



# Our Critical Minerals Advantage

A Plan to Maximize the Value of Newfoundland and Labrador's Critical Minerals Resources





Photo: Iron Ore Company of Canada

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St. Lawrence Fluorspar



# Mineral Development and Critical Minerals Development

The mineral development industry, from prospecting through to mining and processing, is a significant contributor to the economy of Newfoundland and Labrador. It creates well-paying jobs that support families, contributes to infrastructure that benefits communities and generates economic activity that sustains a secondary industry of suppliers and service providers. Beyond these benefits are opportunities for increased training, innovation and participation by women, Indigenous Peoples and members of other underrepresented groups (e.g. members of the 2SLGBTQIA+ community, persons with disabilities, newcomers and visible minorities).

Significant progress has been made on new mine development, sustainable direct employment, annual exploration expenditure targets and increased mineral shipments since Mining the Future 2030 was released. One of the most ambitious goals in that plan was five new mines by 2030. With Vale's opening of Reid Brook and Eastern Deeps, the opening of the Argyle Mine and developing projects such as Marathon's Valentine Gold Project and Maritime's Hammerdown Gold Project, we are within reach well ahead of 2030.

The Province's collaborative efforts with industry and other stakeholders over the last five years have accomplished many of the targets identified to measure success. The province has consistently achieved annual increases in direct employment exceeding 6,200 people employed annually since 2019. Annual exploration expenditures exceeded \$100 million in 2021 with over \$238 million forecast for 2023. The province has successfully reached mineral shipment values that have been at least 10 per cent of the Canadian total. Newfoundland and Labrador regularly ranks as a top jurisdiction



2022 Statistics, Industry, Energy and Technology and Natural Resources Canada

for permitting times, and our investment attractiveness has achieved a ranking of second nationally and fourth globally in the Fraser Institute's 2022 Annual Survey of Mining Companies.

These significant accomplishments do not mean that our work is finished. The global environment and our industry is constantly changing and we must continually improve. While the Province has developed this Plan to seize opportunities related to critical minerals, we acknowledge the contribution that other minerals, such as gold, are making to the province, industry, communities and people. To realize the value of our mineral potential there must be a mineral project for development. It is underlying prospecting, exploration and mining that generates jobs, economic activity, training and research and development opportunities as well as many other benefits. All mineral development remains a focus for Newfoundland and Labrador. Our efforts to realize emerging opportunities as part of the global transition will not detract from our efforts to promote and develop our full mineral potential.

# Critical Minerals Overview

Global trends including the need to reduce emissions and the increasing use of technology are transitioning global economies to be green and innovative. This transition is projected to create an increased demand for minerals deemed critical. This will require additional supply through new mines and products that will drive new manufacturing capacity.

A significant factor in a mineral being deemed critical is its necessity in the manufacturing of products required for this transition. There are two factors that support projected increased demand for minerals – first, the demand for these products will increase and second, the amount of minerals required in production will also increase compared with traditional alternatives. The International Energy Agency reported that a typical electric vehicle requires six times the mineral inputs of a conventional car and an onshore wind plant requires nine times more mineral resources than a gas-fired power plant.

This is complicated by the fact that much of the current production and processing for many critical minerals are geographically concentrated making some existing supply chains vulnerable to disruptions.

Newfoundland and Labrador has immense critical mineral potential that if developed, can support new mines, mineral processing and possible manufacturing located here in the province.

## The Energy Transition

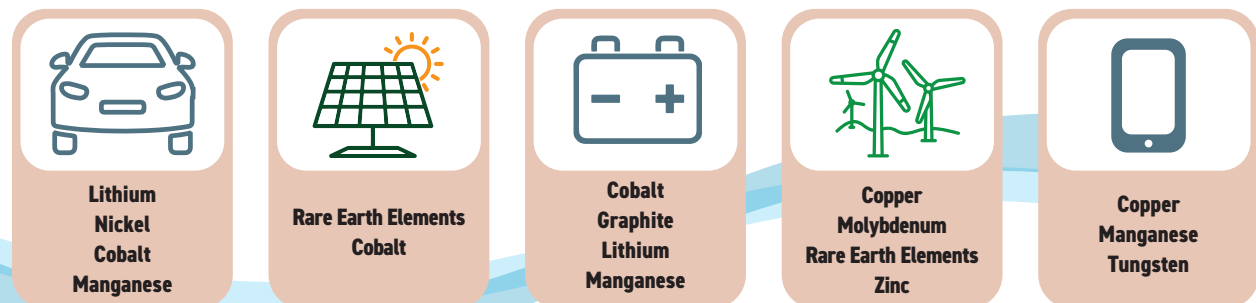
The global energy transition refers to the shift to renewable energy sources like hydro, wind and solar to reduce greenhouse gas emissions through decarbonisation. Energy storage is also playing a role with significant innovation occurring in battery technologies.

A future net-zero emissions economy will require huge increases in electricity supply to meet demand. This will require an escalation of clean power generation, an expansion of electricity grids and growth in the production of transition enabling products. Critical minerals are the necessary building blocks to accomplish this transition through the production of renewable energy generation, storage and transmission infrastructure.

## Canadian Critical Minerals Focus

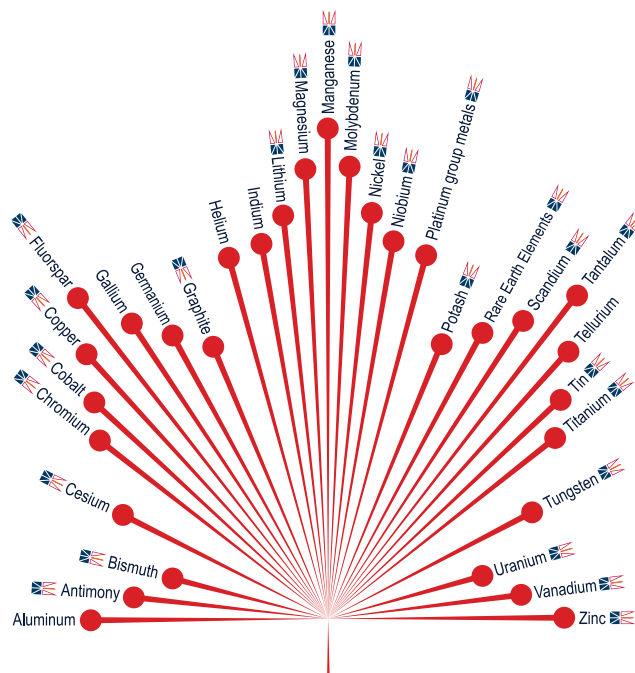
The Government of Canada is committed to critical minerals development. In December 2022, the Government of Canada released the Canadian Critical Minerals Strategy to increase the supply of responsibly sourced critical minerals and support the development of domestic and global supply chains for the green and digital economy.

The Canadian Critical Minerals Strategy was backed by a financial commitment in Federal Budget 2022 of \$3.8 billion to provide support to the minerals sector to take advantage



of new opportunities. Supports for critical minerals have included measures such as the Critical Mineral Exploration Tax Credit, the Critical Minerals Infrastructure Fund, research and development programming and an Investment Tax Credit for Clean Technology Manufacturing.

Canada and Newfoundland and Labrador's focus on critical minerals creates an opportunity to work together on areas of mutual interest and benefit. The potential for critical minerals development in this province can help drive economic security and development across the country.



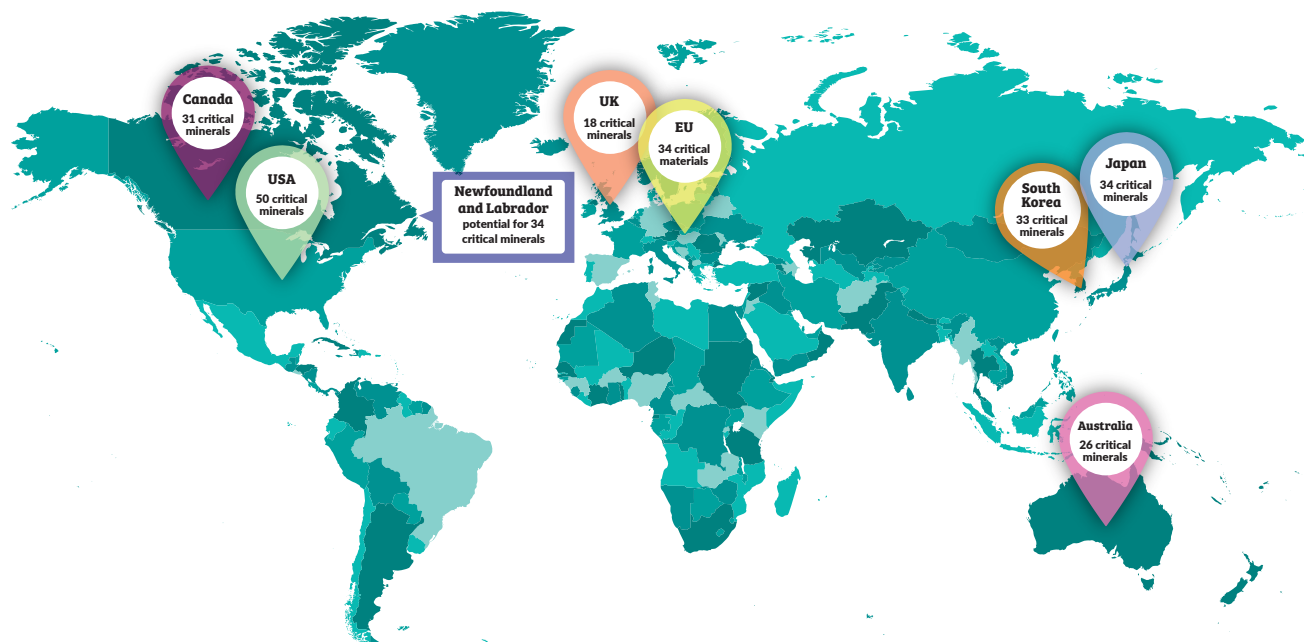
Reproduced with the permission of Natural Resources Canada, 2023

### Global Critical Minerals Focus

Like Canada, other countries around the world see the opportunities presented by critical minerals. Worldwide, governments are developing policies to ensure supply reliability and resilience, promote exploration and encourage production, innovation and sustainable practices. Major producer countries tend to focus on the importance of minerals to their economy while importing economies typically focus on identifying which minerals are necessary for their strategic sectors. Like

Canada's list of critical minerals, these lists can be updated to reflect a country's changing priorities.

For jurisdictions such as Newfoundland and Labrador with critical mineral potential, this creates an opportunity to establish working relationships to advance projects within the province. This can include working with Canada as part of international engagements with the United States, Australia, Japan, the United Kingdom, the European Union including France and Germany, South Korea and others.



# Newfoundland and Labrador's Strategic Assets

## Critical Minerals Potential

Newfoundland and Labrador has tremendous potential to be a stable, responsible supplier of critical minerals. Canada has identified 31 critical minerals and Newfoundland and Labrador is home to 25 of those minerals. Of the 46 minerals identified as critical by the US, EU, Japan, Australia, UK and South Korea, Newfoundland and Labrador hosts 31 (note that platinum group metals and rare earth elements are not counted individually). The geology of the province boasts a diverse mineral endowment with great exploration potential.

Newfoundland and Labrador has current mineral production and ongoing exploration for nickel, cobalt and copper, advanced projects in rare earth elements, by-product recovery potential for manganese, known reserves of graphite and active exploration for lithium.

For other minerals deemed critical, there is current or recent production of antimony, barite and fluorspar, with the latter preparing for a restart of production. There are projects with advanced economic studies or resource estimates for other minerals including tungsten, molybdenum, uranium, vanadium and zinc. There are known mineral resources such as rare earth elements and magnesium that are protected as exempt mineral lands for future development. Active exploration programs are ongoing for many of these minerals and others including platinum group metals, cesium, tin, lead and titanium. Large areas remain relatively under-explored and represent further opportunities for growth in Newfoundland and Labrador's mineral development sector.

## Generational Mining Expertise

Prospecting and exploration in Newfoundland and Labrador date back to the mid-sixteenth century and mining to the 1850s. This long history has established mining districts in the province including copper and gold on and around the Baie Verte Peninsula, fluorspar on the Burin Peninsula, high-grade, low-impurity iron ore in western Labrador and direct shipping iron ore in the Menihek region of Labrador. This creates communities familiar with mineral development and a local service and supply industry to support prospecting, exploration, mining and processing activities.

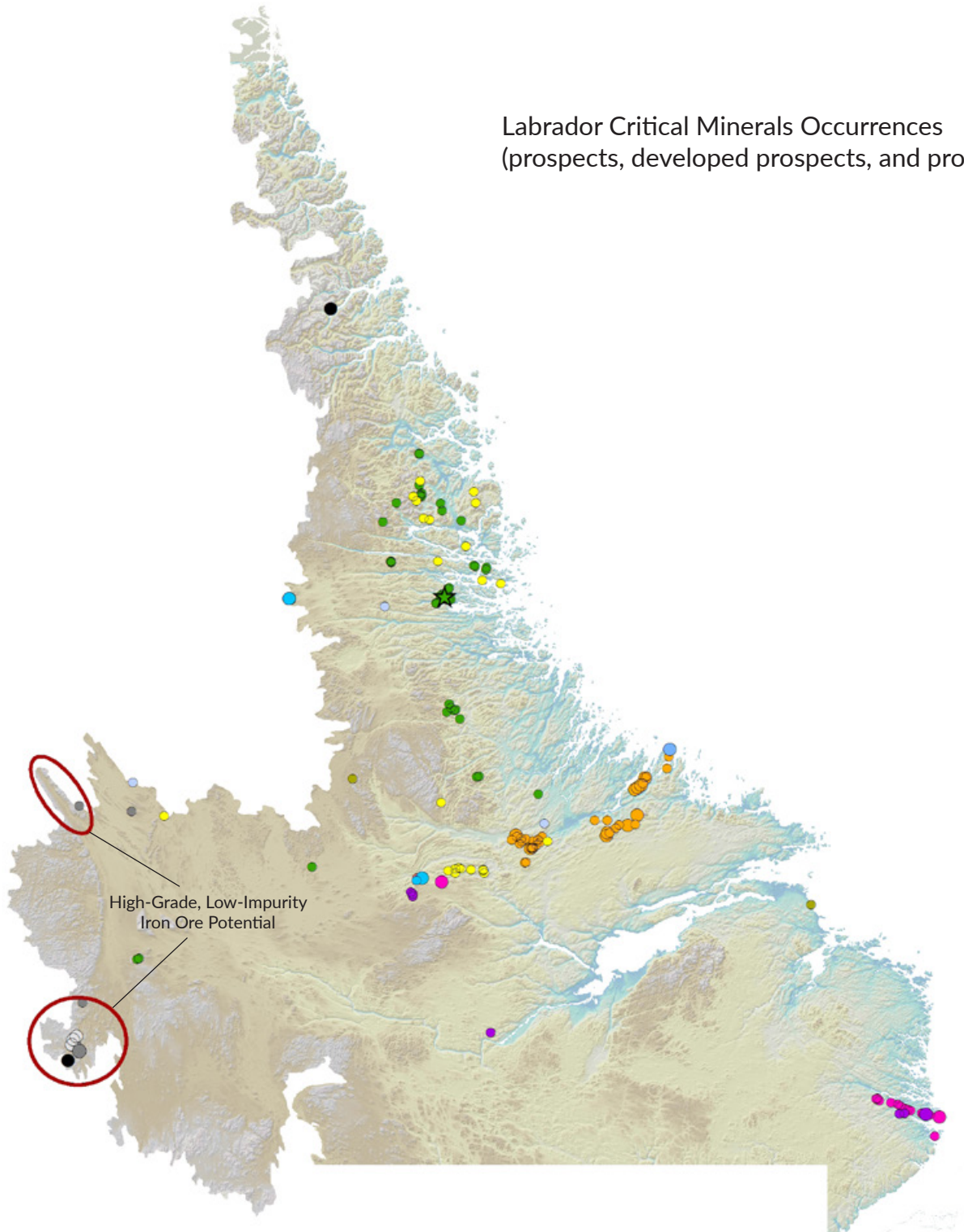
This long history also contributes to the development of a skilled workforce. People in this province have developed expertise and are working here in open pit and underground mines, at processing facilities, in exploration and prospecting and in the supply and service industry.

## Infrastructure, Electricity and Renewable Energy

Newfoundland and Labrador has significant infrastructure that is supportive of mineral development. On the Island of Newfoundland, there is an extensive road network including forestry roads throughout the central and western regions to facilitate exploration and development. There are deep sea ports located around the province as well as rail infrastructure from Labrador West to the north shore of the St. Lawrence Seaway. Airport infrastructure supports international and regional flights as well as smaller facilities to support exploration level activities.



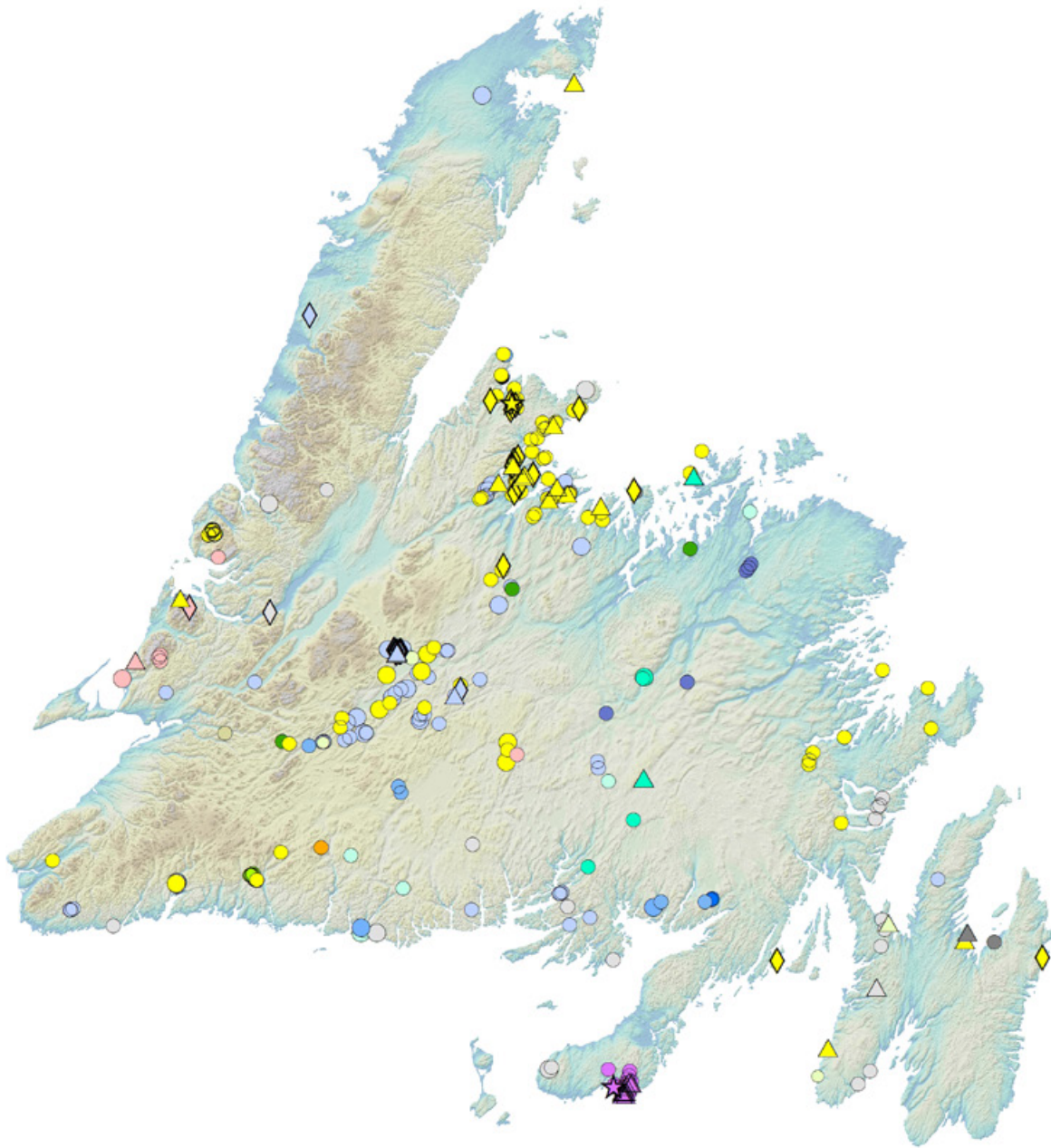
## Labrador Critical Minerals Occurrences (prospects, developed prospects, and producers)



High-Grade, Low-Impurity  
Iron Ore Potential

- |             |             |                       |             |                             |
|-------------|-------------|-----------------------|-------------|-----------------------------|
| ● Antimony  | ● Fluorine  | ● Molybdenum          | ● Titanium  | ○ Prospect                  |
| ● Barium    | ● Graphite  | ● Nickel              | ● Tungsten  | ○ Developed Prospect        |
| ● Beryllium | ● Lithium   | ● Niobium             | ● Uranium   | △ Past Producer (Dormant)   |
| ● Chrome    | ● Magnesium | ● Rare Earth Elements | ● Vanadium  | ◇ Past Producer (Exhausted) |
| ● Copper    | ● Manganese | ● Silica              | ● Zinc      | ☆ Producer                  |
|             |             | ● Tin                 | ● Zirconium |                             |

## Newfoundland Critical Minerals Occurrences (prospects, developed prospects, and producers)



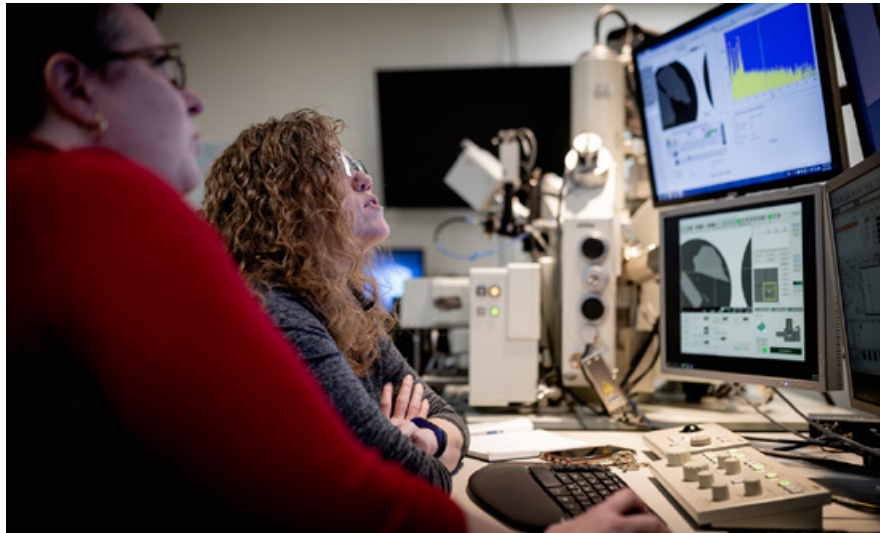
- |  |  |  |   |  |
|--|--|--|---|--|
| <span style="color: cyan;">●</span> Antimony     | <span style="color: purple;">●</span> Fluorine   | <span style="color: blue;">●</span> Molybdenum             | <span style="color: olive;">●</span> Titanium     | <span style="border: 1px solid black; border-radius: 50%; width: 10px; height: 10px; display: inline-block;"></span> Prospect  |
| <span style="color: lightgreen;">●</span> Barium | <span style="color: black;">●</span> Graphite    | <span style="color: green;">●</span> Nickel                | <span style="color: lightblue;">●</span> Tungsten | <span style="border: 1px solid black; border-radius: 50%; width: 15px; height: 15px; display: inline-block;"></span> Developed Prospect  |
| <span style="color: cyan;">●</span> Beryllium    | <span style="color: limegreen;">●</span> Lithium | <span style="color: red;">●</span> Niobium                 | <span style="color: orange;">●</span> Uranium     | <span style="border: 1px solid black; border-left: none; border-right: none; border-top: 1px solid black; border-bottom: 1px solid black; width: 15px; height: 15px; display: inline-block;"></span> Past Producer (Dormant)   |
| <span style="color: pink;">●</span> Chrome       | <span style="color: blue;">●</span> Magnesium    | <span style="color: magenta;">●</span> Rare Earth Elements | <span style="color: grey;">●</span> Vanadium      | <span style="border: 1px solid black; border-left: none; border-right: none; border-top: 1px solid black; border-bottom: 1px solid black; width: 15px; height: 15px; display: inline-block;"></span> Past Producer (Exhausted) |
| <span style="color: yellow;">●</span> Copper     | <span style="color: grey;">●</span> Manganese    | <span style="color: lightgrey;">●</span> Silica            | <span style="color: lightblue;">●</span> Zinc     | <span style="font-size: 2em;">★</span> Producer  |
|  |  | <span style="color: blue;">●</span> Tin                    | <span style="color: purple;">●</span> Zirconium   |  |



Currently, over 90 per cent of the province's electricity is generated from renewable energy resources. There is significant potential for further hydro and wind power generation development within Newfoundland and Labrador.

## Transparent and Defined Governance and Regulatory Processes

The Government of Newfoundland and Labrador is guided by the principles of transparency, accountability, participation and collaboration. Creating a stable regulatory system needs to balance change to accomplish efficiencies, address gaps and provide clarity. The Fraser Institute's 2022 ranking for Newfoundland and Labrador acknowledges our geological potential and that the province is competitive in areas such as the regulatory environment, taxation and jurisdictional stability. This encourages exploration and investment.



Memorial University's Core Research Equipment and Instrument Training Network  
Photo: Memorial University

## Academic and Research Institutions

Newfoundland and Labrador is home to world-class training and research institutions that have demonstrated leadership in creating programs and networks that respond to the needs of the mineral development industry. Memorial University's Core Research Equipment and Instrument Training Network is designed to maximize the value of investments in research through access to and use of major research equipment. Memorial University also has research programs that can support critical minerals initiatives including Machine Learning & Artificial Intelligence Applications and Mining and Mineral Processing. The College of the North Atlantic's Mining Innovation Network is home to three dedicated applied research laboratories with services to assist with critical minerals innovations. To help meet the needs of the current workforce, the College of the North Atlantic has recently developed a Mining Engineering Technician Program, which began in September 2023. There is also a broad range of private training institutions throughout

Newfoundland and Labrador that produce highly skilled workers. Academic and research institutions that respond to the needs of Newfoundland and Labrador's mineral development industry are critical to innovation and to develop a skilled workforce for the future.

# Newfoundland and Labrador's Critical Minerals

Critical minerals pose a unique opportunity for the mineral development industry. The magnitude of the increases in demand, the timeline for climate goals and the level of effort by jurisdictions to secure stable supply chain inputs are all factors that will affect our opportunities for development.

As a stable, secure jurisdiction pursuing sustainable development by incorporating environmental, social and governance principles, Newfoundland and Labrador can supply the transition to a green and digital economy both domestically and globally.

**Newfoundland and Labrador will use two criteria to identify minerals that would be deemed critical:**

- **Critical minerals identified by other jurisdictions, including Canada, presenting an opportunity for Newfoundland and Labrador to participate in critical mineral supply chains and where partnerships can be formed; and**
- **Minerals needed to facilitate the energy transition and climate change action and adaptation where there are significant strategic advantages for Newfoundland and Labrador to further develop and build value chains and partnerships.**

Based on these criteria, 34 minerals are considered critical minerals by Newfoundland and Labrador (see infographic on next page).

Significant steel production will be required for the green transition with some order of magnitude projections into the billions of

tonnes. High-grade, low-impurity iron ore is reported to represent approximately only 15 per cent of the world's supply. This type of ore has a competitive advantage due to its ability to support lower greenhouse gas emissions in current downstream steel manufacturing. High-grade, low-impurity iron ore is produced in the Labrador West region, and is coupled with strategic infrastructure to support existing developments and future expansion.

Current steel production represents about eight per cent of global greenhouse gas emissions. With high-grade, low-impurity iron ore and using hydrogen in electric arc furnaces instead of coal in traditional steelmaking, emissions can be reduced up to 95 per cent. Steelmakers will have limited alternatives to using high-grade, low-impurity iron ore in order to meet emission standards. Signatory countries to the 2015 Paris Accord correspondingly will need to rely on high-grade, low-impurity iron ore feedstock in the production of green steel to meet commitments and broader energy transition objectives. Green steel is steel produced using the most sustainable and lowest carbon emissions possible.

With the province's renewable energy and mineral resources, we have a strategic opportunity to position the province and Canada as leaders in the development of a high-grade, low-impurity iron ore green steel supply chain. **As an immediate priority, the Province is designating high-grade, low-impurity iron ore as a critical mineral in this Plan.**







Antimony

Cobalt

Copper

High-grade,  
Low-impurity Iron Ore

Fluorspar

Manganese

Nickel

Silicon

Zinc

Barite

Rare Earth  
Elements

Lead

Lithium

Molybdenum

Zirconium

Tungsten

Uranium

Vanadium

Arsenic

Beryllium

Bismuth

Cesium

Chromium

Feldspar

Graphite

Hafnium

Magnesium

Niobium

Platinum  
Group  
Metals

Potash

Scandium

Tantalum

Tin

Titanium

## Strategic Partners

This Plan is the result of a process that engaged with industry, Indigenous Governments and Organizations, stakeholders and the public to identify focus areas and actions that can unlock our critical mineral potential and maximize its value. This was accomplished through public virtual sessions, meetings directly with industry, Indigenous Governments and Organizations and stakeholders, as well as, the receipt of written submissions and questionnaire responses. A summary of the engagement process was released through [What We Heard: Newfoundland and Labrador Critical Minerals Strategy](#) in October 2023.

The engagement process identified many opportunities to work with strategic partners on initiatives to provide mutual benefits. The Provincial Government will continue to collaborate with these and other stakeholders during the implementation of this Plan.

### Indigenous Governments and Organizations

Engagement with Indigenous Governments and Organizations identified opportunities to work together on initiatives across many focus areas. While some of these initiatives have been reflected in this Plan, others have significant potential and can be advanced through additional dialogue and collaboration. The Government of Newfoundland and Labrador recognizes that a principle-based relationship with Indigenous Peoples, characterized by mutual respect, is the foundation for sound government policies and programs, as well as vibrant and prosperous Indigenous communities. The Government

of Newfoundland and Labrador is committed to continuing engagement with Indigenous Governments and Organizations on both the implementation of this Plan and the advancement of opportunities for future development and collaboration.

This Plan establishes a commitment to work with Indigenous Governments and Organizations as an overarching principle to facilitate collaboration across all focus areas. While conversations and engagement to date have identified potential actions that can generate success, continuing in-depth discussion will shape these efforts and accomplish what is necessary.

As a commitment to continued engagement, the Department of Industry, Energy and Technology (IET) will establish critical minerals development working groups with interested Indigenous Governments and Organizations. These working groups can be led jointly by a departmental executive and Indigenous representative and will be a vehicle to discuss mineral development issues and specific opportunities to work jointly on initiatives.

### Industry

Industry is the means for mineral development. The Newfoundland and Labrador mineral development industry and its supply and service industry has proven experience in advancing projects throughout the development cycle from prospecting and exploration, to development, operation and closure. Accessing this expertise through the engagement of individuals, companies and associations representing our mineral



development industry will be required to unlock our critical mineral potential. The Government of Newfoundland and Labrador is committed to continued positive engagement, strengthening relationships and support for our industry associations.

### **Government of Canada**

The Government of Canada has identified critical minerals as a generational opportunity for Canada's economy, workers and net-zero future. Both the federal and provincial governments are working to advance critical mineral opportunities through the

Newfoundland and Labrador/Canada Regional Energy and Resource Tables (Regional Tables), with critical minerals identified as one of four work streams. The Regional Tables are a collaborative initiative to advance the top economic priorities in the energy and resource sectors in the province. Some of the potential sources of federal funding to support opportunities identified include the federal government's Strategic Innovation Fund – Net Zero Accelerator, the \$15 billion Canada Growth Fund, the \$35 billion Canada Infrastructure Bank, and the \$3.8 billion (Budget 2022) to implement Canada's first Critical Minerals Strategy.



Finished Nickel Rounds

Photo: Vale Newfoundland and Labrador Ltd.




# The Vision

Newfoundland and Labrador is a globally competitive jurisdiction throughout all stages of critical mineral development from geoscience to manufacturing – one that is inclusive, environmentally and socially responsible, innovative and maximizes opportunities through effective collaboration.

## Principles

The Government of Newfoundland and Labrador will be guided by overarching principles as it moves forward in implementing the Province's Critical Minerals Plan. We will:

- Engage internally and externally to develop informed policy, programming and regulatory actions that are effective and efficient.
- Engage and collaborate with Indigenous Governments and Organizations.
- Pursue safe, environmentally responsible exploration and development that aligns with environmental, social and governance standards.
- Be competitive, innovative and technologically advanced.
- Contribute meaningful economic growth including further processing and supply chain opportunities that foster sustainable communities, particularly in rural areas.
- Promote a highly skilled, educated, equitable and diverse workforce.



LaPoile River,  
Newfoundland and Labrador  
Photo: Getty Images



# Pillars of the Newfoundland and Labrador Critical Minerals Plan

A focused, collaborative effort is required to achieve success for the benefit of all Newfoundlanders and Labradorians. Confirmed through public and stakeholder engagement sessions, three pillars and eight focus areas have been identified to support planning and delivery of a number of actions.

The pillars and focus areas are:

## 1. Unlocking Our Critical Minerals Potential

- 1.1 Expand and Promote Geoscience
- 1.2 Prospecting and Exploration
- 1.3 Investment Attraction and Promotion

## 2. Maximizing the Value of Our Critical Minerals Potential

- 2.1 Supply Chain Opportunities
- 2.2 Innovation and Research & Development
- 2.3 Access to a Skilled Workforce

## 3. Supporting Project Development

- 3.1 Enhance Regulatory Framework
- 3.2 Strategic Infrastructure



François Granite, Geological Survey Newfoundland and Labrador

# 1. Unlocking Our Critical Minerals Potential

## 1.1 Expand and Promote Geoscience

Public geoscience is foundational work that interprets the geological framework of the province, helps direct exploration and uncover our mineral potential. The availability of public geoscience helps de-risk the private investment necessary to advance projects toward a potential resource statement and feasibility analysis. The Prospectors and Developers Association of Canada states that for every dollar invested in public geoscience, five dollars are spent in private sector exploration.

Despite the province's geological potential there are areas of the province with high critical mineral prospectivity that do not have sufficient baseline geoscience. There is work to do in areas such as northeastern Labrador near Voisey's Bay nickel, copper and cobalt deposits, southeastern Labrador with an emerging rare earth element district and southwestern Newfoundland where several companies are actively exploring for lithium. Strategic geoscience investments in areas of high critical mineral prospectivity can help attract private investment.

Newfoundland and Labrador possesses some key assets and relationships that can produce significant value in geoscience. Positive relationships can facilitate the collaboration necessary to realize mutual benefits and some Indigenous Governments and Organizations expressed interest in working with the Province to explore geoscience initiatives. The Government of Newfoundland and Labrador will continue to work with the Government of Canada on joint geoscience initiatives and to leverage federal programming.

The role of public geoscience in facilitating mineral development is understood and was communicated by participants throughout our public engagement process. The Provincial Government has worked with the Atlantic Canada Opportunities Agency (ACOA) to secure \$1.3 million for a two-year airborne geophysical survey in regions of the province with high critical mineral prospectivity. The Government of Newfoundland and Labrador also announced an investment of almost \$1 million in public geoscience targeting Labrador as part of Budget 2023. These early actions have established momentum in this focus area.

We need to continue to invest in geoscience and use innovative tools such as artificial intelligence and remote sensing to provide detailed information. Industry needs access to this data and its interpretation as quickly





as possible. Data must be in a format that is useable, amenable to analysis, and available through platforms that are stable and user friendly. We must promote our geoscience resources.

### **Newfoundland and Labrador will:**

**Pursue traditional and innovative approaches to geoscience including exploring the opportunity for mutual benefits with strategic partners through collaboration.**

- Maintain core funding of \$3.6 million for provincial public geoscience
- Invest \$1.6 million annually for four years in public geoscience initiatives targeting Labrador as a highly prospective region for critical minerals
- Invest an additional \$3.0 million in public geoscience initiatives targeting regions of the province highly prospective for critical minerals
- Explore opportunities to collaborate with partners on innovative geoscience using technologies such as artificial intelligence and remote sensing
- Collaborate with Indigenous Governments and Organizations on geoscience initiatives that are aligned on mutual priorities
- Work with Government of Canada to make strategic geoscience investments in areas with greatest potential

**Enhance geoscience data dissemination by exploring efficiencies in the release of existing and new data**

**and developing more effective methods of communication, storage and distribution.**

- Explore opportunities to work with training institutions on data digitization, initiate historical data digitization and release
- Release data from ongoing geoscience activities
- Develop a commodity brochure as a critical mineral reference to detail our provincial critical minerals potential
- Initiate an assessment of an innovative one-stop portal for geoscience data distribution and make improvements to existing data dissemination infrastructure



Drone Geoscience Data Collection  
Photo: Geological Survey of Newfoundland and Labrador

## 1.2 Prospecting and Exploration

Prospecting and exploration are the early industry steps in critical mineral development. Investments at this stage have significant technical and financial risk. Individual prospectors and exploration companies undertake work to identify exploration targets, invest capital and execute programs to uncover the targets potential. The ability to raise capital and access to skilled people and land can impact the ability to advance this work.

Newfoundland and Labrador has demonstrated that we are able to attract exploration investment with 2022 being the highest annual level of exploration expenditure recorded. The province has a well-established industry and is a competitive jurisdiction for investment.

The role of prospecting and exploration in mineral development cannot be overstated. Having a strong prospecting community is necessary and this means creating a pathway for those interested in participating. As a result, IET has been working with the College of the North Atlantic, with the support of the Department of Immigration, Population Growth and Skills and ACOA, to develop a more accessible prospector training course that will qualify students for Genuine Prospector

Status under the **Mineral Act**. IET and ACOA also provided financial support for the Newfoundland and Labrador Prospectors' Association to deliver seminars across the province related to prospecting for critical minerals. Junior Exploration Assistance (JEA) is a program that provides a financial rebate toward exploration expenditures to expand the mineral inventory of the province. JEA now includes additional targeted critical minerals assistance beginning in 2023 and continuing to 2025 through our partnership with ACOA.

Understanding what actions are required to drive prospecting and exploration will require continued collaboration. We have heard throughout our engagement that there is a need to continue the Matty Mitchell Prospectors Resource Room and examine the potential to further leverage assets such as prospector training. Some areas that are known to hold critical mineral potential are protected as exempt mineral lands. Some could be made available for exploration and development and others will require working collaboratively with some Indigenous Governments and Organizations. Analysis will also be required to determine the effectiveness of existing and potential financial support for prospecting and exploration.





## Newfoundland and Labrador will:

Collaborate with partners to support prospecting and exploration and facilitate industry-led initiatives.

- Collaborate with interested Indigenous Governments and Organizations to identify opportunities to leverage exploration and prospector supports
- Develop a plan to advance the development of existing and future exempt mineral lands
- Support the delivery of prospecting professional development initiatives including operation of the Matty Mitchell Prospectors Resource Room
- Collaborate with interested Indigenous Governments and Organizations to increase industry awareness of available Indigenous human resources and supplier capacity
- Support industry associations

Deliver prospecting and exploration supports and review current assistance framework to identify gaps and potential for new supports or modifications to existing programs.

- Maintain core funding of \$1.7 million toward prospecting and exploration supports delivered under the Mineral Incentive Program
- Deliver \$1.3 million annually in ACOA-funded targeted critical mineral assistance through the Junior Exploration Assistance Program during 2024 and 2025
- Invest an additional \$1.3 million to support exploration for critical minerals through the Junior Exploration Assistance Program
- Review existing and potential supports for prospecting and exploration to assess effectiveness and efficiencies
- Support participation in the provincial prospector training course



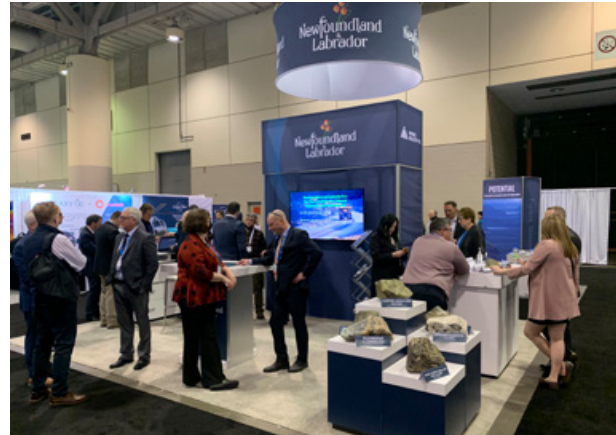
### 1.3 Investment Attraction and Promotion

Investment attraction and promotion play a vital role in unlocking our critical mineral potential. New investments in critical mineral development can drive our economy by supporting existing jobs and creating new ones, expanding business opportunities, accelerating innovation and increasing exports.

Newfoundland and Labrador's critical minerals potential, established mineral development industry and stable regulatory system can be marketed to attract investment. We can achieve mutual benefits through investment attraction and promotion of specific provincial opportunities by working with our provincial and federal partners and Indigenous Governments and Organizations.

The promotion of our mineral potential will remain a priority as opportunities for international engagement and investment attraction develop and mature. The Provincial Government has been working with the Government of Canada as part of international engagements to identify opportunities for collaboration and investment. This has resulted in a list of investment-ready critical minerals projects, based on set criteria, being distributed during previous Canada/US engagement. We have worked with Invest in Canada to develop resources detailing mining opportunities in the province for international investment attraction efforts. The Province also continues to work directly with companies interested in exploring investment opportunities within the province.

To effectively promote, the message must match and communicate the opportunity. We must develop, package and deliver the Newfoundland and Labrador message locally, nationally and internationally. These efforts must include local outreach so that people of the province can make informed decisions regarding critical mineral development. We must also participate strategically in conferences, establish direct contact with potential investors and developers and engage internationally through federal/provincial efforts as well as bilaterally.



Industry, Energy and Technology Booth at the Prospectors and Developers Association of Canada 2023 Convention

### Newfoundland and Labrador will:

**Develop a critical minerals marketing, promotions and investment attraction approach to target potential investors.**

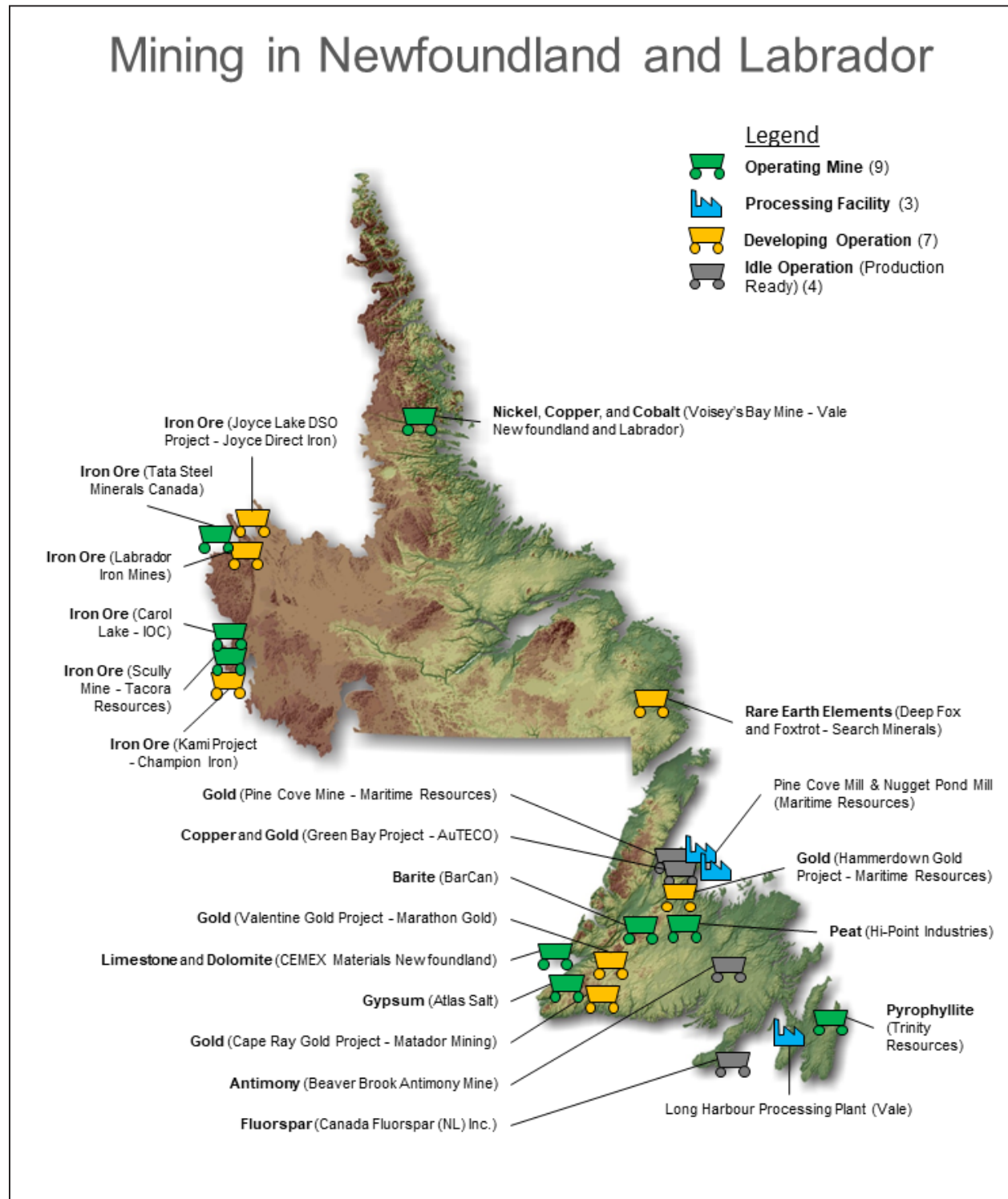
- Develop an investment package outlining the full Newfoundland and Labrador critical mineral opportunity through all stages of development
- Map provincial and federal funding programs to support critical mineral development
- Engage with interested Indigenous Governments and Organizations through jointly led working groups to discuss investment attraction activities and potential for joint efforts
- Target high impact events and opportunities to execute promotion and investment attraction activities
- Support stakeholder and partner efforts in the area of promotion and investment attraction such as Canada's Atlantic Edge Investment Forum and Hyperspectral Database initiative
- Collaborate with the Government of Canada to leverage resources in support of provincial investment attraction opportunities
- Participate in the Government of Canada's international engagement efforts related to critical mineral development



**Develop an outreach program including communication of critical mineral opportunities within the province.**

- Collaborate with interested Indigenous Governments and Organizations on critical minerals related public outreach

- Execute outreach initiatives focused on improving the awareness of critical mineral opportunities and development within the province



## 2. Maximizing the Value of Our Critical Minerals Potential

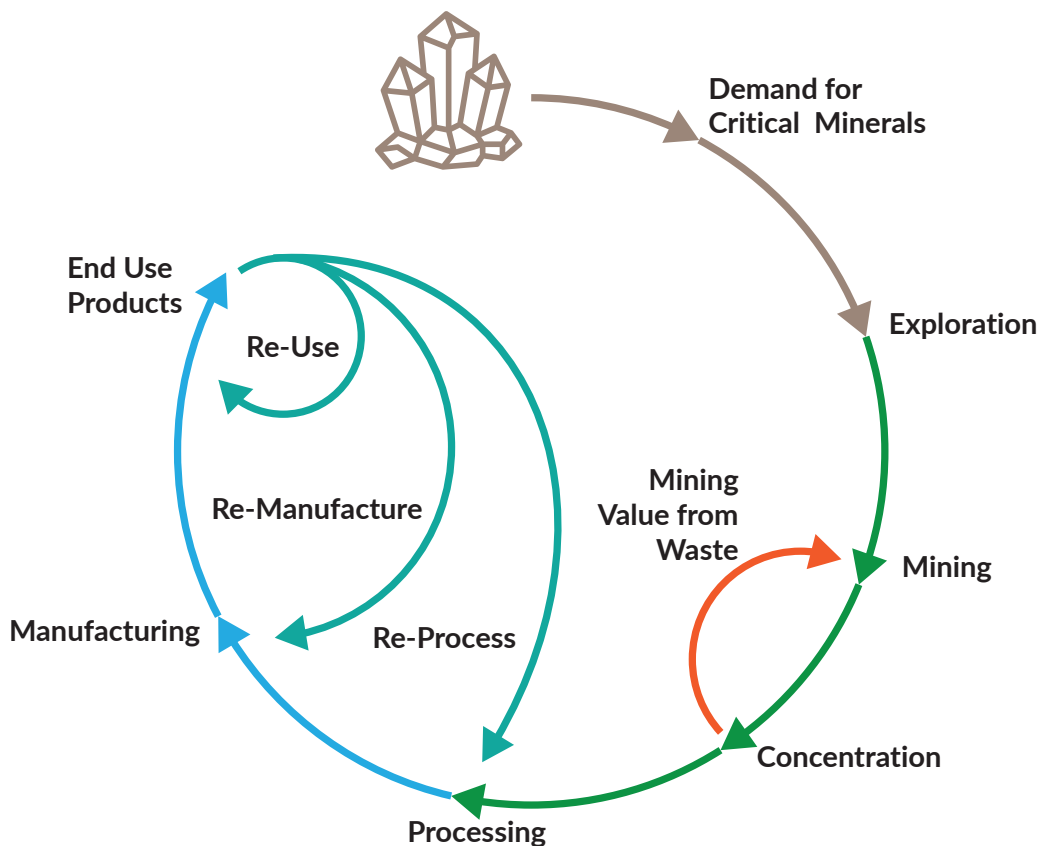
### 2.1 Supply Chain Opportunities

Jurisdictions with a supply of critical minerals can have a competitive advantage toward participating in steps further along the supply chain. The opportunity for processing and manufacturing is not the same for all critical minerals. Some, such as copper and nickel, have better-established supply chains than others have, such as rare earth elements and manganese. As well, the increasing cost of transportation and pressure to reduce carbon intensity throughout the full supply chain is changing the viability of further processing at the source.

While technology challenges exist in areas such as mineral separation, we can work with our academic institutions to create solutions and provide benefits across multiple focus areas identified in this Plan. Critical minerals mined and any related products viably

produced in Newfoundland and Labrador reflect responsible production from a stable jurisdiction. These factors are supportive of Newfoundland and Labrador's potential participation in developing critical mineral supply chains and the circular economy including reprocessing and recycling.

The Government of Newfoundland and Labrador has identified value chain opportunities as a priority focus area under the Regional Energy and Resource Tables' critical minerals work stream. The Provincial Government has also launched the Green Transition Fund to assist with the transition to a green economy and includes a focus on conducting research and development, developing new markets, and other initiatives supporting the green economy. The program also includes business lines for projects led by Indigenous and rural proponents. Utilizing supports at all levels of government and effective collaboration between industry, Indigenous Governments and Organizations and academia is necessary.







Long Harbour Operations  
Photo: Vale Newfoundland and Labrador Ltd.

The Government of Newfoundland and Labrador will assess opportunities from both technical and economic perspectives to understand where the greatest opportunities lie. We need to work with proponents to help navigate provincial and federal supports and aid viable project advancement.

### **Newfoundland and Labrador will:**

**Make critical mineral development a priority sector for the Department of Industry, Energy and Technology and communicate available supports for supply chain development.**

- Support strategic value added critical mineral projects in accessing existing Department of Industry, Energy and Technology business development programs, currently valued at \$46.5 million

**Assess specific supply chains for technical and economic viability to further downstream development opportunities.**

- Support the viability assessment of a provincially-based critical mineral supply chain including the identification of stages for participation

- Support the technical assessment of further provincially-based critical mineral processing beyond the primary stage
- Facilitate joint projects including industry and provincial academic research institutions related to further critical mineral processing
- Engage with interested Indigenous Governments and Organizations through jointly led working groups to discuss opportunities for participation in supply chain development and supporting services
- Collaborate with the Government of Canada to support the commercialization of critical mineral projects including extraction, processing, reprocessing and manufacturing opportunities
- Include consideration of critical mineral economic factors that determine viability of in-province processing opportunities as part of the primary production requirements of the **Mineral Act**

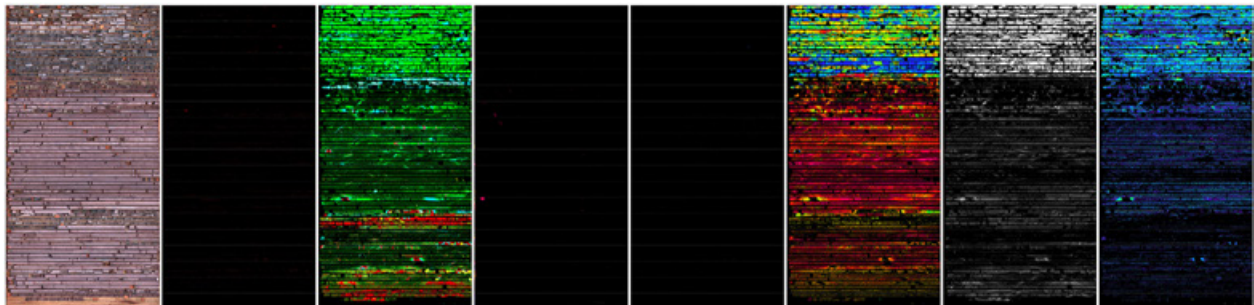
## 2.2 Innovation and Research & Development

The mineral development industry continually responds to operational and technical challenges and the need to address these through environmentally and socially acceptable solutions. Research and development is crucial to the sustainability and continuous improvement of this industry. Innovation to improve efficiencies and safety and reduce carbon intensities is required to ensure that Newfoundland and Labrador's critical minerals potential can support the green transition.

Provincial academic and research institutions such as Memorial University and the College of the North Atlantic have significant experience in mineral development. Newfoundland and Labrador also has a thriving technology sector that can be a significant innovation and research and development resource. There is programming and funding available at both the provincial and federal levels to support work in this area including commercial and non-commercial projects.

Newfoundland and Labrador's academic and research institutions also see the opportunity to add value to critical mineral innovation and research and development. Memorial University and the College of the North Atlantic have recently signed a memorandum of understanding to cooperate on critical minerals. This is a foundational agreement for collaboration between the two institutions and industry.

Efforts to enhance institutional innovation, research and development, and training capacity in areas such as earth sciences, mineral exploration, processing, economic and environmental and social governance disciplines can create strategic advantages for Newfoundland and Labrador. Access and development of local expertise provides benefits to the proponent, the province and provides opportunities for training and professional development. We need to facilitate this collaboration to enable critical minerals related challenges to be solved in Newfoundland and Labrador.



Hyperspectral Scanning Unit and Hyperspectral Scan

Photo: College of the North Atlantic





Memorial University's Core Research Equipment and Instrument Training Network-  
Photo: Memorial University

**Newfoundland and Labrador will:**  
**Enhance critical mineral innovation and research and development capacity within the province that is accessible to industry and supported through programming.**

- Collaborate with the Government of Canada to secure funding and supports to enhance critical minerals research and development capacity in the province
- Work with Memorial University and the College of the North Atlantic to facilitate innovation and research and development that is focused on critical minerals and supports the Newfoundland and Labrador mineral development industry
- Support the creation of a critical minerals innovation and research and development hub with capacity in areas such as earth sciences, mineral exploration, processing,

mining operations, ore and waste characterization and environmental, social and governance policies

- Work with Memorial University and the College of the North Atlantic to establish pilot scale mineral processing analytical capability
- Work with industry and Indigenous Governments and Organizations to access innovation and research and development capacity at our academic institutions
- Identify and address priority innovation and research and development gaps related to critical minerals
- Continue to include innovation and research and development commitments within benefits agreements for mineral development projects



**Control Room**  
Photo: Tacora Resources Inc.

### 2.3 Access to a Skilled Workforce

Careers in the minerals sector include both traditional and new innovative skills. Traditional roles such as trades, engineering and other professions are in demand now and will remain essential to the success of our industry. In addition, new equipment and processes including the integration of robotics and automation are changing the nature of mining. There is a shift toward workers with specialized skills and knowledge, such as those with expertise in operating and maintaining advanced technology and machinery. Despite these exciting opportunities in both traditional and new roles, mineral development is not attracting people to the industry in sufficient numbers to fill important positions.

Newfoundland and Labrador is home to a knowledgeable, diverse and highly productive workforce that has recently achieved the highest annual value of mineral shipments on

record for the province. Our industry directly employs over 9,000 people in exploration, mineral development and mine construction. Training for these skillsets is available through Memorial University, a multi-disciplinary teaching and research institution, and the College of the North Atlantic, which delivers a wide range of nationally accredited programs. In addition, there are private training institutions throughout the province that offer many different programs.

Continuing to develop and attract a highly skilled workforce to support all stages of mineral development has been a priority for the Government of Newfoundland and Labrador and our industry. A recently formed Mining Industry NL Think Tank has focused on workforce development and aims to facilitate collaboration among industry to attract youth to the minerals sector. The Department of Immigration, Population Growth and Skills



is conducting an independent review of the apprenticeship system throughout 2023 and into 2024. Recently, IET worked with some of our mining companies, industry associations and companies from other provincial industries to deliver a job fair initiative targeting skilled workers outside the province.

The Government of Newfoundland and Labrador needs to assess the current and projected condition of our provincial workforce with specific focus on the skills required for critical mineral development. We must highlight the role of critical mineral development in the energy transition to youth to create interest and engage this workforce of the future. We must collaborate with our partners to attract individuals and help develop the skills required through apprenticeship programs, micro credentialing, professional development and other initiatives. We need to continue working to be more inclusive to attract a wider pool of talent such as women, Indigenous Peoples and members of

underrepresented groups. We can work with Indigenous Governments and Organizations, and other groups, to use existing program infrastructure such as the Labrador Aboriginal Training Partnership, the Office for Indigenous and Northern Skilled Trades and the Prospector Training Course to increase participation in the minerals sector. Furthermore, boosting immigration will help address labour needs for technical roles and newly created jobs, especially as our workforce is aging.

### **Newfoundland and Labrador will:**

**Work to have our mineral development industry specifically included in workforce assessments to inform initiatives to further develop skills and attract people.**

- Collaborate with the Government of Canada to develop a labour market plan to analyze workforce availability, skills gap and suitability, future opportunities, risks and barriers



Long Harbour Operations  
Photo: Vale Newfoundland and Labrador Ltd.





Equipment Maintenance

Photo: Iron Ore Company of Canada



- Collaborate with the Department of Education to deliver an outreach program targeting K-12 students to create an awareness of mining and career opportunities
- Support our industry associations in providing training and upskilling opportunities for individuals to adapt to new skill requirements
- Increase opportunities for hands-on mineral development experiences as part of attraction, apprenticeship and mentorship for individuals interested in entering and advancing in the minerals sector
- Work with the College of the North Atlantic to evaluate the prospector training pilot and establish an open intake course
- Support industry efforts to increase sector interest among K-12 students, underrepresented communities and groups with high potential for engagement
- Engage with interested Indigenous Governments and Organizations through jointly led working groups to increase Indigenous workforce participation and discuss how to advance specific initiatives
- Collaborate with the Office of Women and Gender Equality to actively promote diversity and inclusion to attract women, girls and gender diverse individuals to pursue careers in mining
- Work with the Government of Canada and provincial employers to increase immigration including through the Newfoundland and Labrador Provincial Nominee Program and Atlantic Immigration Program
- Work with industry to expand training and upskilling opportunities for women, Indigenous Peoples, newcomers and members of underrepresented groups

**Collaborate with Indigenous Governments and Organizations, members of underrepresented groups, the Government of Canada, academic institutions and industry to identify and address barriers to employment to increase participation.**

### 3. Supporting Project Development

#### 3.1 Enhance Regulatory Framework

A jurisdiction's regulatory framework is a significant factor in consideration of its competitiveness and ability to attract investment. The focus has increasingly become not just timing but also the alignment with responsible and safe development through an environmental, social and governance lens. Continuing to enhance the efficiency and effectiveness of Newfoundland and Labrador's regulatory framework is required to support project development, provide the appropriate oversight and facilitate an understanding of mineral development by people of the province.

Work has been ongoing to enhance the regulatory framework of the province.

A review of the **Mining Act** and **Mineral Act** was initiated under Mining the Future 2030 to modernize and identify potential amendments. The exploration approval process has been modified to separate low-impact activities to achieve efficiencies in receipt of approvals. The duration of an exploration term has also been increased from one to two years providing increased flexibility in the execution of programs. The Department of Environment and Climate Change is reviewing the environmental assessment process to modernize environmental protection and effective industry regulation.

Improvements to processes do not imply a less robust regulatory framework but instead create clearer pathways and facilitate project permitting. Mapping the regulatory path for industry and providing executive-level support to assist project advancement will help. However, as new technologies, the understanding of potential impacts and interest in less commonly mined minerals continue to develop, new regulatory processes may be needed that must align with environmental, social and governance principles. For projects

to operate safely within our environment and communities, we must work with Indigenous Governments and Organizations, our academic institutions, stakeholders and industry to improve our regulatory processes.

#### **Newfoundland and Labrador will:**

**Complete the review of the Mineral Act and Mining Act and implement necessary regulatory amendments to modernize both Acts that guide mineral development within the province.**

**Assess the regulatory process for critical minerals to identify and address gaps including collaboration with the Government of Canada, Indigenous Governments and Organizations, industry and stakeholders on potential effectiveness and efficiency.**

**Provide regulatory information and guidance for critical mineral projects to facilitate timely and efficient permitting.**

- Executive support will be available to advanced mining projects to assist with navigation of project permitting
- Map critical mineral permitting provincially and collaborate with the Government of Canada on similar federal permit mapping initiatives
- Engage with Indigenous Governments and Organizations through jointly led working groups to discuss opportunities for collaboration related to environmental, social and governance principles
- Engage with the Government of Canada on overlapping regulatory processes
- Support the development of environmental, social and governance capacity at academic institutions as a resource to industry and government
- Establish new and/or update existing reference materials to provide regulatory guidance



### 3.2 Strategic Infrastructure

Infrastructure is necessary for all stages of mineral development from exploration through to mining, processing and manufacturing. Much of Newfoundland and Labrador's critical mineral potential is located in remote areas. The availability of roads, seaports, airports, telecommunications and clean renewable energy is a key driver in investment decisions.

The Provincial Government has made strategic announcements related to infrastructure including the recent release of the Renewable Energy Plan and Newfoundland and Labrador's Connectivity Strategy. In addition, potential strategic infrastructure requirements are being investigated including power requirements for Labrador West and a pre-feasibility study of a road to northern Labrador.

With the role of critical minerals in facilitating the transition to a green economy, the availability of clean power is of increasing importance. The Government of Newfoundland and Labrador will seek to support the study of power demand in Labrador West and must engage with partners to facilitate development. We must engage with interested Indigenous Governments and Organizations regarding potential infrastructure projects at a regional, community and project level. We will continue to work with the Government of Canada to further the assessment of infrastructure gaps and to facilitate future investments.



Photo: Iron Ore Company of Canada





Transmission Infrastructure Churchill Falls  
Photo: Newfoundland and Labrador Hydro

### **Newfoundland and Labrador will:**

**Work to support access to and development of clean renewable energy for our mineral development industry and collaborate to identify and advance strategic infrastructure initiatives and investments.**

- Work with the Government of Canada to undertake the assessment of infrastructure gaps including road, port and rail transport connections, transmission/generation, and green power for mining
- Engage with Indigenous Governments and Organizations through jointly led working groups to discuss potential infrastructure opportunities
- Collaborate with the departments of Transportation and Infrastructure and Fisheries, Forestry and Agriculture on strategic infrastructure
- Complete the pre-feasibility study for the road to northern Labrador



## Next Steps

The global environment for critical minerals continues to evolve and we must be able to adapt for changing opportunities. The principles and priority focus areas identified in this Plan are foundational pieces to unlock our critical minerals potential and maximize its value through project development. As critical mineral supply, demand, production, technology and key jurisdictions' policy priorities change, our actions may need to be adjusted or expanded upon. As a result, the Government of Newfoundland and Labrador will issue an updated action plan and report on implementation of this Plan in three years. During this period, progress on actions under this Plan will be updated through IET's annual reporting requirements, updates provided to industry through media and speaking engagements as well as departmental promotional efforts.

To realize our critical mineral advantage, IET along with other departments and agencies are engaged and working toward unlocking and maximizing the value of our critical mineral potential. Effective collaboration with industry, Indigenous Governments and Organizations, academic and research institutions, underrepresented groups, the Government of Canada and potentially other jurisdictions is required to accomplish what has been identified in this Plan. This is key to Newfoundland and Labrador being a globally competitive jurisdiction throughout all stages of critical mineral development from geoscience to manufacturing – one that is inclusive, environmentally responsible, innovative and maximizes opportunities through effective collaboration.



Labrador Carol Lake Mine  
Photo: Iron Ore Company of Canada





  
Newfoundland  
&  
Labrador