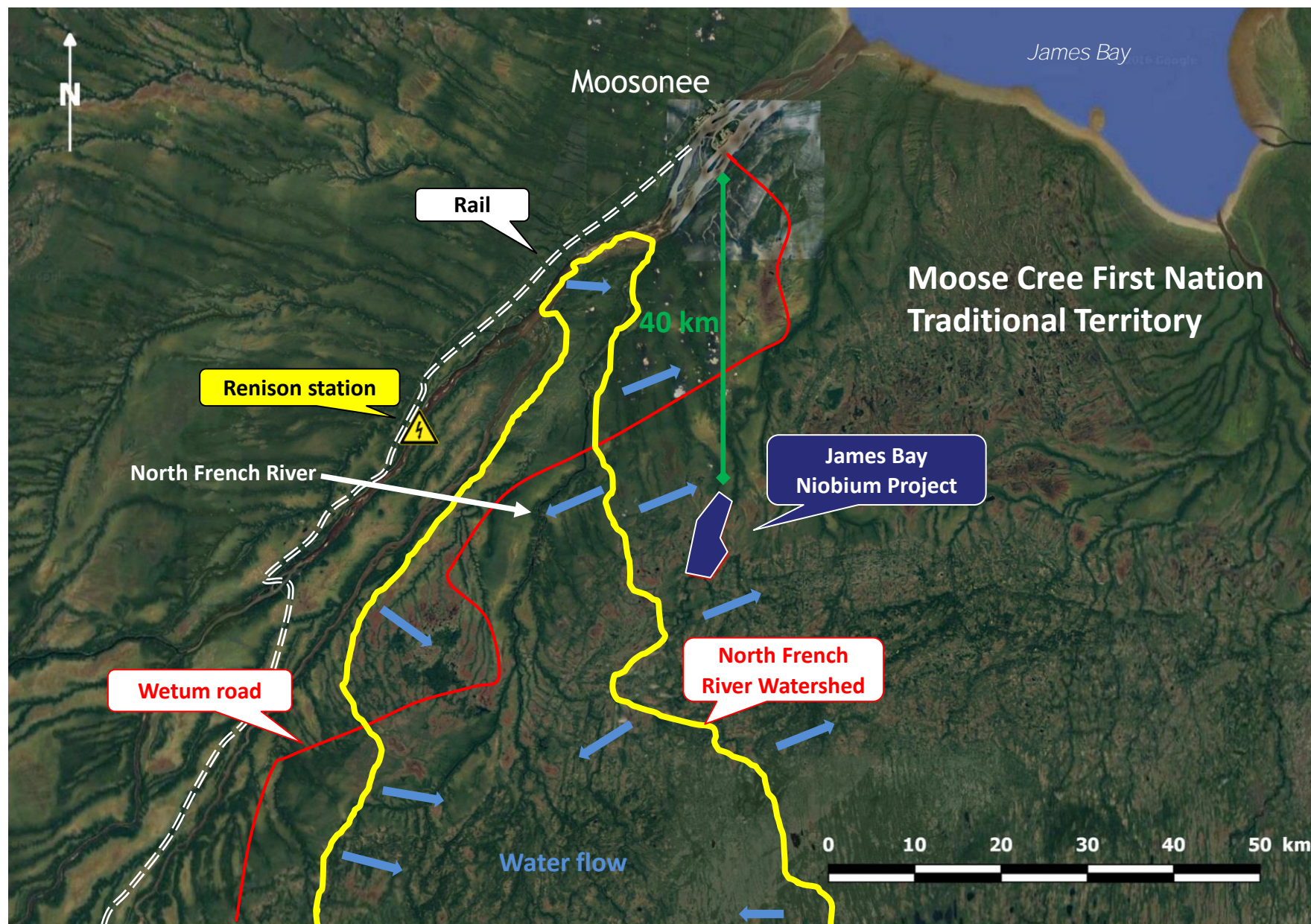


## PROJECT LOCATION

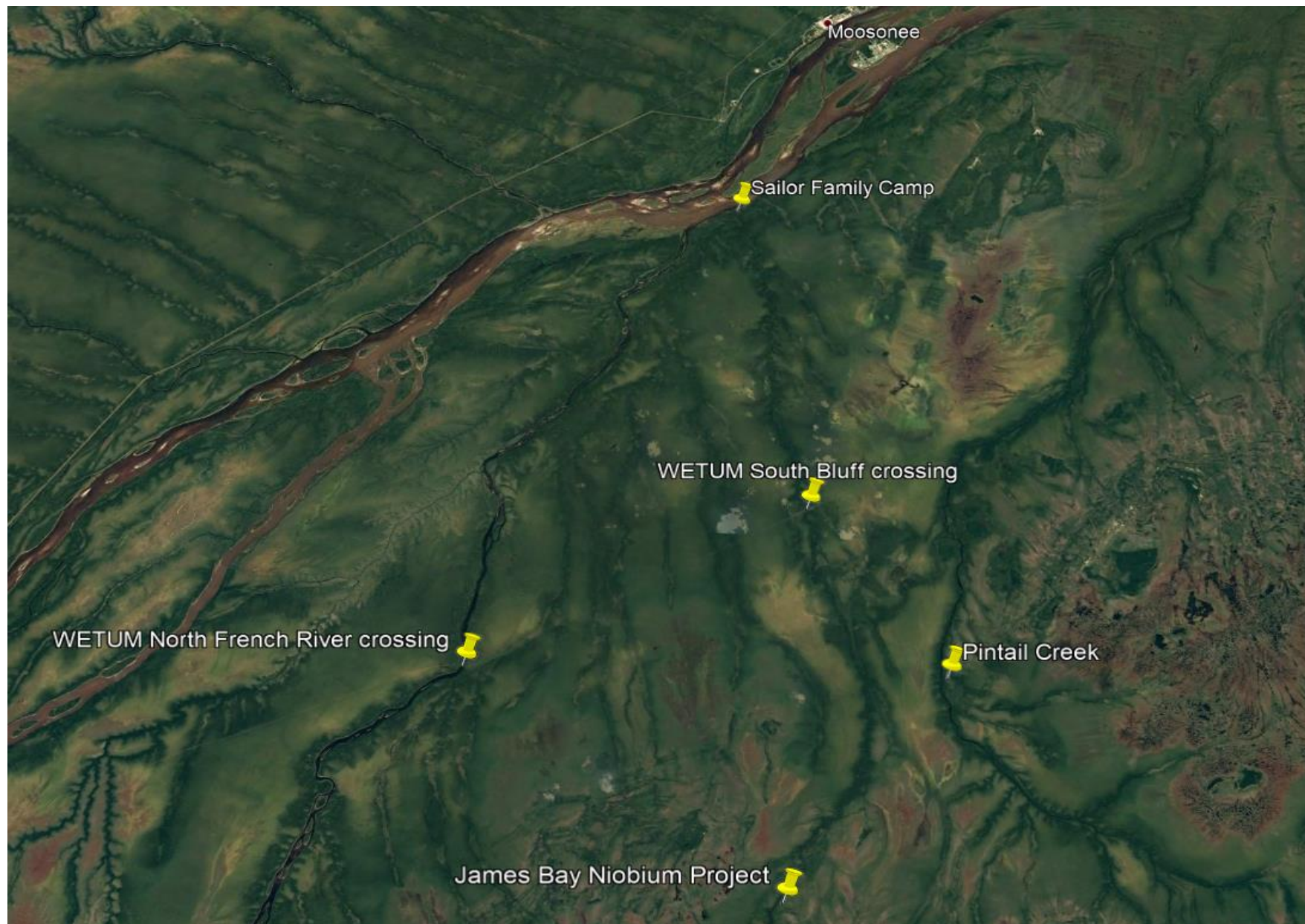










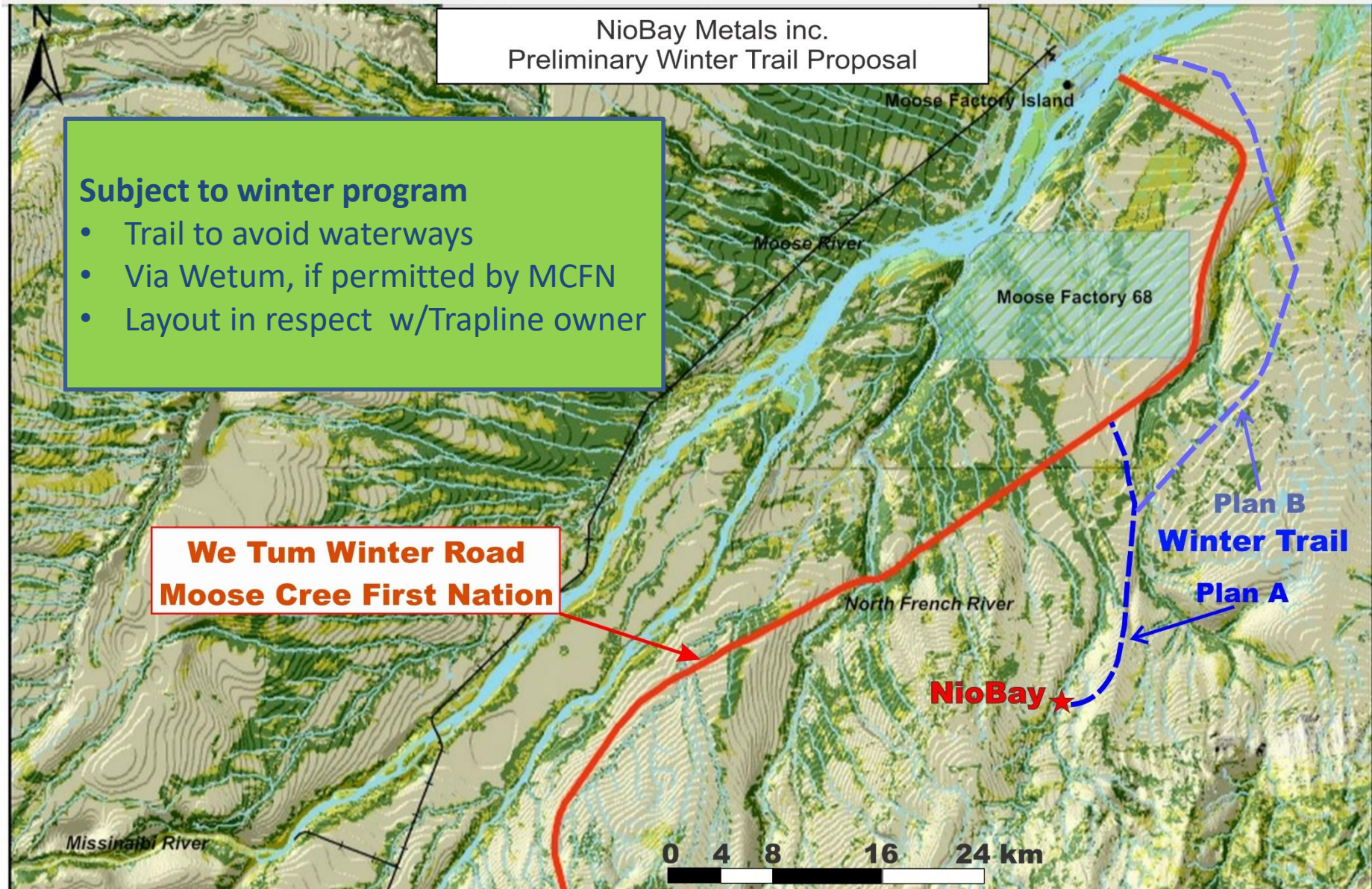


# DRILLING PROGRAM

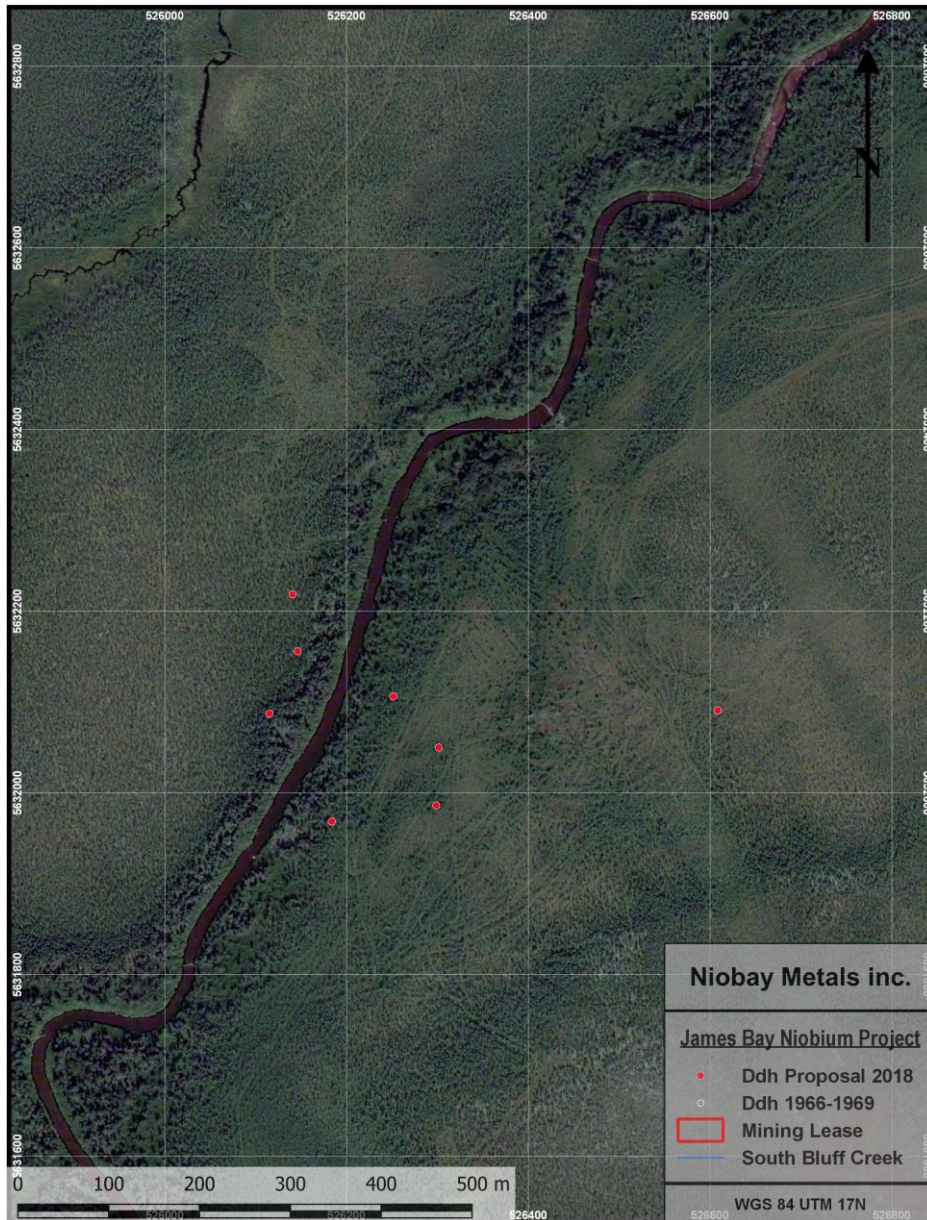
- Niobay will seek the **support** from MCFN for the small (only 8 holes) drilling program.
- In order to validate the historical data and test the **high-grade** extension, NioBay needs to conduct a small program.
- Drilling contractor will have to;
  - High **safety & environmental** standard.
  - **Experience** working on first nations territory.
  - Willingness to **hire** community members.
- MCFN **observation & monitoring** of the drilling will be welcome, subject to health and safety requirement.



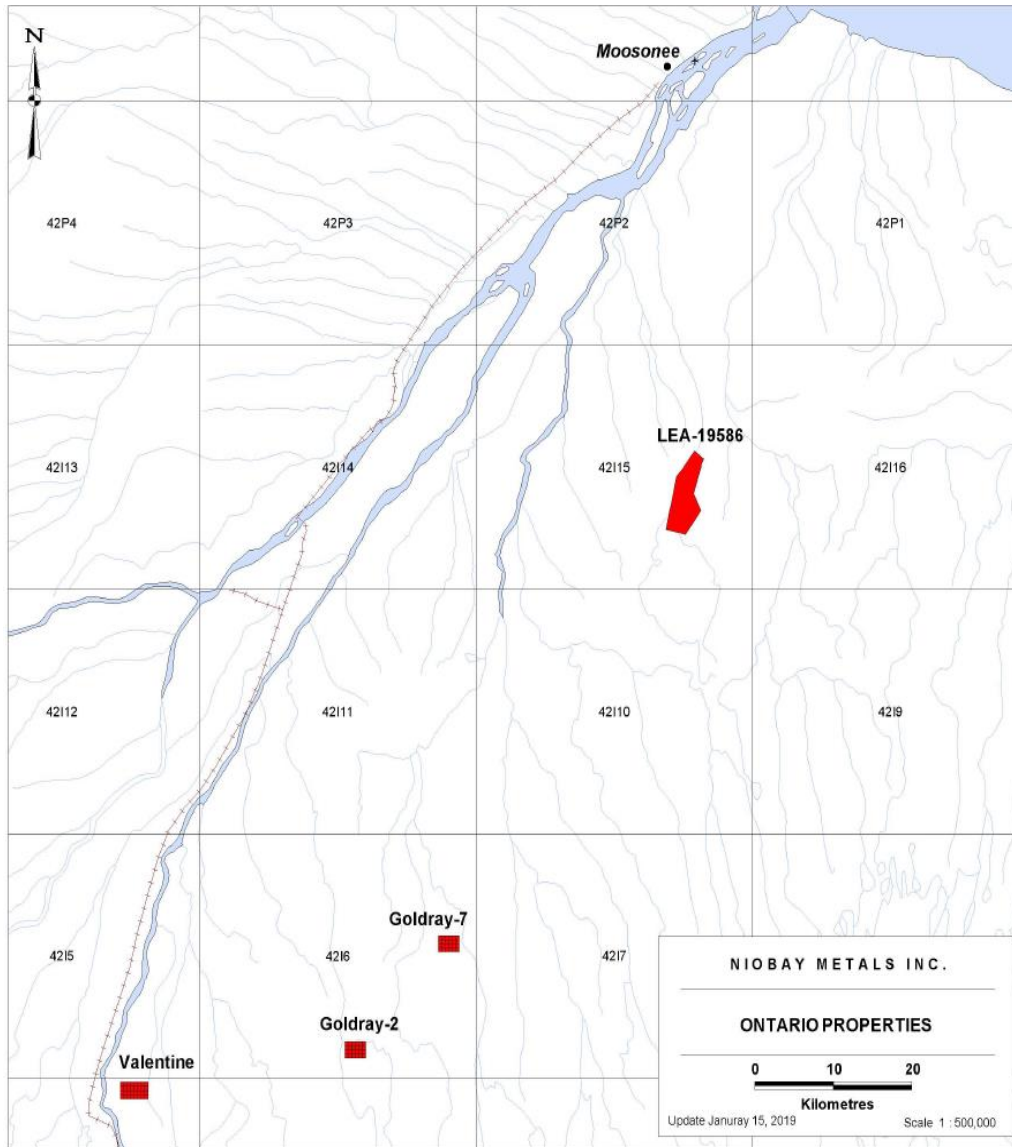






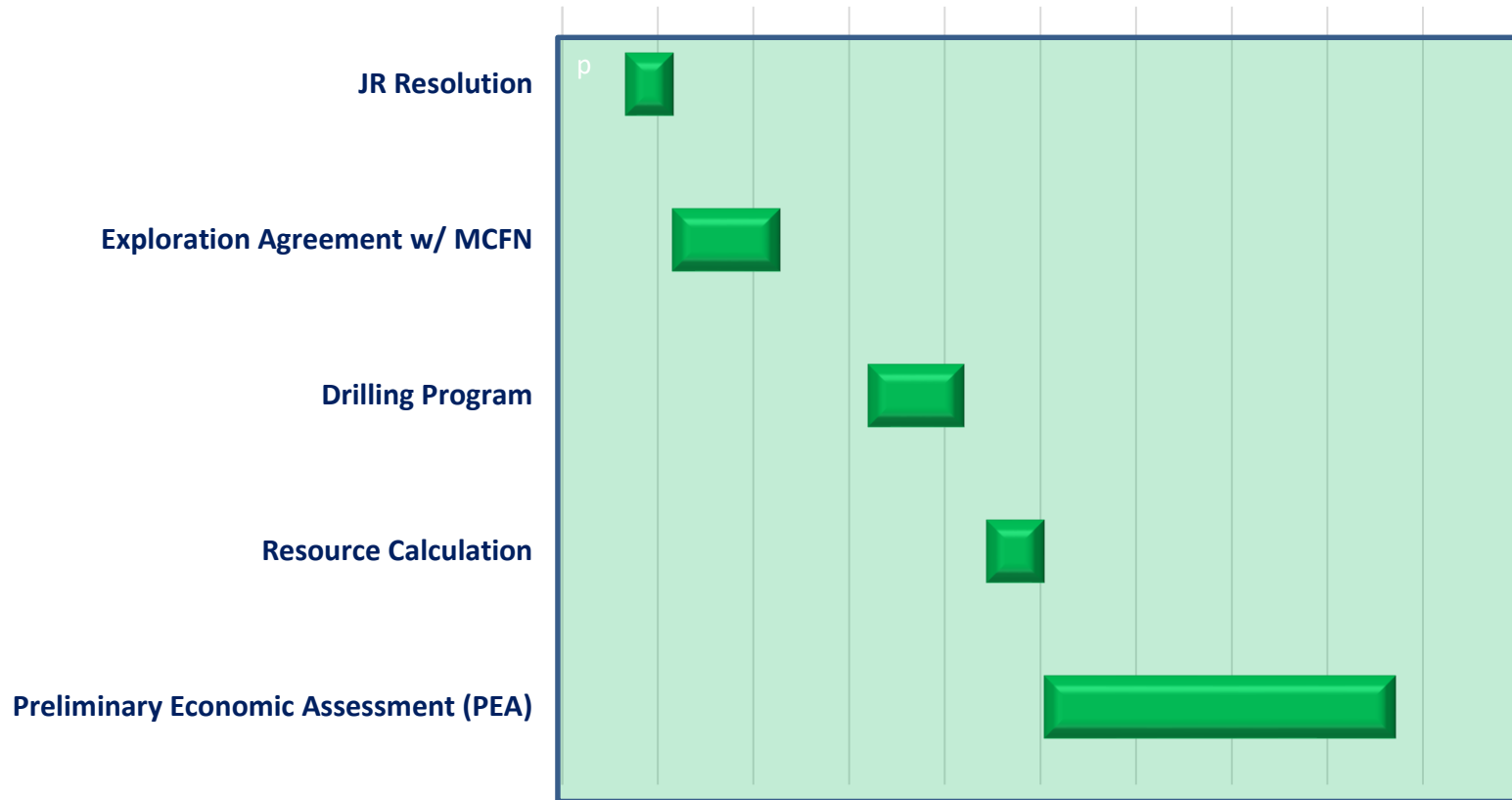


- Drill holes locations designed to **validate** historical results.
- Total of **8** holes.
  - **4** holes less than originally planned but deeper holes.
- Holes E1-2-3 located >50m from the creek.
  - Emilitate risk.
- Duration of the program estimated at **6 weeks**.
- Drill cores will be used to continue **metallurgical** program.
- Best environmental **practices** will be used.



- Niobay staked 3 areas within the MCFN traditional territory (Valentine, Goldray-2 & 7).
- All areas were drilled by the companies who discovered James Bay Niobium.
- Valentine property has the higher potential. It is also located on TTN & Metis traditional territory.
- No works are planned on these properties for the time being.
- MCFN will be informed if the situation change.





**If PEA is positive, engage with MCFN**



*developing one of the most critical metals*

Tel: (514) 866-6500  
[www.niobaymetals.com](http://www.niobaymetals.com)

