

**RED PARAMOUNT IRON LTD.  
LAC VIROT IRON ORE PROJECT MINERAL ACCESS ROAD  
Labrador West, 12 Km from Labrador City, NL**

***Environmental Assessment  
Registration Document***

**Submitted by  
Red Paramount Iron Ltd.  
1188-1095 W Pender Street, Vancouver, BC, V6E2M6,**

**April 05, 2023**

**NAME OF UNDERTAKING:**

Red Paramount Iron - Mineral Exploration Access Road Project

**PROPONENT:**

**(i) Name of Corporate Body:**

Red Paramount Iron Ltd.

**(ii) Address:**

1188 – 1095 West Pender Street

Vancouver, BC V6E 2M6

**(iii) Chief Executive Officer:**

Shervin Teymouri

President and CEO

**(iv) Principal Contact Person for purposes of environmental assessment:**

Farzad Nader

Director and COO

**THE UNDERTAKING:**

**(i) Name of the Undertaking:**

Lac Virot Mineral Exploration Access Road

**(ii) Purpose/Rationale/Need for the Undertaking:**

The primary purpose of the Undertaking is to construct a mineral exploration access road for safe, secure, reliable, and efficient operation of mineral exploration activities and environmental baseline data collection programs for Lac Virot Iron Ore Project. The potential of the project has significantly grown with the recent estimation of the iron ore resource and discovery of other anomalies in the area.

Red Paramount Iron is developing the Lac Virot Iron Ore Project in Western Labrador to the first fully integrated green iron ore and green steel feed project in North America. Red Paramount holds 4 mineral licenses as presented in **Appendix A**. Previously, rounds of successful exploration

campaigns of geological mapping, airborne geophysical work, and 12,000 meters of drilling have been conducted. SGS, as request of Red Paramount has conducted an estimation of economical iron ore resource for this project and has suggested further drilling because of potential for a large iron ore resource for this project.

The inferred mineral resource estimate totals 527 million tons of iron ore with a 15% iron (Fe) cut-off grade and an average grade of 23.23% iron in inferred category. SGS work suggested conducting further campaigns of geophysics, 26,000 m of drilling and field reconnaissance's programs which requires a safe and proper access. Thus, Red Paramount suggesting construction of an access roads as a crucial component of mining explorations and operations to provide a reliable and effective way of transportation for workers, equipment, and materials. The primary purpose of the proposed mineral exploration access road is to provide safe and efficient transportation of personnel, drilling equipment, and materials to and from the Lac Viroit mine site for Red Paramount Iron and its hired contractors.

The proposed undertaking allows ground access for secure, sustainable exploration activities, baseline environmental data collections across various identified ore bodies, reducing the potential environmental footprint while facilitating the expeditious and timely completion of contractual obligations. The access road facilitates the transportation of drilling equipment needed for drilling exploration, conducting geophysics and environmental baseline data collections. It can also aid emergency response teams by providing easy access to the exploration sites in case of accidents or other emergencies. The proposed road will increase safety measures for safe operations, reduces transportation costs, minimize environmental impacts, and ensure that exploration operations can continue even in adverse weather conditions.

#### **DESCRIPTION OF THE UNDERTAKING:**

Under Sections (i), (ii), (iii) and (iv) below, the proponent shall provide complete information concerning the preferred choice of location, design, etc., together with additional information on any alternatives which may have been considered and rejected, but which may still be regarded as viable. Reasons for the rejection of those alternatives should be included.

##### **(i) Geographical Location:**

- **Provide a description of the proposed site, including boundaries if possible.**
- **Attach large-scale (e.g. 1:12,500) original base map(s) and/or recent air photos clearly indicating the site location relative to existing communities and transportation facilities and showing the proposed route of access. The National Topographic Survey edition should be affixed to the map(s).**

The proposed access road is to be built off the existing Trans-Canada Highway (TCH) 500, 7km from Labrador City and extends to Labrador Winter Trails. It will use as much as possible the existing logging and Labrador West Trails. As shown on the map, the yellow line reflects the path

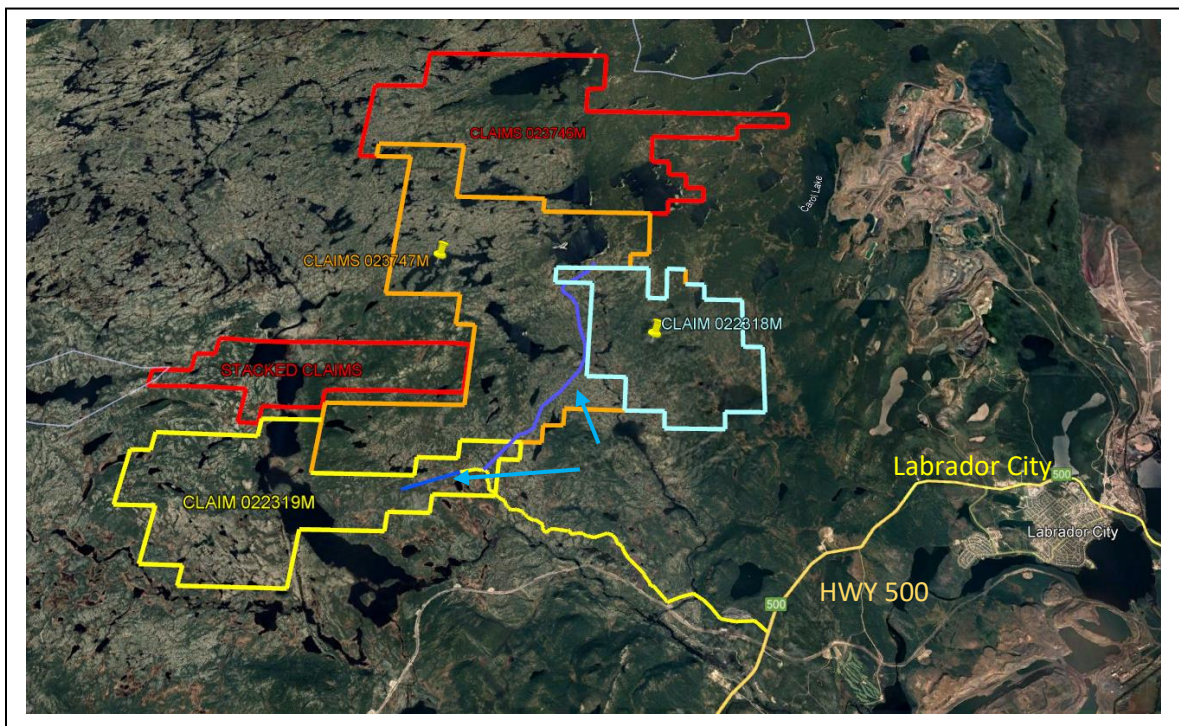
of existing Labrador West trails and other logging trains in the area being used and the blue lines are the proposed extension of these trails to the location of mineral resources.

Please refer to the attached aerial photograph in **Appendix B** showing the following features:

- Proposed access road
- Proposed stream culvert crossings
- Mineral exploration target areas
- Existing trails

The Department of Crown Lands holds the rights to the proposed area for constructing the access road for the Lac Virot Project. Red Paramount has not been aware of any other zoning restrictions in the area and will not violate any landowners' or users' rights. Red Paramount will conduct all drilling activities within the boundaries specified in the Mineral Licenses and ensure other licenses and permits are all in good standing.

The attached map indicates the detailed location of the undertaking including the claim boundary and existing infrastructure.



An alternative approach would be using helicopter for transportation of drilling equipment and personnel for access which would have significant impact on duration, cost, environmental impacts and safety measures.

**(ii) Physical Features:**

- **Describe the major physical features of the undertaking, including buildings, other large structures, roads, pipelines, transmission lines, marine facilities, etc.**
- **Provide the size of the area to be affected by the undertaking.**
- **Attach an artist’s conceptual drawing/visual rendering/aerial imagery.**
- **Describe the physical and biological environments within the area potentially affected by the project, e.g., topography, water bodies, vegetation, wildlife species, fish, threatened / endangered species, protected areas, residential/ public/ commercial/ industrial/ recreational infrastructure, human receptors of potential adverse environmental effects, etc.**

The proposed Project is located in Western Labrador, within the Labrador City municipal planning areas. Mineral exploration, mining and associated industrial activities have been ongoing in the region since the late 1950s and have become the backbone of its economic sustainability. The Lac Viroit project is in vicinity of iron ore mines (IOC’s Carol Lake Mine, ArcelorMittal’s Mont Wright Mine, Québec Iron Ore’s Bloom Lake Mine and Tacora Resources’ Scully Mine).

The proposed class C-2 resource access road and all culvert crossings will be constructed according to the Department of Natural Resources specified standards as specified in the link below.

The guidelines specifically set the Right-of-Way clearing to be 20 meters in width and the surface of the road to be 6 meters wide. Any wood harvested from the Right-of-Way will be utilized in accordance with the Department of Natural Resources guidelines. Please refer to Appendix D for contractor’s specifics on permitting and best practices.

The proposed access road is to be built off the Labrador Winter Trails in two sections, approximately 1.5 km and 4.5 km length. The primary physical feature of this undertaking is a mineral exploration road to provide access to the exploration target for drilling purposes, geophysical work and conducting environmental baseline data collection at the Lac Viroit iron ore project. The road will be designed to accommodate the width and weight of exploration vehicles, and the final alignment will be adjusted to avoid crossing water bodies as much as possible. Where required, a temporary crossing will be built while Red Paramount will adopt necessary prevention and control measures to avert adverse impact on drainage patterns, erosion, and sedimentation.

Red Paramount will utilize the most effective engineering practices when constructing the road and the required water crossings to prevent any harm to the habitat in compliance with all applicable laws, regulations, and engineering standards that govern the province of NL.

The biophysical environment in which the project lies is within the Mid Subarctic Forest (Michikamau) Ecoregion of Western Labrador. Habitat types common to Western Labrador are found throughout the Project area. These habitat types support a wide range of wildlife species that are common throughout the region. The intended access road is not close to any regions that have been designated as protected or reserved by provincial or federal authorities and will not be hazardous to the ecosystem. Red Paramount will remain resolute in its commitment to taking appropriate measures to monitor for any unknown adverse effects continuously. The construction of the proposed access road will not impact the public or nearby communities.

Nevertheless, prudent consideration and management from Red Paramount will minimize potential adverse effects. The design of the access road for the Lac Viroit iron ore mining project will also be engineered to consider environmental factors. Careful considerations and mitigation measures will be adopted to minimize potential impacts and protect the area's ecological integrity.

**(iii) Construction (if applicable):**

- **Provide the approximate total construction period (if staged, please list each stage and its approximate duration).**
- **Proposed date of first physical construction related activity on site.**
- **Describe the potential sources of pollutants during the construction period(s) including airborne emissions, liquid effluents and solid waste materials.**
- **Propose measures to mitigate potential adverse environmental effects on receptors and resource/land use conflicts.**
- **Describe any potential causes of resource conflicts.**
- **Describe public and Indigenous consultation that was conducted to address construction concerns.**

Pending permit approval, the proposed start date for the construction of the mineral exploration access road is estimated to take place in early summer (July) 2023, subject to the Minister of Environment and Conservation's decision. The construction of the proposed access road is estimated to take approximately two months, considering the relatively flat terrain in the area and readily available resources. Once construction starts, it is estimated to continue uninterrupted until the completion of the access road, subject to the absence of any technical or permitting challenges.

The road is planned to be constructed employing conventional methods such as excavators and dozers to mitigate potential environmental issues. The road alignment will be positioned at a distance of no less than 20 meters from any water bodies as much as possible. Temporary crossings will be installed where a water body crossing is required as per guideline. Proper culverts will be installed as needed to ensure natural drainage of the area remains unimpacted. If the full road needs decommissioning and rehabilitation, grubbed material and organic matter will be retained in windrows at the extremities of the cleared right-of-way for potential future use.

Airborne emissions, liquid effluents, and solid waste materials are considered sources of pollutants, and mitigation strategies will be adopted for potential unforeseen accidents. Liquid effluents and solid material can be generated mostly from excavation and soil stabilization throughout the construction phase due to leaks or spills from equipment or fuel storage tanks. The mitigation plan involves utilizing double-walled and certified fuel tanks and on-site emergency response spill kits in case of any incidents. Monitoring and reporting programs will be established to ensure compliance with regulatory requirements and identify any issues that may arise during construction. Another possible cause of pollution may arise from siltation during road construction activities. Proper take-off ditches will be constructed at all water crossings to address

this issue to control siltation and surface run-off. In addition, the diligent use of silt control fabrics in drainage ditches will also be employed to minimize any potential environmental impacts.

The construction of the access road in Labrador West will be conducted by careful planning and execution to ensure that it is built to withstand the region's environmental conditions and meet regulatory requirements while minimizing the impact on the surrounding ecosystem. Throughout the construction process, various quality control measures are employed to ensure that the road is built to the required specifications, is safe for use, and is environmentally sustainable. These measures include regular inspections, testing of materials, and adherence to applicable regulatory standards. Implementing effective developing resource management plans and monitoring and evaluating the road construction and use can help mitigate potential resource conflicts associated with constructing an access road.

The closest Indigenous community to the Project is Schefferville, located approximately 200 km to the north. The Project is, however, located in an area that five Indigenous governments or organizations assert as their traditional territory.

Similar to the last drilling program, the indigenous governments will be notified before the road development starts. There are no treaties or settled land claims that overlap the Project area and although residents of Western Labrador engage in recreational land and resource use activities throughout the region, there is no evidence, based on available information, of the current use of lands and resources for traditional purposes by Indigenous organizations in or immediately adjacent to the Project area. Additionally, no historic and cultural resources have been identified in the Project vicinity.

**(iv) Operation:**

- **Describe how the undertaking will operate.**
- **Estimated period of operation, if not a permanent facility.**
- **Propose measures to mitigate potential adverse environmental effects on receptors and resource/land use conflicts.**
- **Describe public and Indigenous consultation that was conducted to address construction concerns.**
- **Describe any potential causes of resource conflicts.**
- **Describe all potential sources of pollutants during the operating period, including airborne emissions, liquid effluents and solid waste materials.**

The access road connects the mine site with the surrounding areas, making it a vital transportation infrastructure. Its purpose is to provide safe and efficient transportation of personnel, equipment, and materials to and from the mine site. A qualified contractor with prior experience with the Department of Natural Resources in constructing and operating Forest Access Road will be engaged to undertake the road layout and construction phases. Once the road is operational, it is regularly maintained to ensure its safe and functional condition, including grading, pothole filling, heavy equipment damage repair, and snow removal.

Red Paramount's employees will usually access and exit the proposed resource access road for environmental baseline data collection and exploration work at times following a normal 9 to 5, 5-day work week schedule. If, however, Red Paramount's employees have to access the proposed resource access road with contractors, access and exit times would begin at daylight and end at dusk. Traffic volume and vehicle types could consist of several half-tonne or heavy-duty pick-up trucks on any given day due to and subject to the nature of the work and depending on if contractors and/or Red Paramount employees are accessing the site. Transport trucks towing heavy equipment on flatbeds, such as drill rigs and excavators may be accessing the proposed access road on any given day, due to and subject to the nature of the work.

The following activities are expected:

- Soil sampling, water sampling and other environmental baseline data collection
- Drone assisted geophysical surveys
- Trenching along the side of the proposed resources
- Extensive prospecting of exposed bedrock and boulders.
- Reverse Circular (RC) drill program to test overburden mineralization.
- Intensive drill program for infill and exploratory

All permits related to mineral exploration activities have been obtained from the Department of Natural Resources, Mineral Lands Division

The approval of the proposed access road will enable Red Paramount to access exploration sites safely, efficiently, and sustainably in the Lac Viot project area. The undertaking will not be utilized for commercial production during the exploration phase. However, further development approvals will be pursued if a feasible economic mineral deposit is determined in the future.

The closest Indigenous community to the Project is Schefferville, located approximately 200 km to the north. The Project is, however, located in an area where five Indigenous governments or organizations assert as their traditional territory. There are no treaties or settled land claims that overlap the Project area and although residents of Western Labrador engage in recreational land and resource use activities throughout the region, there is no evidence, based on available information, of current use of lands and resources for traditional purposes by Indigenous organizations in or immediately adjacent to the Project area. Additionally, no historic and cultural resources have been identified in the Project area.

An access road for a mineral exploration program may cause limited environmental pollution during its operating period if the activities are not conducted responsibly. Airborne emissions from vehicles that use the road can pollute the air, while liquid effluents from runoff water can negatively impact water quality and aquatic habitats. The road can also generate solid waste materials that, if not managed properly, can become a potential source of pollution. To mitigate these potential sources of pollution, we implement various measures, including proper disposal of waste materials, and implementing best practices for vehicle emissions control. Additionally, monitoring and testing air, water, and soil quality can help identify and address potential pollution issues.



One possible source of pollution could be siltation from road construction. To prevent this, appropriate drainage measures, such as the construction of suitable takeoff ditches at all water crossings and the diligent application of silt control fabrics in drainage ditches, will be implemented to manage sedimentation and surface runoff.

Red Paramount Iron anticipates no infringement on the rights of any landowners or users. The Department of Crown Lands holds the surface rights to the proposed resource access road, and there are no known landowners within the project area that Red Paramount is aware of.

**(v) Occupations:**

**- Estimate the number of employees required for the construction and operation of the project as well as the expected duration of employment.**

**10 employees**

| <b>Occupation</b>                | <b>Number of employees</b> | <b>Employment type</b> |
|----------------------------------|----------------------------|------------------------|
| Safety and Environmental Officer | 1                          | Contractor             |
| Forestry Field Technician        | 1                          | Contractor             |
| Mechanical Harvester Operator    | 1                          | Contractor             |
| Mechanical Forwarder Operator    | 2                          | Contractor             |
| Truck Drivers                    | 2                          | Contractor             |
| Excavator/Dozer Operators        | 2                          | Contractor             |
| On site Foreman/Supervisor       | 1                          | Contractor             |

Exploration activities will involve line cutting, soil sampling, ground geophysics, trenching and diamond drilling. The line cutting will be cut in a grid formation with lines being no more than 1 meter wide. Any drill trails will be kept to a maximum width of 4 meters to minimize disturbance and will take advantage of open dry areas reducing the need for any cutting. Any trenching and disturbed lands will be remediated upon completion of each activity. Environmental baseline data collection would involve soil, rock and water sampling, air quality sampling, water flow measurements etc.

The project duration would take 24 months.

| <b>Occupation</b>                | <b>Number of employees</b> | <b>Employment type</b> |
|----------------------------------|----------------------------|------------------------|
| Safety and Environmental Officer | 1                          | Contractor             |

|                                       |    |            |
|---------------------------------------|----|------------|
| Drillers                              | 8  | Contractor |
| Mechanical support                    | 2  | Contractor |
| Geologist and environmental scientist | 12 | Contractor |
| Drilling Support                      | 4  | Contractor |
| Management                            | 2  | Contractor |

**- Identify how employment equity will be addressed relative to age and gender.**

Diversity, Equity and Inclusion (DEI) are our strongest pillars for our organization's human resources. Our outsourced and independent HR/People and Culture department constantly drive initiatives to ensure we have a diverse, inclusive and physically and psychologically safe workplace where everyone is thriving regardless of their demographics and individual, physical and psychological differences. It is important to note that we appreciate that this department is independent. Therefore, it can remain an objective and trustworthy resource for everyone in our company.

The followings are a few examples of how we prioritize cultivating a diverse, inclusive and equitable workplace on a daily basis at Red Paramount:

We take a data-driven approach by creating benchmarks and assessing the culture, DEI values, psychological safety, engagement and demographic of the team and individuals. We use software that allows us to collect data and generate a dashboard for further evaluation and progress tracking in our cultural matters objectively, effectively and efficiently. We have a recruitment process and evaluation metrics in place that allow us to evaluate a candidate's competencies objectively.

- We have mandatory DEI training in our onboarding process for new hires to ensure they support us in enhancing our DEI values and culture.
- We have formalized processes and structures in place to ensure our promotional and termination decisions are being made fairly, transparently and objectively.
- Team members are being trained regularly on the DEI, Anti-discrimination and harassment policies and norms we have in the company.
- Each leader has an executive coach that works closely to ensure our leaders are mindful and aware of their own biases and behaviour.
- We have a hotline provided to all employees to access a consultant, coach or a registered counsellor if they need a safe and independent resource to address their workplace concerns, questions and needs.

**vi) Project Related Documents:**

**- Provide a bibliography of all projects related documents already generated by or for the proponent.**

Appendix A: Mineral Licenses held by Red Paramount Iron

Appendix B: Detailed Features on Aerial Photograph

Appendix C: Location of upcoming drilling program

Appendix D: Construction Standard for Resource Access Roads

#### **APPROVAL OF THE UNDERTAKING:**

**List the main permits, licenses, approvals and other forms of authorization required for the undertaking, together with the names of the authorities responsible for issuing them (e.g., federal government department, provincial government department, municipal council, etc.)**

Obtained:

- Exploration Approval E2106662 – Appendix E
- Labrador City -Development Application Permit No.23-005- Appendix F

Once the undertaking has been successfully registered, the following permits will be obtained:

- The applicant has sought permit from the Crown Land
- Any permits for stream crossing(s)
- Any trees within the Road Right-of-Way will be harvested after obtaining a Commercial Cutting Permit from Natural Resources. If any activity is to occur within the Forecast Fire Season, an Operating Permit from Natural Resources will be obtained.
- To obtain permission from service NL to gain access to the Trans-Canada Highway and construct a road within 400 meters of a protected highway, an approval will be sought.

All permits related to Mineral Exploration Activities have been obtained from the Department of Natural Resources, Mineral Lands Division.

#### **SCHEDULE:**

**Indicate the earliest and latest dates when project construction could commence (assuming all approvals are in place). Briefly state the reasons for the selection of these dates.**

Upon obtaining all required permits, the construction of the exploration access road will begin in July 2023 as more favorable weather conditions in summertime rather than cold winters in Newfoundland and Labrador. It is anticipated that the construction of the road will take about three months to reach completion.

**FUNDING**

**If this project depends upon a grant or loan of capital funds from a government agency (federal, provincial or otherwise) provide the name and address of the department or agency from which funds have been requested. To determine whether cost recovery is applicable in accordance with the Cost Recovery policy, provide an estimate of the capital costs of the project. Projects having capital costs in excess of \$5 million will be subject to applicable cost recovery fees.**

Red Paramount is a privately owned company, and the costs of this undertaking will be fully covered by the proponent.

03April 2023

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Date

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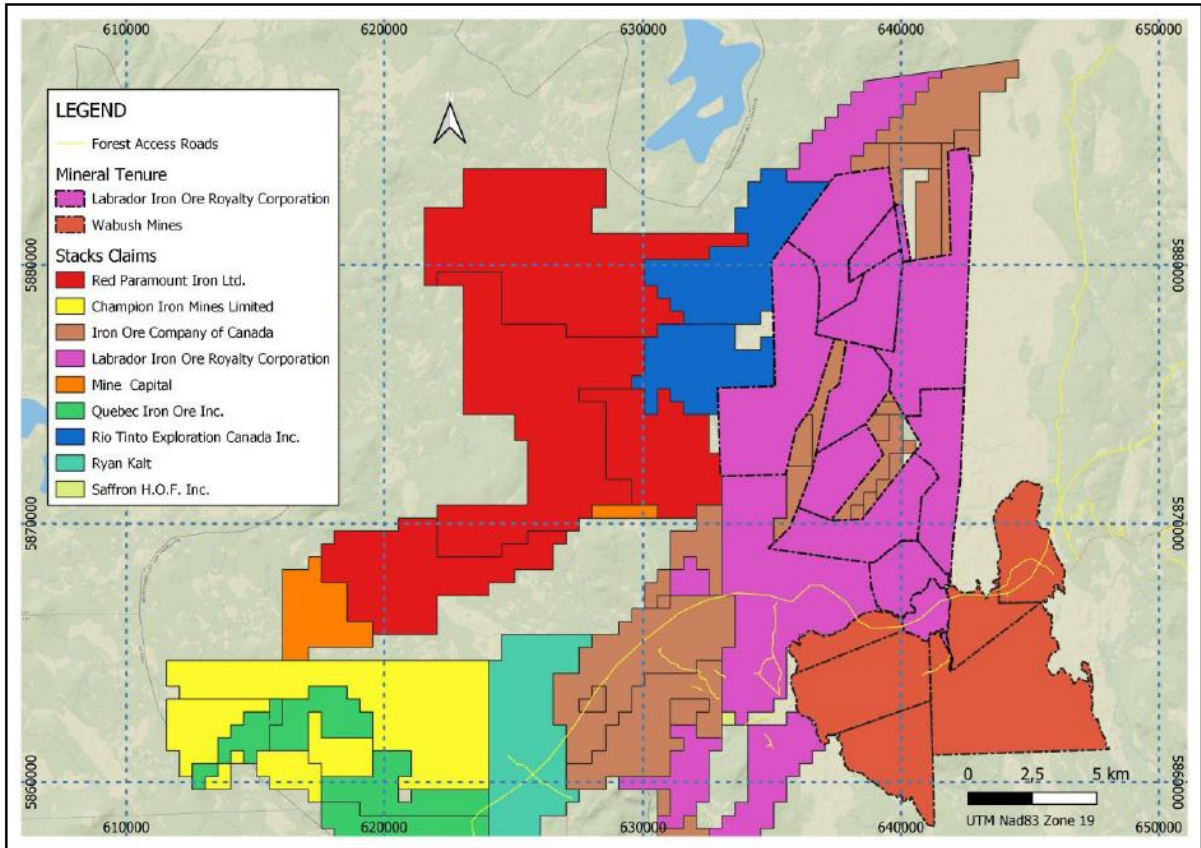
Signature of Proponent

The completed Registration and the digital and paper copies should be sent, together with a covering letter, to:

Minister of Environment and Climate Change PO Box 8700 St. John's NL A1B 4J6 Attention: Director of Environmental Assessment

## **Appendix A**

### **Mineral Licenses Held by Red Paramount Iron**





Department of Industry, Energy and Technology  
(<https://www.gov.nl.ca/iet/>)

(<https://www.gov.nl.ca/>)

Search gov.nl.ca



## Mineral Rights Inquiry Portal

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### Mineral Licence Report

Date / Time Printed: Thu Mar 30 00:00:00 NDT 2023

**Licence Number:**

023747M

**File Number:**

775:1842

**Original Holder:**

**Licence Holder:**

Red Paramount Iron Ltd.

**Address:**

688 West Hastings St Suite 460, Vancouver BC, Canada

**Licence Status:**

Issued

**Electoral District:**

Labrador West

**Recorded Date:**

**Issue Date:**

2011/02/07

**Renewal Date:**

2026/02/09

**Report Due Date:**

2023/04/10

**Original Number of Claims:**

180

**Current Number of Claims:**

180

**Recording Fee:**

\$0.00

**Receipt(s):**

**Deposit Amount:**

\$0.00

**Staking Security Status:**

**Map Sheet Number(s):**



Department of Industry, Energy and Technology  
(<https://www.gov.nl.ca/iet/>)

(<https://www.gov.nl.ca/>)



## Mineral Rights Inquiry Portal

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### Mineral Licence Report

Date / Time Printed: Thu Mar 30 00:00:00 NDT 2023

**Licence Number:**

023746M

**File Number:**

775:1842

**Original Holder:**

**Licence Holder:**

Red Paramount Iron Ltd.

**Address:**

688 West Hastings St Suite 460, Vancouver BC, Canada

**Licence Status:**

Issued

**Electoral District:**

Labrador West

**Recorded Date:**

**Issue Date:**

2011/02/07

**Renewal Date:**

2026/02/09

**Report Due Date:**

2023/04/10

**Original Number of Claims:**

181

**Current Number of Claims:**

181

**Recording Fee:**

\$0.00

**Receipt(s):**

**Deposit Amount:**

\$0.00

**Staking Security Status:**

**Map Sheet Number(s):**





Department of Industry, Energy and Technology  
(<https://www.gov.nl.ca/iet/>)

(<https://www.gov.nl.ca/>)



## Mineral Rights Inquiry Portal

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### Mineral Licence Report

Date / Time Printed: Thu Mar 30 00:00:00 NDT 2023

**Licence Number:**

022319M

**File Number:**

775:1737

**Original Holder:**

**Licence Holder:**

Red Paramount Iron Ltd.

**Address:**

688 West Hastings St Suite 460, Vancouver BC, Canada

**Licence Status:**

Issued

**Electoral District:**

Labrador West

**Recorded Date:**

**Issue Date:**

2011/01/10

**Renewal Date:**

2026/01/12

**Report Due Date:**

2023/05/12

**Original Number of Claims:**

90

**Current Number of Claims:**

90

**Recording Fee:**

\$0.00

**Receipt(s):**

**Deposit Amount:**

\$0.00

**Staking Security Status:**

**Map Sheet Number(s):**



Department of Industry, Energy and Technology  
(<https://www.gov.nl.ca/iet/>)

(<https://www.gov.nl.ca/>)



## Mineral Rights Inquiry Portal

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### Mineral Licence Report

Date / Time Printed: Thu Mar 30 00:00:00 NDT 2023

**Licence Number:**

022318M

**File Number:**

775:1171

**Original Holder:**

**Licence Holder:**

Red Paramount Iron Ltd.

**Address:**

688 West Hastings St Suite 460, Vancouver BC, Canada

**Licence Status:**

Issued

**Electoral District:**

Labrador West

**Recorded Date:**

**Issue Date:**

2010/06/07

**Renewal Date:**

2025/06/09

**Report Due Date:**

2023/08/07

**Original Number of Claims:**

70

**Current Number of Claims:**

70

**Recording Fee:**

\$0.00

**Receipt(s):**

**Deposit Amount:**

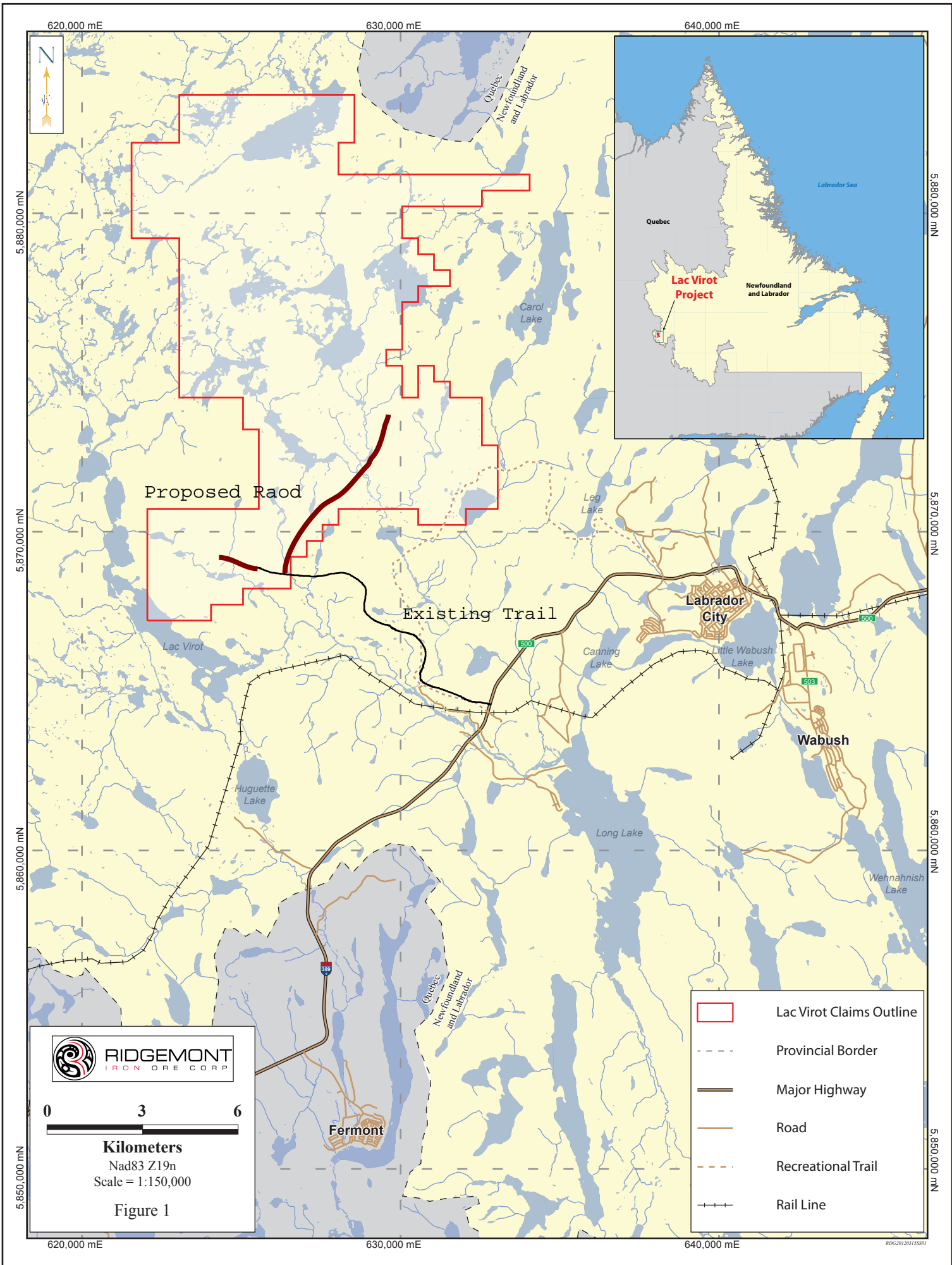
\$0.00

**Staking Security Status:**

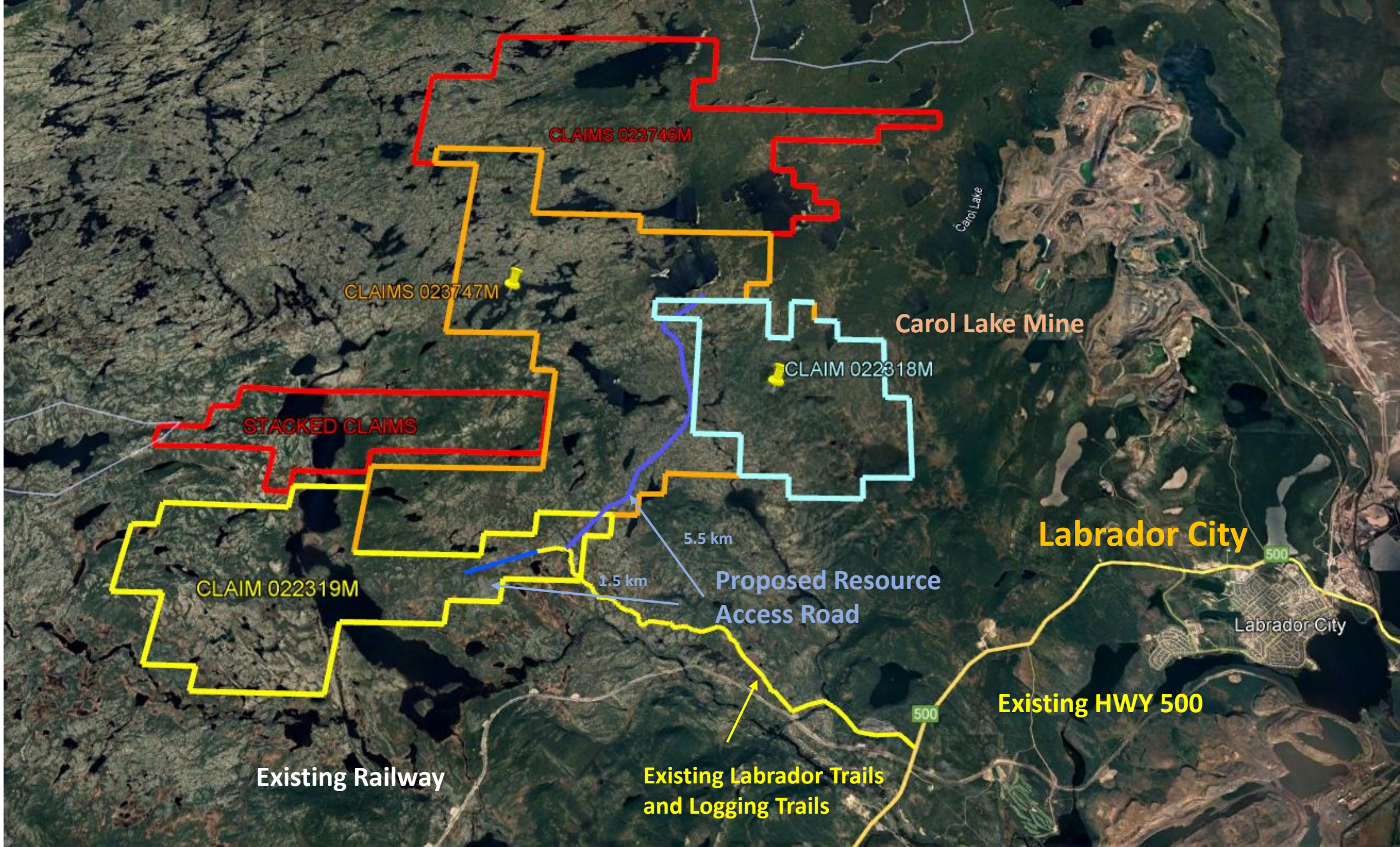
**Map Sheet Number(s):**

## **Appendix B**

### **Detailed Features on Aerial Photograph**







CLAIMS 023746M

CLAIMS 023747M

Carol Lake Mine

CLAIM 022318M

STACKED CLAIMS

Labrador City

CLAIM 022319M

5.5 km

Proposed Resource Access Road

1.5 km

Existing HWY 500

Existing Railway

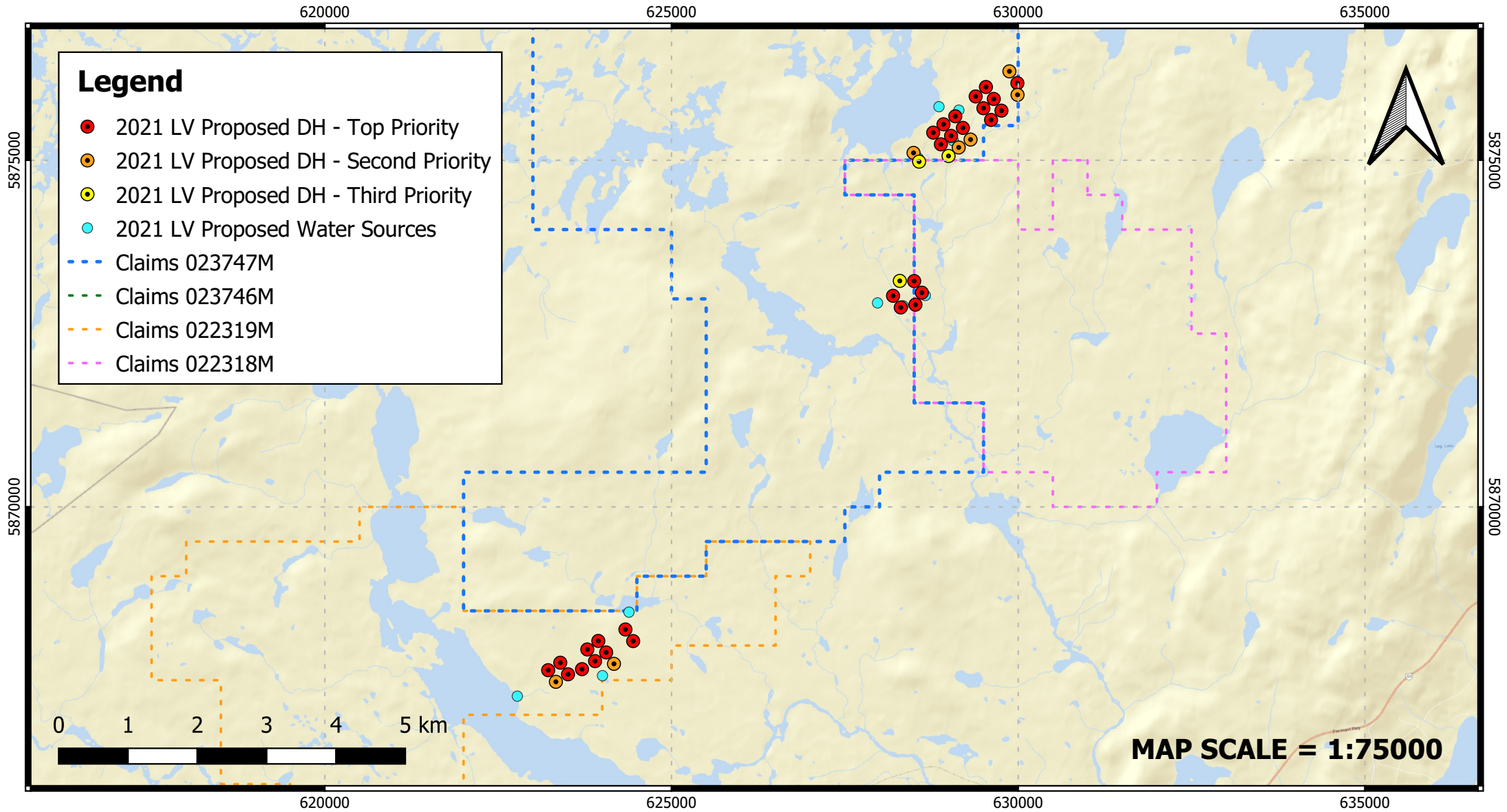
Existing Labrador Trails and Logging Trails



## **Appendix C**

### **Locations of Upcoming Drilling Program and Environmental Baseline Data Collection**

# Lac Viot Iron Ore Project



Lac Viot Iron Ore Project  
N 5875000, E627500, NAD 83, UTM Zone 19N  
Newfoundland and Labrador, Canada  
July 13, 2021  
by Morgan Cox, Mineit Consulting Inc.  
for Red Paramount Iron Ltd.



## **Appendix D**

### **Construction Standard for Resource Access Roads**





Government of Newfoundland and Labrador  
**Department of Fisheries and Land Resources**

# **Construction Standards**

## **for Resource Access Roads in Newfoundland and Labrador**

Date effective: January 01, 2018

Forest Engineering and Industry Services

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DOC/2018/00598

Copies of this publication may be obtained free of charge from:

Department of Fisheries and Land Resources  
Forestry and Wildlife  
Forest Engineering and Industry Services  
P.O. Box 2006  
Corner Brook NL A2H 6J8

[www.faa.gov.nl.ca/forestry](http://www.faa.gov.nl.ca/forestry)

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## FORWARD

A Timber Sale Agreement (TSA) is a contractual agreement between government and a registered company, for the harvest and extraction of timber from forested parcels of Crown land. Any registered business that qualifies and has an interest in harvesting TSA areas may bid in an open and fair competition through an established bidding process.

The Guide to Construction Standards for Resource Access Roads in Newfoundland and Labrador provides applicants with an understanding of their responsibilities under Timber Sale Agreements. The document contains a general overview of provincial road construction requirements and should be reviewed when developing a Resource Access Plan.

## RESOURCE ACCESS PLAN

A Resource Access Plan refers to all activities related to the planned transport of forest products from a TSA area to a provincial highway (i.e. generally paved road). This includes all primary resource roads, operational resource roads and timber extraction trails. It includes all aspects of road and trail planning, layout, construction, maintenance, snow clearing and decommissioning (if applicable).

All activities related to resource access are the responsibility of the Company. All forestry operations on Crown land must comply with the *Forestry Act*, associated regulations, and all other municipal, provincial and federal laws and regulations. All road construction activities must be done so in accordance with the Department's Environmental Management System and must follow standard operating procedures.

The department will provide a suggested Resource Access Plan for each TSA area as part of the TSA Information Package. The suggested Resource Access Plan will include:

- suggested road and trail layout (map);
- proposed construction specifications; and
- a decommissioning and road rehabilitation plan (if applicable).

TSA applicants are asked to review the suggested Resource Access Plan before submitting bids. Interested parties are highly encouraged to visit the TSA area to verify the information presented in the package. If the applicant determines that revisions are necessary to the suggested Resource Access Plan, then they must submit a revised Resource Access plan for review and consideration with their bid.

There are a number of factors which may result in revised Resource Access Plans being submitted. These may include, but are not limited to:

- The identification of alternate extraction routes;
- Seasonal harvesting schedules that do not require extensive road; or
- Extraction methods using alternate types of equipment.

Resource Access Plans must be approved by the Department before construction begins.

## ROAD TYPES

Generally, there are three types of resource access roads:

- Primary Resource Road – provides access to the TSA harvest block
- Operational Resource road – provides access within a TSA harvest block
- Trails – provide access for harvesting/forwarding machinery within TSA harvest block

As a rule, primary resource roads are constructed to A, B or C-2 specifications and are often referred to as “main haul roads”. Depending on harvesting requirements, operational resource roads are normally constructed to a C, C-1 or D specifications, and typically branch off primary resource roads. Trails are developed to provide access for harvesting and forwarding equipment throughout the harvest block. Trails exist temporarily while operations are active.

The following is a summary of resource road construction specifications on Crown land.

| Road Specification                                      | A  | B  | C-2, C, C-1                                  | D                                      |
|---|--|--|--|--|
| Design Load   | Tractor Trailer                          | Tractor Trailer                              | Tandem (Pallet) Truck                        | Single Axle (<= 3 tonnes)              |
| Design Speed  | 55 km/hr                                 | 50 km/hr                                     | 30 km/hr                                     | 25 km/hr                               |
| Road (Surface) Width                                    | 9.0 m                                    | 7.5 m  | 6.0 m, 5.0 m, 4.0 m                          | 3.5-4.5 m                              |
| Max. Grade  | 6 %                                      | 8 %  | 10 %   | 15 %                                   |
| Right-Of-Way  | 30 m                                     | 20-30 m                                      | 20 m   | 15-20 m                                |
| Min. Sight Distance                                     | 150 m                                    | 120 m  | 90 m   | 45 m                                   |
| Max. Grade Change (Blind Hill)                          | 0.6 / 20 m                               | 0.8 / 20 m                                   | 1.0 / 20 m                                   | N/A                                    |
| Min. Ditch Depth  | 1.0 m                                    | 0.8 m  | 0.6 m  | 0.3 m                                  |
| Surface Material (Type and Depth)                       | Min. 15cm of AASHO class A-1-b or better | Granular, no stones > 10 cm in the top 30 cm | Granular, no stones > 15 cm in the top 30 cm | Granular, no stones > 15 cm in surface |
| Fill Slope  | 2:1                                      | 1.5:1  | 1.5:1  | N/A                                    |
| Cut Slope (Back Slope)                                  | 2:1                                      | 1.5:1  | 1.5:1  | N/A                                    |
| Stream Width  | 3.5 m                                    | 3.5 m  | 3.0 m  | 2.5 m                                  |
| Culvert to Bridge conversion point (personal judgement) |  |  |  |  |

# CONSTRUCTION STANDARDS

The following outlines general, provincial road construction requirements.

## 1. CLEARING RIGHT-OF-WAY

### 1.1. DESCRIPTION OF WORK

Under this item, the Contractor must perform all operations in connection with clearing for the permanent work along the length of the project route for the purpose of salvaging merchantable timber and cutting a clear area for the roadway.

### 1.2. GENERAL

Clearing shall be performed within a minimum width of 15 metres on such areas within or without the limits of the roadway, unless specified, for the purpose of constructing the roadway, side slopes, push lanes, stream diversions and borrow pits.

### 1.3. CLEARING

Clearing consists of the felling, trimming, cutting up of trees and the satisfactory salvage of the trees together with the cutting down of snags, brush and rubbish occurring within the area to be cleared. Trees, other vegetation, stumps, roots and brush in areas to be cleared shall be cut off 15 centimetres above the original ground surface or as close to the ground as practical under snow conditions.

### 1.4. SALVAGE OF CLEARED MATERIAL

All timber shall be salvaged as stated in the Contractor's Cutting Permit (and associated Regulations).

### 1.5. BRUSH MATS / CORDUROY

The Contractor may encounter instances where either the use of brush mats or corduroy are necessary. In constructing a brush mat or corduroy the Contractor should first use sub-merchantable or non-merchantable stems. In the event that these are not present or sufficient; permission must be obtained from the Department prior to merchantable stems being utilized. Stems should be placed in a "butt-to-top" alternating fashion for the entire length of the area to be brush matted.

## 2. STRIPPING

### 2.1. DESCRIPTION

Under this item the Contractor will perform all operations in connection with stripping designated areas along the uncompleted length of the route.

### 2.2. GENERAL

Areas to be stripped will consist of all excavations and embankments less than one metre high and all ditches. Embankments greater than one metre must not be stripped and brush, rotten wood and other refuse from clearing may be used as a mat or used as fill in areas requiring deep fill provided it is well packed and covered with at least one metre of acceptable granular fill.

### 2.3. STRIPPING

Stripping consists of the removal and disposal of all stumps and roots larger than four centimetres in diameter, matted roots, moss, bog, surface boulders, and any other vegetation or debris. Stripped material not used in the construction of the road bed must be pushed to the edge of the right-of-way and left in a neat and tidy fashion so as not to obstruct access to adjacent forest land. Stripped material must not exceed one (1) metre in height.

## 3. CULVERTS

### 3.1. DESCRIPTION

This work shall consist of supplying and placing Corrugated Metal Pipe (CMP) or High Density Polyethylene (HDPE) culverts, jointing material and couplers on all stream crossings which appear on a 1:50,000 topographic map or where cross drainage is required for proper water control.

### 3.2. MATERIALS

All culverts should be of sufficient size as to handle peak flows. All culverts must have diameters equal to or greater than 450 millimetres. Culvert length must be at least one metre greater than the bottom length of the roadbed to ensure that the ends are not filled in following repeated grading. Corrugated metal pipe (CMP) 600 millimetres or less in diameter must be 1.6 millimetre thickness or heavier metal. CMP's greater than 600 millimetres up to 1,000 millimetres must have a thickness of 2.0 millimetres or heavier metal. CMP's greater than 1,000 millimetres must not have a thickness less than 2.8 millimetres. CMP's greater than 1,400 millimetres must have a corrugation profile of 76 millimetres x 25 millimetre. Unless otherwise stated, HDPE Culvert's will be an acceptable substitute to CMP's. These culverts must be constructed of high density polyethylene with 210 kPa stiffness, be double walled, hollow inside and applicable for forestry application.



In certain situations properly constructed bottomless box culverts would be an acceptable alternative to CMP or HDPE culverts. Use of these culverts would be pending the inspection by forestry officials to determine if the size and construction materials are adequate. See Figure 1.

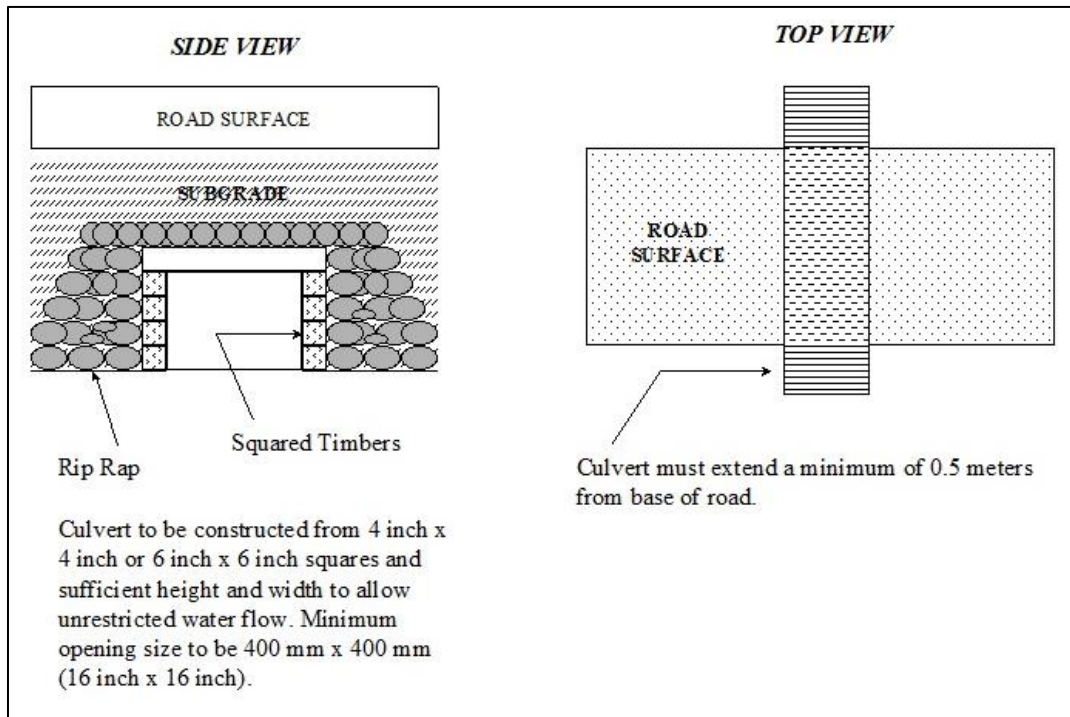


FIGURE 1: DRAWING OF BOTTOMLESS BOX CULVERT

### 3.3. CULVERT PLACEMENT

The Contractor must shape the trench to conform to the bottom of the culvert and provide a uniformly firm bed throughout the entire length. Where an unsuitable soil is encountered at the bottom of the trench, suitable material must be substituted and compacted. Culverts are to be backfilled with select granular material to a point not less than 60 centimetres above the top of the culvert. This backfill material must be deposited equally on both sides of the culvert in layers and thoroughly compacted. If the road depth is such that the culvert cannot be placed 60 centimetres into the roadbed, the road must be built up to this height. It will be necessary to back slope 25 metres on both side of such culvert.

### 3.4. EMBEDDING AND IN THE DRY INSTALLATION

All culvert bottoms in fish bearing streams are to be placed below the natural streambed level according to the following criteria: for culverts less than 750 millimetre outside diameter, one-third the diameter of the pipe should be below the streambed; for culverts greater than 750 millimetre outside diameter, a minimum of 300 millimetres below the streambed. The only exception to this would be when bedrock is encountered and it is impossible to embed the culvert. Such situations must be identified to forestry officials prior to culvert placement.

### 3.5. BLOCKING

All culverts 900 millimetres and greater must be blocked during installation to avoid failure. The Contractor will place rough lumber along the top and bottom of the culvert and blocks in between to provide support during backfilling of the culvert. Once properly placed backfill material has reached 3/4 of the height of the culvert, this blocking is to be removed to allow for proper culvert settlement.

A mechanical tamper should be utilized to ensure proper installation of all culverts 900 millimetres or greater. Backfill should be spread and compacted in 150 millimetre lifts alternating from one side of the culvert to the other.

### 3.6. EMBANKMENT SLOPE AND COMPACTION

The Contractor must ensure that the road embankment slope is at 1.5:1, as per Figure 2, for a minimum of 10 metres on all sides of culverts. The immediate area around culvert inlet and outlet is to be compacted (with excavator bucket) prior to placement of riprap or armour stone.

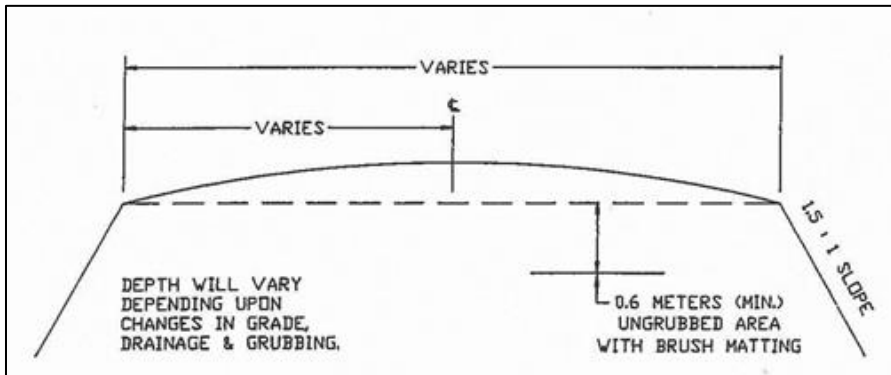


FIGURE 2: CROSS SECTION OF ROADWAY EMBANKMENT

### 3.7. RIPRAP

Riprap must be laid at the upstream and downstream ends of all culverts. Stones with an average diameter between 20 and 30 centimetres are to be used as rip rap. The Contractor must place larger stones at the bottom and take care to place the stones as close together as possible. The minimum requirements for riprap are shown in Figure 3.

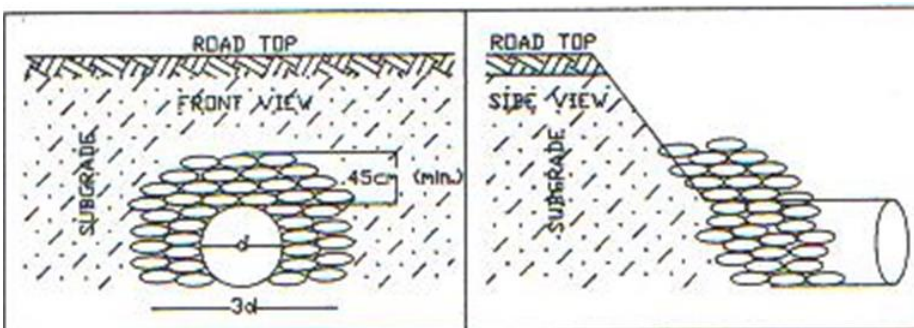


FIGURE 3: RIPRAP SPECIFICATIONS FOR CULVERTS

## 4. ROADWAY EXCAVATION AND GRADING

### 4.1. DESCRIPTION

This work shall consist of excavating materials as required to construct the roadway to a minimum top width and with such materials as to permit loaded trucks to travel at normal speeds. Grading shall consist of the hauling, levelling, shaping, ripping of cuts, filling of embankments, trimming of side slopes and the construction of ditches.

### 4.2. EXCAVATING EARTH

Earth shall be excavated as required to complete earth cuts, ditching, sub-excavation and shall include hauling, handling and disposal. The Contractor may, with the approval of forestry officials, excavate outside the limits of the roadway ditching for the purpose of obtaining suitable and/or sufficient material to complete embankments. Additional subgrade material required to build the road can also be obtained from approved borrow pits. All holes/pits are to be filled in with grubbing material.

### 4.3. EARTH EMBANKMENT CONSTRUCTION

The Contractor shall be responsible for selecting material from excavations which can be spread and compacted. In no case shall fill containing frozen material, material with an excessive moisture content, or any deleterious materials be used for earth embankment construction. Earth embankments shall be built to uniform grades and cross sections. The depth of the embankment shall be a minimum of 0.6 metres unless otherwise specified in those areas where no grubbing has been undertaken and the brush has been left as a mat. See Figure 4. In those areas that have been grubbed, embankments must be deep enough to provide a uniform surface and to avoid roadway surface water accumulating from surrounding areas. In areas where brush is required as a mat, the Contractor shall utilize brush from the roadway right-of-way.

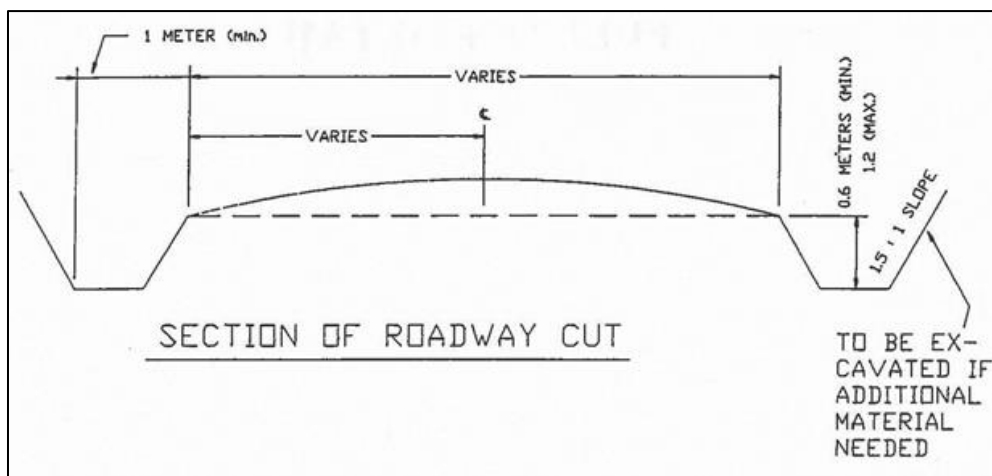


FIGURE 4: CROSS SECTION OF ROADWAY CUT



#### 4.5. ROADWAY SURFACE

The surface shall be of suitable granular material, compacted and sufficiently crowned to permit runoff. Roadway surface includes all turnarounds and pull offs.

#### 4.6. COMPACTION

Compaction resulting from the normal traffic of dump trucks during construction is considered sufficient. However, the Contractor should route trucks and earth moving equipment to the softer shoulders of the road in order that these may be compacted to a degree similar to the travelled centre portion of the road. Should little or no traffic by wheeled dump trucks result during construction, the Contractor is encouraged to affect an equivalent degree of compaction by means of a rubber tire compactor. This operation should be carried out just prior to final grading.

#### 4.7. FINAL GRADING

After all traffic by heavy construction machinery has ceased, all road surfaces shall be given a heavy and thorough grading by a wheeled grader so as to give a proper crowned and even surface to the road.

It is important to avoid windrows of graded material on the shoulders of the road as this can cause water to accumulate on the road surface and potentially cause erosion issues.

## 4.8. TURNAROUNDS

Turnarounds are constructed at various locations to permit trucks to turn around.

The following points should be considered:

- Entire turnaround should be level, surfaced and graded.
- Ditching is required around the entire turnaround.
- Push lanes, to divert water away from turnaround and into vegetated areas, should be installed as required.
- Turnarounds should be located on the driver's side to make backing in easier.
- Turnarounds should be located a minimum of 30 metres from the end of the road.

Figure 6 provides details as to the general specifications of turnarounds on resource roads.

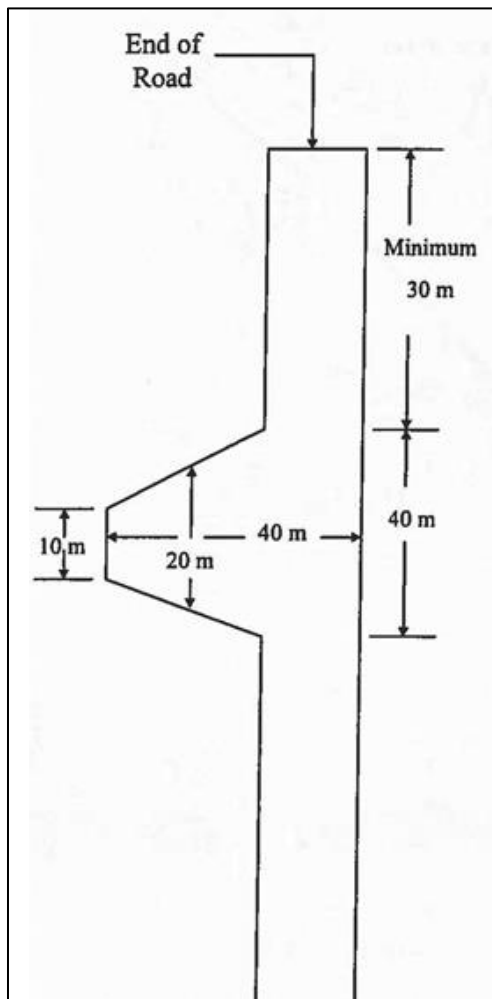


FIGURE 6: TURNAROUND DETAIL

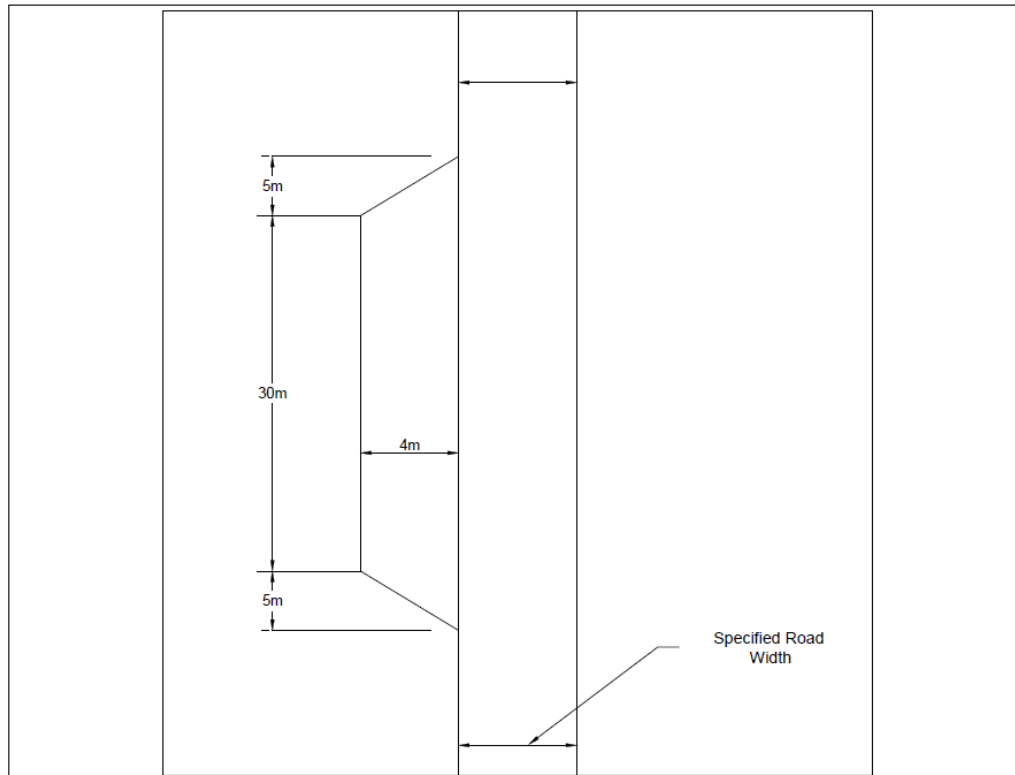
## 4.9. PULL OFFS

Pull offs are constructed to allow traffic to pass on narrow resource roads.

The following points should be considered:

- Entire pull off should be level, surfaced and graded.
- Ditching is required around the entire pull off.

Figure 7 provides details as to the general specifications of pull offs on resource roads.



**FIGURE 7: PULL OFF DETAIL**

## 5. ENVIRONMENTAL SPECIFICATIONS

Contractors are required to comply with these specifications in order to eliminate or minimize the detrimental effects of road construction on the environment of this Province.

All efforts must be made by the Contractor to prevent the entry of silt, slash, tops or any other deleterious materials into any streams or ponds located on or adjacent to the construction route. Excessive bulldozing will not be tolerated. All costs for environmental adherence are to be borne by the Contractor.

### 5.1. SILTATION

- i. The Contractor must maintain a buffer strip of at least 30 metres between the road construction area and any adjacent body of water.
- ii. The Contractor will not extend push lanes to streams or ponds. The Contractor will not back fill into streams or ponds.
- iii. The Contractor will not remove gravel from the bed or bank of any pond or stream.
- iv. Where activities may cause sediment-laden run-off, sediment control measures such as filter fabrics or sedimentation ponds are to be installed by the Contractor.

### 5.2. STREAM CROSSINGS

- i. The Contractor must make every effort to ensure that slash, tops or other construction materials do not enter streams or ponds. Any material felled in a waterbody is to be removed.
- ii. The Contractor must leave a ground vegetation buffer zone of at least 30 metres on both sides of any proposed watercourse crossing. Gravel for these sections of road, including the bridge approach embankments, must be trucked.
- iii. The Contractor must minimize the use of heavy equipment in streams. Any work should be carried out from dry stable areas where possible.
- iv. All culverts should be set into the stream as stated in the "Culverts" Section.
- v. Push lanes shall be used on both sides of the road or in conjunction with culverts to divert the ditch flow into the woods or stable vegetation areas before reaching the waterbody.
- vi. When working near waterbodies, road building operations causing erosion or siltation are to be suspended during periods of intense rainfall or when soils are saturated.
- vii. All in stream work is to be done in the dry. Cofferdams of non-erodible material are to be used to separate work areas from the stream when installing bridges or similar structures requiring abutments, or footings. Water pumped from work areas and cofferdams is to be directed into a settling pond or stable vegetation areas.
- viii. Not more than one-third of the stream width is to be blocked at any one time.



- ix. The stream banks are to be restored to their natural state upon completion and removal of the coffer dam. In some instances, this may mean seeding and other stabilization controls.

### 5.3. GRAVEL PITS

- i. Overburden or grubbed material pushed off any gravel pit site must be retained in a manner that allows it to be pushed back into the pit after construction and spread in a neat and tidy fashion.
- ii. Existing pits are to be used where possible; minimize the opening of new pits.

### 5.4. SITE

- i. The Contractor is to make every effort to maintain a clean and tidy work site. No garbage, construction debris, oil, diesel or their containers are to be deposited on the site.

**Failure to comply with the Environmental Specifications could result in:**

- i. Charges being laid by the Provincial Department of Environment, the Federal Department of Fisheries and Oceans or other Government agencies.
- ii. Termination of the Contract by the Department of Fisheries and Land Resources.

## 6. ENVIRONMENTAL SPECIFICATIONS WHEN OPERATING IN A PROTECTED WATER SUPPLY AREA (PWSA)

### 6.1. FUEL STORAGE AND USAGE

- i. If bulk fuel storage facilities are not permitted within the PWSA, fuel must be transported to the operating area in no more than two, 205 litre barrels, one 500 litre "slip tank". Fuel may also be delivered to the site by a fuel supplier.
- ii. Refueling sites shall be located at least 150 metres from any water body or wetland.
- iii. The proponent is hereby informed that fuel storage and handling requires a separate approval under the Storage and Handling of Gasoline and Associated Products Regulations, CNR 775/96.
- iv. All waste material and products are to be collected in refuse containers and disposed of at an approved waste disposal site outside of the protected area in accordance with the Waste Material Disposal Act. RSN 1990 c.W-4.

## 6.2. OIL SPILL AND CLEAN UP

- i. An oil spill clean-up kit must be on site at all times when gasoline or fuel powered equipment is being used or refueled.
- ii. If bulk fuel storage facilities are located in Protected Water Supply Areas, spill clean-up capabilities must be increased by the following tools and materials unless additional requirements are specified on PWSA:
  - One fire pump
  - 100 metres of fire hose
  - Two hand-operated fuel pumps
  - Six empty 45 gallon drums
  - Four long-handled shovels
  - Two pick axes
  - 10 metres of containment boom
  - 25 absorbent pads
  - 100 litres of loose absorbent material
- iii. Oil spills of gasoline, fuel or oil, regardless of volume, shall be reported immediately to the Regional Watershed Management Specialist and the appropriate Municipal Authority or Watershed Management Committee by calling (709) 261-2300 and (709) 292-4280, respectively.
- iv. Oil spills in excess of 70 litres shall be reported immediately to the 24 hour spill report line at (709) 722-2083 or 1-800-563-9089.

## 6.3. EQUIPMENT AND MAINTENANCE

- i. All equipment used in conjunction with this project must be in good working order with no leaking fuel or oil. Equipment storage and maintenance facilities associated with resource access road construction must not be located within the project area and all maintenance other than emergency repairs must be conducted outside the PWSA.

## 7. DEFINITIONS

- a) "Contractor" means the person or persons, firm or company named as such in the Form of Agreement or Timber Sale Agreement.
- b) "Drawings" means the drawings, plans, maps or diagrams forming part of a Contract, Timber Sale Agreement or Commercial Cutting Permit.
- c) "Engineer" means the Project Engineer with the Department of Fisheries and Land Resources or his or her duly appointed representative.
- d) "Equipment" means all fixed or mobile machines, tools, or other things required in the execution and completion of the works.
- e) "*Forestry Act*" means the *Forestry Act*, RSNL1990 CHAPTER F-23 as amended and associated regulations thereunder.
- f) "Forest Operations" mean all activity related to forest access road construction and maintenance, harvesting operations, silviculture operations, and insect and disease forest protection.
- g) "Forestry Official" means an official of the department authorized by the minister to carry out the provisions of the *Forestry Act* and the regulations.
- h) "Resource Access Plan" means the activities related to the planned transport of forest products from a TSA area to a provincial highway (i.e. paved road). This includes all primary resource roads, operational resource roads and timber extraction trails, and includes all aspects of road and trail planning, layout, construction, maintenance, snow clearing and decommissioning (if applicable)
- i) "Specifications" means the directions and written instructions contained in the Contract pertaining to the method and manner of performing the work, or to the quantities and qualities of the materials to be furnished under the Contract.
- j) "Timber Sale Agreement Area" means the area depicted in the Request For Bids Information Package.

## **Appendix E**

### **Exploration Approval E2106662**

August 11, 2022

**E210662 (EXTENSION)**

Farzad Nader  
[Farzad.Nader@Redparamount.ca](mailto:Farzad.Nader@Redparamount.ca)

Red Paramount Iron Ltd.  
460 - 688 Hastings St. W.  
Vancouver BC  
V6B 1P1

Dear Mr. Nader:

**EXTENSION**  
**Exploration Approval (Airborne Survey,**  
**94 DDH [Ground-Supported])**  
**for Red Paramount Iron Ltd. on the**  
**Lac Virot Property; NTS: 23B/14, 23G/03;**  
**Licences: 022318M, 022319M, 023746M, 023747M**

Your proposed exploration program submitted in compliance with Section 5(4) of the **Mineral Act** has been reviewed and approved.

Note that the following conditions, which are categorized based on the scope and location of exploration work, apply:

General Conditions

1. The Proponent, its employees, agents and subcontractors ("Proponent") shall comply with the Mineral Regulations, in particular sections 41 – 45. The Mineral Regulations can be read at: <http://assembly.nl.ca/legislation/sr/regulations/rc961143.htm>
2. This approval may be cancelled or suspended by the Minister if the Proponent fails to comply with any condition in this approval or as a result of a failure to comply with the Mineral Act, Mineral Regulations or any other provincial law or regulation. Upon cancellation or suspension of this

approval the Proponent shall immediately cease all exploration activities.

3. The Proponent shall comply with any other Provincial and Federal act or regulation, and obtain all permits that may be required in connection with the exploration activity.
4. As required by Section 42 of the Mineral Regulations, the Proponent shall notify the Mineral Lands Division of any significant changes to the approved exploration plan, and shall not proceed with exploration work, preparatory work or site access that deviates substantially from the approved exploration plan or deviates from the approved exploration plan in a manner which may significantly impact the environment without first receiving written authorization from the Mineral Lands Division.
5. The Proponent shall provide the Mineral Lands Division with:
  - A brief notice immediately before beginning the work;
  - A brief update of the status of the exploration program when it is completed.
  - Notices and updates should be sent to [exploration\\_approval@gov.nl.ca](mailto:exploration_approval@gov.nl.ca)
6. At any time the Mineral Lands Division may issue a request for information regarding completed, ongoing or planned exploration and the Proponent agrees to abide by all such requests without undue delay. The information requested may include but is not limited to: the location of exploration sites (including access trails), site preparation methods, the status of rehabilitation and cleanup, and photographic documentation of site conditions.
7. If exploration work is to take place on lands not vested in the Crown, as per section 12(2) of the **Mineral Act**, the licensee shall obtain prior written permission and forward copies to the Mineral Lands Division. Information regarding private land may be found on Crown Lands' Land Use Atlas: <https://www.gov.nl.ca/landuseatlas/details/>
8. Exploration work, including traditional prospecting, shall not be carried out on ground for which the mineral rights are held by another party unless permitted by an agreement registered with the Mineral Claims Recorder's office or unless written permission from the other party has been forwarded to the Mineral Lands Division. The Department's Geoscience Atlas is a current map of mineral rights held in the province. The Geoscience Atlas is located at: <http://gis.geosurv.gov.nl.ca/>
9. The Proponent shall ensure that all waste materials are placed in suitable refuse containers without undue delay and removed to a waste disposal site approved by Service NL to accept the type(s) of waste being disposed of. Digital Government and Service NL Government Service Centres are listed at: <https://www.gov.nl.ca/dgsnl/department/contact/#locations>
10. The modernized **Fisheries Act** (2019) includes fish and fish habitat protection provisions which came into effect on August 28, 2019. If you are conducting work in or near water you should refer to the Projects Near Water website (<http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html>) to get information about how to comply with the **Fisheries Act** and as well as information on the project review process.

You are responsible for:

- understanding the impacts your project will likely have on fish and fish habitat;
- taking measures to avoid and mitigate impacts to fish and fish habitat;
- requesting an authorization from the Minister and abiding by the conditions of your authorization when it is not possible to avoid and mitigate project impacts on fish and fish habitat;
- ensuring compliance with all statutory instruments, including federal, provincial, or municipal legislations/requirements.

In cases where impacts to fish and fish habitat cannot be avoided, and the project does not fall within waterbodies where a Fish and Fish Habitat Protection Program (FFHPP) review isn't required or the scope of the project is not covered under standards and codes of practice (<https://www.dfo-mpo.gc.ca/pnw-ppe/practice-practique-eng.html>), you are asked to submit a **Request for Review** (<https://www.dfo-mpo.gc.ca/pnw-ppe/reviews-revues/request-review-demande-d-examen-004-eng.html>) to the NL Region-FFHPP at [FPP-NL@dfo-mpo.gc.ca](mailto:FPP-NL@dfo-mpo.gc.ca). If you have any questions please call (709) 772-4140.

11. As per Section 38 (5) of the **Fisheries Act**, every person has a duty to notify DFO of an occurrence that results in serious harm to fish, or the deposit of a deleterious substance in water frequented by fish. Should such an occurrence take place, the Proponent shall contact DFO at 709-772-4140 or [FPP-NL@dfo-mpo.gc.ca](mailto:FPP-NL@dfo-mpo.gc.ca).

#### Diamond Drilling & Use of Water Pumps

12. The Proponent is advised of Section 45(2) of the **Mineral Regulations** which requires that all sites cleared of topsoil (e.g. drill pads prepared by cut-and-fill, grubbed sections of access trail, laydown area) be rehabilitated before the end of the current exploration program. Rehabilitation as per Section 45(2) requires that the site be re-contoured and the original organic cover (topsoil, ground vegetation, and any trees not used for other purposes) be spread back over the re-contoured site. If the original organic cover proves insufficient to completely re-cover the site then an organic substitute material must be used in addition to complete the process, provided that no invasive species are introduced. Acceptable substitute materials are straw, hay, trees having been cut in other parts of the exploration project area, or ground vegetation produced by hydroseeding. If the Proponent wishes to keep drill casing above ground then the re-contouring may accommodate this. Sumps pits and borrow pits fall under Section 45(1)(a) of the **Mineral Regulations** and need to be rehabilitated before the end of the exploration season in which they are excavated.
13. The Proponent shall not permit drilling discharge waters to flow overland into a water body, including into a small stream or intermittent channel, irrespective of whether the water body is displayed on the 1:50,000 scale NTS map. More specifically, waterborne drill cuttings and drill additives shall not be permitted to enter a water body.

14. All water pumps shall be underlain by a drip tray lined with absorbent pads and the pads shall be changed before becoming saturated. Drip trays where the containment rim is broken must be replaced or placed in secondary containment (e.g. a tarp-lined wooden tray) without delay.
15. Drill casings producing water in any quantity shall be sealed (grouted) before the expiry of the exploration approval and capped in the meantime. The drill holes shall be sealed with high-swelling bentonite or cement; however coarse sand may be used to fill the lower portions of the hole. Capping is not a substitute for sealing, since many caps cannot fully stop the water and, in any case, the caps will inevitably break due to freezing and thawing.
16. Immediately after demobilization from a drill site, the site shall be inspected for spills of hydraulic oil or fuel, deposits of drill grease, garbage, and waste equipment and these shall be cleaned up in their entirety without delay. The Proponent shall excavate deep enough to retrieve all of the contaminated soil. Soil contaminated by hydraulic oil or fuel shall be excavated and disposed of at an approved waste disposal site. The Proponent shall contact the nearest Government Service Centre to find out the location of the nearest approved waste disposal site accepting the materials that have been cleaned up. Government Service Centres are listed at:  
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  - d. Ensure openings in the guides and seals are less than the opening criteria to make “fish tight”.
  - e. Screens should be located a minimum of 300 mm (12 in.) above the bottom of the watercourse to prevent entrainment of sediment and aquatic organisms associated with the bottom area.
  - f. Structural support should be provided to the screen panels to prevent sagging and collapse of the screen.
  - g. Large cylindrical and box-type screens should have a manifold installed in them to ensure even water velocity distribution across the screen surface. The ends of the structure should be made out of solid materials and the end of the manifold capped.
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  - d. Minimal amounts of local in-filling (“minimal” meaning only at specific locations where it can be demonstrated that it would have been unsafe or impractical for an all-terrain vehicle to drive over the original topography).
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27. The property overlaps the Town of Labrador City. The proposed exploration areas overlap areas zoned 'Mining Reserve – Rural' where mineral exploration and mining is permitted. **The applicant must seek approval from the Town of Labrador City before commencing this work.**

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29. Approximate locations of Crown Land titles can be viewed on the Public Land Inquiry map viewer

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30. If the exploration activity includes stream crossings and/or fording, the Proponent shall contact the Water Resources Management Division to obtain a Permit to Alter a Water Body.
31. The proponent must apply for and obtain a permit under the **Water Resources Act**, 2002, specifically Section 48 <http://assembly.nl.ca/Legislation/sr/statutes/w04-01.htm> for any work in any body of water (including wetland) prior to the start of the work.

Application forms for working within a body of water can be found online at:  
<https://www.gov.nl.ca/ecc/waterres/regulations/appforms/>

### Provincial Archaeology Office

32. Please be advised on the provisions of the **Historic Resources Act**, protecting archaeological sites, artifacts and significant fossils, and procedures to be followed in the event that either are found:
  - a) A person who discovers an archaeological object or significant fossil in, on or forming part of the land within the province shall report the discovery forthwith to the Minister (responsible for the **Historic Resources Act**) stating the nature of the object, the location where it was discovered and the date of discovery;
  - b) No person other than one to whom a permit has been issued under this Act, who discovers an archaeological object or significant fossil shall move, destroy, damage, deface, obliterate, alter, add to, mark or in any other way interfere with, remove or cause to be removed from the province that object or fossil;
  - c) The property in all archaeological objects or significant fossils found in, on or taken from the land within the province, whether or not these objects or fossils are in possession of the Crown is vested in the Crown;

Should any archaeological remains be encountered, such as stone, bone or iron tools, concentrations of bone, charcoal or burned rock, fireplaces, house pits and/or foundations, activity in the area of the find must cease immediately and contact should be made with the Provincial Archaeologist in St. John's (709-729-2462) as soon as possible.

Copies of the **Historic Resources Act** and information on archaeology in the province may be obtained from the Provincial Archaeology Office upon request.

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33. The Wildlife Division advises applicants to operate under established legislation and regulations, such as to prevent harassment of wildlife (Section 106 of the **Wild Life Regulations** under the **Wild Life Act**) and guidance with respect to wildlife and their habitats (e.g. nesting birds, caribou, waterfowl, wetlands, inland fish, rare plants, riparian species) to avoid or minimize adverse

impacts.

Pursuant to Section 106 of the **Wild Life Regulations**:

- a. A person shall not operate an aircraft, motor vehicle, vessel, snow machine or all-terrain vehicle in a manner that will harass any wildlife;
- b. You are advised that helicopter supported exploration programs must be conducted in a manner that does not disturb, harass or harm any animal life that you encounter. This can easily be accomplished by avoiding concentrations of wildlife by rescheduling the planned activities for another day.
- c. Under no circumstances should nesting raptors be approached, not even for a “harmless” look. The startle effect that helicopters have on nesting raptors can be detrimental and therefore either a 600 m horizontal buffer from cliff faces or an altitude of 300 m must be observed.

No vegetation clearing is to occur within 800 metres of a bald eagle or osprey nest during the nesting season (March 15 to July 31) and 200 metres during the remainder of the year. The 200m buffer also applies to all other raptor nests (e.g. Northern Goshawk, Sharp-shinned Hawk, Merlin, American Kestrel, Great-horned Owl, Boreal Owl, Northern Saw-whet Owl). The location of any raptor nest site must be reported to the Wildlife Division.

The Wildlife Division requires a minimum 30 m naturally vegetated buffer to be maintained along all waterbodies and wetlands greater than 1 m in width or appears on a 1:50,000 scale NTS map to protect sensitive riparian and aquatic species, and their habitat.

The **Migratory Birds Convention Act, 1994, Migratory Bird Regulations, Wild Life Act and Wild Life Regulations** protect birds and prohibit the disturbance or destruction of bird nests and eggs in Newfoundland & Labrador. Proponents are advised to develop and implement appropriate preventative and mitigation measures to avoid incidental take of birds, nests and eggs.

Proponents must adhere to the **Motorized Snow Vehicle and All-Terrain Regulations** under the **Motorized Snow Vehicle and All-Terrain Act** (O.C.96-240)

<http://www.assembly.nl.ca/legislation/sr/regulations/rc961163.htm>

The proponent must follow appropriate hunting and trapping protocols as set in the annual Hunting and Trapping Guide. Proponents are advised to develop and implement appropriate preventative and mitigation measures to avoid incidental take of wildlife species.

### Environmental Assessment

34. This exploration program was reviewed by the Environmental Assessment Division and it was determined that registration is NOT required under Section 47 of the **Environmental Protection Act**.

**This approval is due to expire on October 31, 2024.**

If you have any questions concerning this approval, please contact the Mineral Lands Division at [exploration\\_approval@gov.nl.ca](mailto:exploration_approval@gov.nl.ca)

Regards,

A handwritten signature in blue ink, appearing to read 'Bernadine Lawlor', written over a horizontal line.

Bernadine Lawlor  
Exploration Approvals Geologist

## **Appendix F**

**Labrador City -Development Application Permit No.23-005**

August 11, 2022

**E210662 (EXTENSION)**

Farzad Nader  
[Farzad.Nader@Redparamount.ca](mailto:Farzad.Nader@Redparamount.ca)

Red Paramount Iron Ltd.  
460 - 688 Hastings St. W.  
Vancouver BC  
V6B 1P1

Dear Mr. Nader:

**EXTENSION**  
**Exploration Approval (Airborne Survey,**  
**94 DDH [Ground-Supported])**  
**for Red Paramount Iron Ltd. on the**  
**Lac Virot Property; NTS: 23B/14, 23G/03;**  
**Licences: 022318M, 022319M, 023746M, 023747M**

Your proposed exploration program submitted in compliance with Section 5(4) of the **Mineral Act** has been reviewed and approved.

Note that the following conditions, which are categorized based on the scope and location of exploration work, apply:

General Conditions

1. The Proponent, its employees, agents and subcontractors ("Proponent") shall comply with the Mineral Regulations, in particular sections 41 – 45. The Mineral Regulations can be read at: <http://assembly.nl.ca/legislation/sr/regulations/rc961143.htm>
2. This approval may be cancelled or suspended by the Minister if the Proponent fails to comply with any condition in this approval or as a result of a failure to comply with the Mineral Act, Mineral Regulations or any other provincial law or regulation. Upon cancellation or suspension of this

approval the Proponent shall immediately cease all exploration activities.

3. The Proponent shall comply with any other Provincial and Federal act or regulation, and obtain all permits that may be required in connection with the exploration activity.
4. As required by Section 42 of the Mineral Regulations, the Proponent shall notify the Mineral Lands Division of any significant changes to the approved exploration plan, and shall not proceed with exploration work, preparatory work or site access that deviates substantially from the approved exploration plan or deviates from the approved exploration plan in a manner which may significantly impact the environment without first receiving written authorization from the Mineral Lands Division.
5. The Proponent shall provide the Mineral Lands Division with:
  - A brief notice immediately before beginning the work;
  - A brief update of the status of the exploration program when it is completed.
  - Notices and updates should be sent to [exploration\\_approval@gov.nl.ca](mailto:exploration_approval@gov.nl.ca)
6. At any time the Mineral Lands Division may issue a request for information regarding completed, ongoing or planned exploration and the Proponent agrees to abide by all such requests without undue delay. The information requested may include but is not limited to: the location of exploration sites (including access trails), site preparation methods, the status of rehabilitation and cleanup, and photographic documentation of site conditions.
7. If exploration work is to take place on lands not vested in the Crown, as per section 12(2) of the **Mineral Act**, the licensee shall obtain prior written permission and forward copies to the Mineral Lands Division. Information regarding private land may be found on Crown Lands' Land Use Atlas: <https://www.gov.nl.ca/landuseatlas/details/>
8. Exploration work, including traditional prospecting, shall not be carried out on ground for which the mineral rights are held by another party unless permitted by an agreement registered with the Mineral Claims Recorder's office or unless written permission from the other party has been forwarded to the Mineral Lands Division. The Department's Geoscience Atlas is a current map of mineral rights held in the province. The Geoscience Atlas is located at: <http://gis.geosurv.gov.nl.ca/>
9. The Proponent shall ensure that all waste materials are placed in suitable refuse containers without undue delay and removed to a waste disposal site approved by Service NL to accept the type(s) of waste being disposed of. Digital Government and Service NL Government Service Centres are listed at: <https://www.gov.nl.ca/dgsnl/department/contact/#locations>
10. The modernized **Fisheries Act** (2019) includes fish and fish habitat protection provisions which came into effect on August 28, 2019. If you are conducting work in or near water you should refer to the Projects Near Water website (<http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html>) to get information about how to comply with the **Fisheries Act** and as well as information on the project review process.



You are responsible for:

- understanding the impacts your project will likely have on fish and fish habitat;
- taking measures to avoid and mitigate impacts to fish and fish habitat;
- requesting an authorization from the Minister and abiding by the conditions of your authorization when it is not possible to avoid and mitigate project impacts on fish and fish habitat;
- ensuring compliance with all statutory instruments, including federal, provincial, or municipal legislations/requirements.

In cases where impacts to fish and fish habitat cannot be avoided, and the project does not fall within waterbodies where a Fish and Fish Habitat Protection Program (FFHPP) review isn't required or the scope of the project is not covered under standards and codes of practice (<https://www.dfo-mpo.gc.ca/pnw-ppe/practice-pratique-eng.html>), you are asked to submit a **Request for Review** (<https://www.dfo-mpo.gc.ca/pnw-ppe/reviews-revues/request-review-demande-d-examen-004-eng.html>) to the NL Region-FFHPP at [FPP-NL@dfo-mpo.gc.ca](mailto:FPP-NL@dfo-mpo.gc.ca). If you have any questions please call (709) 772-4140.

11. As per Section 38 (5) of the **Fisheries Act**, every person has a duty to notify DFO of an occurrence that results in serious harm to fish, or the deposit of a deleterious substance in water frequented by fish. Should such an occurrence take place, the Proponent shall contact DFO at 709-772-4140 or [FPP-NL@dfo-mpo.gc.ca](mailto:FPP-NL@dfo-mpo.gc.ca).

#### Diamond Drilling & Use of Water Pumps

12. The Proponent is advised of Section 45(2) of the **Mineral Regulations** which requires that all sites cleared of topsoil (e.g. drill pads prepared by cut-and-fill, grubbed sections of access trail, laydown area) be rehabilitated before the end of the current exploration program. Rehabilitation as per Section 45(2) requires that the site be re-contoured and the original organic cover (topsoil, ground vegetation, and any trees not used for other purposes) be spread back over the re-contoured site. If the original organic cover proves insufficient to completely re-cover the site then an organic substitute material must be used in addition to complete the process, provided that no invasive species are introduced. Acceptable substitute materials are straw, hay, trees having been cut in other parts of the exploration project area, or ground vegetation produced by hydroseeding. If the Proponent wishes to keep drill casing above ground then the re-contouring may accommodate this. Sumps pits and borrow pits fall under Section 45(1)(a) of the **Mineral Regulations** and need to be rehabilitated before the end of the exploration season in which they are excavated.
13. The Proponent shall not permit drilling discharge waters to flow overland into a water body, including into a small stream or intermittent channel, irrespective of whether the water body is displayed on the 1:50,000 scale NTS map. More specifically, waterborne drill cuttings and drill additives shall not be permitted to enter a water body.

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Proponents must adhere to the **Motorized Snow Vehicle and All-Terrain Regulations** under the **Motorized Snow Vehicle and All-Terrain Act** (O.C.96-240)

<http://www.assembly.nl.ca/legislation/sr/regulations/rc961163.htm>

The proponent must follow appropriate hunting and trapping protocols as set in the annual Hunting and Trapping Guide. Proponents are advised to develop and implement appropriate preventative and mitigation measures to avoid incidental take of wildlife species.

### Environmental Assessment

34. This exploration program was reviewed by the Environmental Assessment Division and it was determined that registration is NOT required under Section 47 of the **Environmental Protection Act**.

**This approval is due to expire on October 31, 2024.**

If you have any questions concerning this approval, please contact the Mineral Lands Division at [exploration\\_approval@gov.nl.ca](mailto:exploration_approval@gov.nl.ca)

Regards,

A handwritten signature in blue ink, appearing to read 'Bernadine Lawlor', written over a horizontal line.

Bernadine Lawlor  
Exploration Approvals Geologist