

NORONT

EAGLE'S NEST PROJECT

A Federal/Provincial Environmental Impact
Statement/Environmental Assessment Report - Draft Copy

December 20, 2013



Volume 1

EXECUTIVE SUMMARY

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EXECUTIVE SUMMARY

1 – INTRODUCTION

1.1 PROJECT OVERVIEW

The Eagle's Nest Project involves the construction, operation and closure of a proposed underground mine, processing facility, and associated ore transportation and handling infrastructure. Eagle's Nest deposit is a vertically-oriented ore body, containing mineable quantities of nickel, copper, platinum, and palladium. The deposit contains approximately 11.1 million tonnes (Mt) of proven and probable reserves and nearly 9 Mt of inferred resources. The deposit is located at 52° 44' 29" N latitude and 86° 17' 45" W longitude (Figure ES.1).

Based upon the proven and probable ore reserves, the proposed mine and associated infrastructure will operate for 11 years at an ore production rate of 2,960 tonnes per day (t/d). The processing facilities at the mine will produce a nickel-copper-platinum-palladium concentrate at a rate of approximately 420 t/d. Tailings from the processing will be stored underground as cemented or uncemented paste backfill in ore stopes and aggregate stopes. The material taken from the aggregate stopes will be crushed and used for the constructing roads and other surface infrastructure.

The concentrate will be shipped by truck from the mine site to a rail transfer facility (trans-load facility) located near the community of Savant Lake, a distance of approximately 550 km (Figure ES.1). At the trans-load facility, the ore will be offloaded from the trucks and loaded onto rail cars for shipment to existing smelting/processing facilities located in eastern Canada via the existing Canadian National (CN) railway.

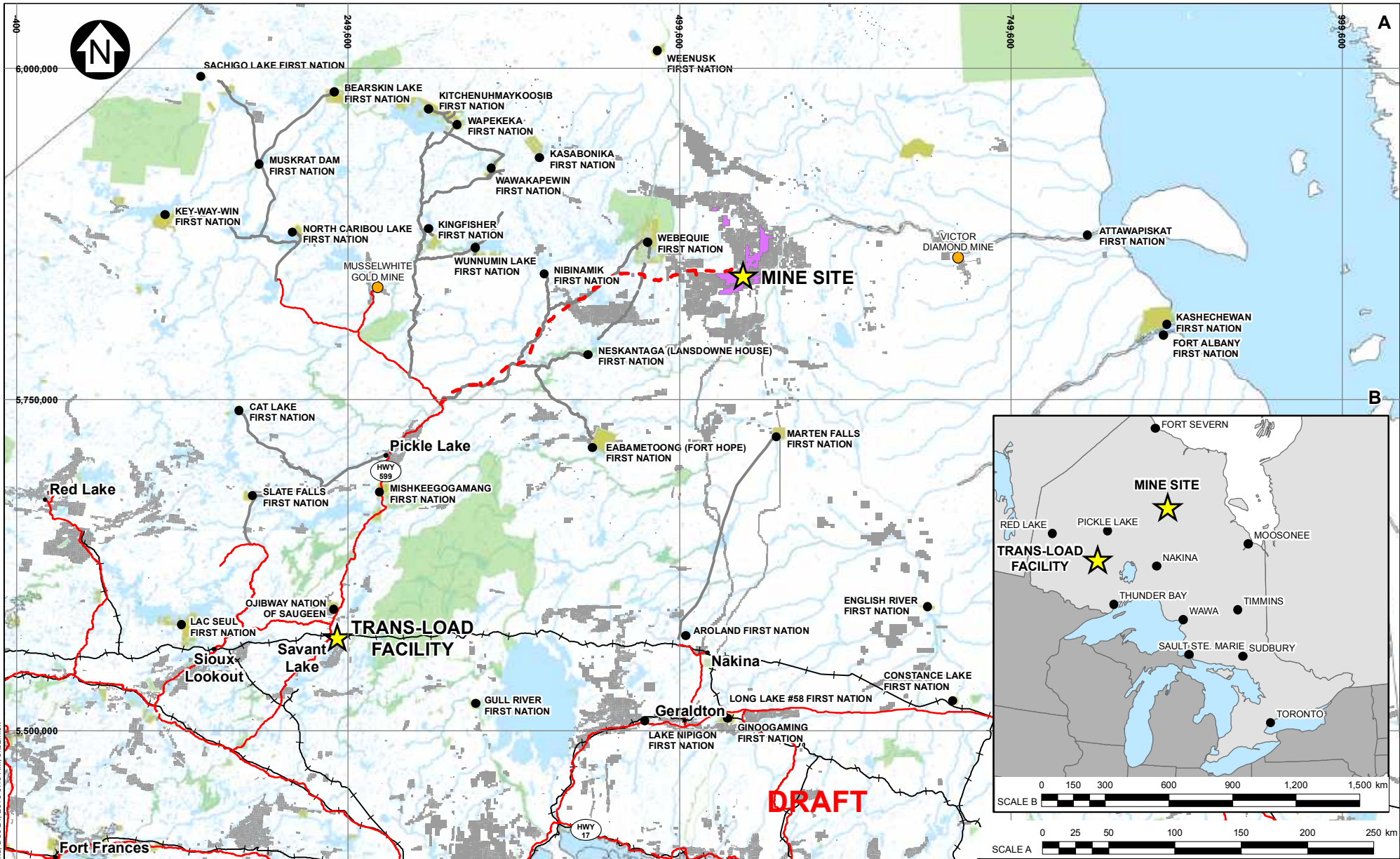
The current Project life is expected to be 16 years. The Project will comprise the following four phases and approximate durations:

- Construction (3 years)
- Operation (11 years)
- Closure (2 years)
- Post-closure (a minimum of 5 years)

The post-closure monitoring phase is expected to be a minimum of 5 years or until mine closure objectives are achieved. In the event that the current inferred resources at Eagle's Nest are developed, the operational mine life will be extended by a further 9 years.

1.2 THE PROPONENT

Noront Resources Ltd. (Noront) is a Canadian mining company focused on the development of the Eagle's Nest Mine, a nickel, copper, and platinum group element deposit in the Ring of Fire region of northern Ontario. Noront is a publicly traded company on the Toronto Venture Exchange (TSXV: NOT). The Company is the sole proponent of the Eagle's Nest Project (the Project) and holds a 100% interest in all of the underlying claims. Noront Resources Ltd. is the legal entity that will develop, operate and manage the Eagle's Nest Mine.

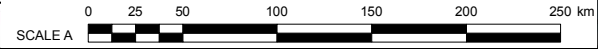
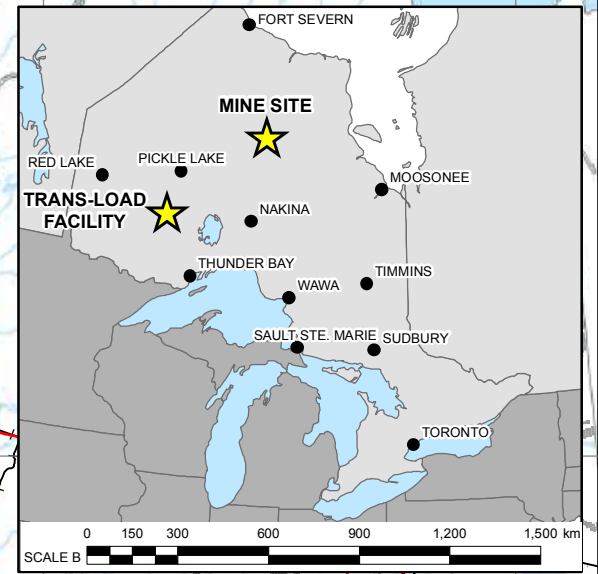


LEGEND:

- ★ MINE SITE AND TRANS-LOAD FACILITY
- COMMUNITY
- OPERATING MINE
- EXISTING ALL-SEASON ROAD
- - - PROPOSED ALL-SEASON TRANSPORTATION CORRIDOR
- EXISTING WINTER ROAD
- RAILWAY
- WATER
- PARK
- FIRST NATIONS RESERVE
- MINERAL CLAIMS HELD BY NORONT
- MINERAL CLAIMS HELD BY OTHERS

NOTES:

1. BASE MAP: © HER MAJESTY THE QUEEN IN RIGHTS OF CANADA DEPARTMENT OF NATURAL RESOURCES (2009). ALL RIGHTS RESERVED.
2. COORDINATE GRID IS IN METRES. COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N.
3. PROPOSED ALL-SEASON TRANSPORTATION CORRIDOR PROVIDED BY NORONT RESOURCES LTD. (NOV 26, 2013).
4. EXISTING WINTER ROAD NETWORK CREATED FROM DATA PROVIDED BY SNC-LAVALIN GROUP INC. (MARCH 24, 2011) AND DATA FROM THE OMNR LIO DATABASE (2009).
5. ACTIVE NORONT CLAIM BOUNDARIES WERE PROVIDED BY NORONT RESOURCES LTD. (MAY 23, 2013).
6. ACTIVE CLAIM BOUNDARIES BY OTHERS PROVIDED BY MINISTRY OF NORTHERN DEVELOPMENT AND MINES (AUGUST 2012).



NORONT RESOURCES LTD.

EAGLE'S NEST PROJECT

LOCATION OF PROJECT ACTIVITIES

	P/A NO. NB102-390/1	REF NO. 32
	FIGURE ES.1	

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1.3 EIS/EA REPORT

This *Draft Environmental Impact Statement/Environmental Assessment Report* (Draft EIS/EA Report) has been prepared for the Project with the objective of meeting both the Provincial requirements for an Individual Environmental Assessment and the Federal requirements for a Comprehensive Study Environmental Assessment. The Draft EIS/EA Report consists of the following:

- Volume 1 - Executive Summary (this document)
- Volume 2 - EIS/EA Report
- Volume 3 - Cumulative Effects Assessment
- Volume 4 - Environmental and Social Management Plan

The four volume EIS/EA Report is also supported by a number of Technical Supporting Documents (TSDs), listed below:

TSD No.	Description
1	Climate and Hydrology Baseline TSD
2	Air Quality Baseline and Modelling TSD
3	Acoustic Baseline and Modelling TSD
4	Terrain and Soils TSD
5	Geochemistry Baseline TSD
6	Hydrogeology Baseline TSD
7	Surface Water Quality Baseline TSD
8	Aquatic Environment Baseline TSD
9	Terrestrial Baseline - Vegetation TSD
10	Terrestrial Baseline - Birds TSD
11	Terrestrial Baseline - Mammals TSD
12	Terrestrial Baseline - Wolverine TSD
13	Terrestrial Baseline - Caribou TSD
14	Socio-economic Baseline
15	Human Health Risk Assessment TSD
16	Navigable Waters TSD
17	Hydrogeology Modelling TSD
18	Habitat Suitability TSD

2 – REGULATORY PROCESS

Provincial Requirements

In Ontario, environmental assessments are an important planning and decision making process, which has its authority in the *Ontario Environmental Assessment Act (OEAA)* to provide for the protection, conservation, and wise management of Ontario's environment. In Ontario, projects may be subject to an Individual EA or to a Class EA. Class EAs are for projects that are carried out routinely and have predictable and mitigatable environmental effects.

While there are no requirements in Ontario for a proposed mining project to undertake a provincial individual EA, there are components of the Project that may trigger either provincial Individual EAs or Class EAs, including:

- The construction of a 25 MW diesel-fuelled power generation plant (Ontario's Electricity Projects Regulation; MOE, 2011)
- The Disposition of Rights to Crown Resources for Project infrastructure development occurring on Crown Land (A Class EA for MNR Resource Stewardship and Facility Development Projects; MNR, 2003)
- Construction of an all-season road (A Class EA for MNR Resource Stewardship and Facility Development Projects; MNR, 2003)

Due to the requirements for provincial Class EAs and the need for an Individual EA for the power generation plant, Noront voluntarily entered into a written agreement to have the *OEAA* apply to the entire Project under Section 3.0.1 of the *OEAA*. A key step in the provincial EA process is the development and approval of a Terms of Reference (ToR), which lays out a clear assessment process and work plan for the EA of the Project. The ToR for the Eagle's Nest Project is awaiting approval by the MOE since October 6, 2012.

Federal Requirements

The Project is also subject to a Comprehensive Study Environmental Assessment (CSEA) pursuant to the *Canadian Environmental Assessment Act (CEAA)*. The *CEAA* and the associated federal environmental assessment process are administered by the Canadian Environmental Assessment Agency (CEA Agency). The Act applies to the Project because specific federal decisions and approvals are required to permit the project to move forward. While *CEAA* was substantially revised in 2012, this environmental assessment is being assessed under the terms and requirements of the former *CEAA* (1992), including its 2010 amendments (*CEAA 1992; amended in 2010*).

Under Section 5 of the *CEAA 1992; amended in 2010*, an environmental assessment is required because:

- Natural Resources Canada may take action in relation to Paragraph 7(1)(a) of the *Explosives Act* for a proposed explosives manufacture facility at the mine site
- Fisheries and Oceans Canada may take action in relation to Subsection 35(2) of the *Fisheries Act* in relation to the potential requirement for an authorization for the harmful alteration, disruption or destruction of fish habitat (HADD) associated with road construction
- Transport Canada may take action in relation to Section 5 of the *Navigable Waters Protection Act* for in-water structures that may potentially affect navigation

A key step in the *CEAA* process is the development of Environmental Impact Statement (EIS) Guidelines by the CEA Agency. The EIS Guidelines define which aspects of the Project should be included in the EA, the focus and boundaries of the EA, stakeholders in the *CEAA* process (affected and interested parties, including government agencies, First Nations, and members of the general public, possibly including non-governmental organizations - NGOs), consultation needs, and the extent of coordination with provincial regulatory requirements. The CEA Agency issued final EIS Guidelines to Noront in January 2012 (CEA Agency, 2012).

The steps in an EA required by the MOE and by the CEA Agency are somewhat different. This requires a coordinated approach to meet the requirements of both federal and provincial legislation. Canada and Ontario entered into an agreement in 2004 (*Canada-Ontario Agreement on Environmental Assessment Cooperation*, 2004). For this Project, the two levels of government have indicated a willingness to follow the coordinated EA process for Noront to report findings within one body of documentation. The single EIS/EA Report addresses the information requirements for both the draft provincial ToR and the federal EIS Guidelines.

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3 – ALTERNATIVES ASSESSMENT

3.1 ALTERNATIVES TO THE PROJECT

The alternatives to the Project are the functionally different ways to meet the project need and achieve the project purpose (CEA Agency, 2012).

The number of alternatives to most mining projects is limited because the ore bodies have a fixed location and the only way to proceed with the project is to mine the ore body at its current location. The purpose of the Project is to produce nickel-copper-platinum-palladium concentrate and this purpose can only be accomplished through the mining and processing of ore. As such, the only feasible alternative to proceeding with the Project is the Do Nothing Alternative. The Do Nothing Alternative was compared against the base-case, which is to proceed with the Project.

Proceeding with the Project is the preferred alternative as the Project has been proven technically feasible, economically viable and has strong community and government support. Abandoning the Project would fail to fulfill the need and purpose of the Project, by foregoing employment opportunities for local communities, and potential tax revenues to the Government of Ontario and the Government of Canada. The Project is not expected to have significant negative effects on the biophysical or socio-economic environment and the potential positive socio-economic effects of the Project will provide excellent opportunities for local and regional First Nations.

3.2 ALTERNATIVE METHODS

The assessment of alternative methods of carrying out the Project was focussed on those aspects of the Project that have the greatest potential for adverse environmental effects. Noront evaluated alternatives using a reasoned process in which the basis for the final selection of alternatives is easily understood at all levels. The approach considers alternatives that are not only technically and economically feasible, but would also satisfy Noront's requirements for environmental and socioeconomic acceptability. Each alternative was evaluated according to established performance criteria, which are meaningful attributes that Noront considers essential for Project success. These attributes included:

- Technical Feasibility
- Economic Viability
- Biophysical Environmental Acceptability
- Socioeconomic Acceptability

The performance of each alternative is evaluated based on three criteria: 1) preferred, 2) acceptable, or 3) unacceptable. The alternative that is both technically and economically feasible and has the least possible potential adverse effects on the biophysical and socio-economic environment will be selected as the preferred option.

A list of alternative methods was prepared that are realistic within the context of developing a new mine in northern Ontario. The assessment of alternative methods focuses on components of the Project that have the greatest potential for adverse environmental effects or issues that were raised through First Nations or Government consultation.

Several potential alternative methods for Project development were eliminated from consideration during a pre-screening process, prior to preparation of the EIS/EA Report, on the basis that they are

not technically feasible or economically viable, or because only one viable alternative was clearly suitable to the Project. The following alternative methods were eliminated during the pre-screening process:

- Open pit mining
- Surface tailings and waste rock disposal
- Shipment of concentrate by hovercraft, canal or airships
- Explosive handling and storage
- Construction methods
- Hazardous waste management
- The use of winter road for concentrate shipment
- Alternative power sources (hydroelectric, solar, wind)
- Off-site power generators
- Location of surface infrastructure
- Storm water management

The alternative methods assessed in the EIS/EA Report, included the following:

- Ore production rate
- Ore processing location
- Concentrate shipment
- Tailings management
- Location of transportation corridor
- Mine site water supply
- Mine site sewage treatment
- Mine site organic and solid waste management

The outcome of the alternative assessment is summarized below:

- **Ore Production Rate** - The preferred 2,960 tonne per day production rate provides a good balance between technical feasibility, maximizing return on investment, mine life and the sustainability and socio-economic benefits.
- **Ore Processing Methods** - The preferred alternative is to position the ore processing equipment both underground and on surface. Locating the mill underground increases efficiency by having it in closer proximity to ore extraction and tailings disposal activities. The final step in the process, concentrate drying, will be located at surface and adjacent to the power plant to make use of waste heat from the generators.
- **Concentrate Shipment** - The use of truck and rail transport is the preferred alternative. The combination of truck and rail transport is the most efficient option and will have the lowest operating costs. This alternative will also support community development initiatives as well as future mineral exploration and mining activities in the region.
- **Tailings Management** - The use of paste backfill is common practice in the mining industry for the underground disposal of tailings. The preferred alternative is the use of cemented paste backfill where structural support is required and un-cemented paste backfill when the structural support is not required.
- **Location of Transportation Corridor** - Year-round access to the mine site will be required to support the Project. Access to the Project will be provided by an all-season road from the mine site to the existing provincial road network. A north-south and an east-west transportation corridor were assessed. The east-west transportation corridor was selected as the preferred alternative in all performance objective categories. An east-west all-season road will be built at a lower capital cost, be a benefit to a greater number of remote First Nation communities, would not infringe in any Provincial Waterway Parks and have less impact on high quality caribou

habitat. Using the existing east-west winter road corridor would also facilitate construction because of good winter access. Using this route would also minimize environmental impacts by being within an established and disturbed corridor. Deviations of up to several kilometres from the existing winter road may be necessary to avoid problematic ground conditions or sensitive cultural or environmental features. The final road alignment will be refined based on additional consultation with First Nation communities in the area, the results of geotechnical investigations, and the avoidance of sensitive features (e.g., wetlands, streams, rivers) at a local scale.

- **Mine Site Water Supply** - The use of the surface water from the Muketei River is technically feasible, economically viable and would result in minimal impact to baseline flows in the river. The use of groundwater wells is technically feasible at a conceptual level. Groundwater is the preferred water source, since no in-water construction activities would be required. Should groundwater wells not be suitable for supply of potable and process make-up water, an intake structure will be proposed in the Muketei River.
- **Sewage Treatment** - A sewage treatment plant is the preferred alternative for managing sewage from the accommodation facility. These facilities are compact, easy to install and operate, proven reliable and easy to remove/reclaim. The sewage treatment facility will be operated in compliance with regulated discharge limits.
- **Mine Site Organic and Solid Waste Management** - The use of an on-site incinerator is preferred as it would reduce the amount of waste that would need to be trucked off site. This alternative will also reduce the storage of wastes that might attract nuisance wildlife.

4 – PROJECT DESCRIPTION

The Project includes the following key components shown on Figure ES.1:

- A mine site
- A transportation corridor
- A trans-load facility

Each project component is described further below.

4.1 MINE SITE

The mine site will consist of the following key components (Figure ES.2):

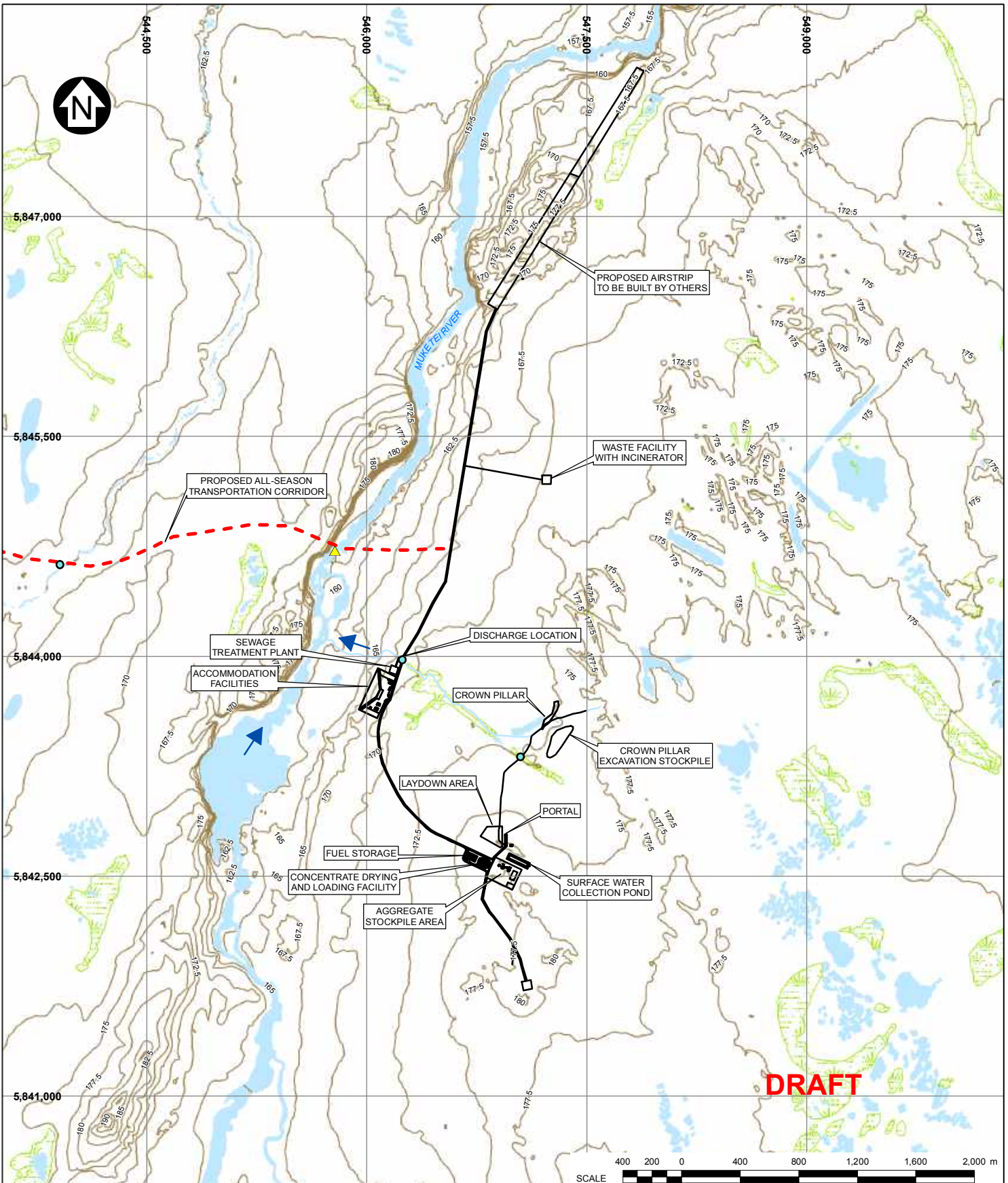
- Underground mine and processing facility
- Underground tailings management and storage
- Surface concentrate storage and transfer facilities
- Surface supporting infrastructure (e.g., accommodations buildings, services complex, and access portals)
- Diesel power generation facilities and fuel storage areas
- Waste and water management facilities
- Aggregate rock stockpile and crusher
- Explosives handling and storage facilities

Noront decided to locate several key mine site components underground, including the processing facility and the permanent disposal areas for waste rock and tailings. This will minimize the Project's environmental footprint, as well as reduce the aggregate requirements and the cost associated with establishing surface infrastructure in the wetland.

Noront plans to utilize a local airstrip for the movement of personnel and supplies to and from the mine site. The airstrip is located north of the mine site on the east side of the Muketei River and will service the Eagle's Nest Project, as well as other mineral exploration and development projects in the region (Figure ES.2). The airstrip has been permitted and will be constructed by a First Nation group.

The mine site development area includes all the underground and supporting surface facilities required to develop and operate the mine. The mine will produce a nickel, copper, platinum and palladium concentrate as well as aggregate from underground sources.

Construction at the mine site will begin by establishing the laydown areas, site roads, and the development of the mine portal and ramp. Due to the lack of available construction material at surface, aggregate for construction will be obtained from rock mined during the underground development. The aggregate rock will originate from granodiorite adjacent to the ore body. Surface laydown areas will be used to store construction equipment and materials. A sedimentation pond will be constructed to receive groundwater pumped from the underground during initial mine development.



- LEGEND:**
- PROPOSED CULVERT CROSSING
 - ▲ PROPOSED BRIDGE CROSSING
 - - - PROPOSED ALL-SEASON TRANSPORTATION CORRIDOR
 - PROPOSED INFRASTRUCTURE
 - CONTOUR
 - RIVER/STREAM/DRAINAGE
 - WATERFLOW DIRECTION
 - WATER
 - WETLAND
- NOTES:**
1. BASE MAP PROVIDED BY SNC-LAVALIN GROUP INC. (2010).
 2. COORDINATE GRID IS IN METRES. COORDINATE SYSTEM: NAD 1983 UTM ZONE 16N.
 3. CONTOUR INTERVAL IS 2.5 METRES.
 4. INFRASTRUCTURE INFORMATION PROVIDED BY NORONT RESOURCES LTD. (MAY 30, 2013). LOCATIONS ARE APPROXIMATE.
 5. PROPOSED ALL-SEASON TRANSPORTATION CORRIDOR AND WATER CROSSING LOCATIONS PROVIDED BY KIEWIT INFRASTRUCTURE ENGINEERS (NOVEMBER 26, 2013).

NORONT RESOURCES LTD.	
EAGLE'S NEST PROJECT	
MINE SITE LAYOUT - OPERATION PHASE	
<i>Knight Piésold</i> CONSULTING	
PIA NO. NB102-390/1	REF NO. 32
FIGURE ES.2	
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A permanent fly-in/fly-out accommodation complex will house workers. Potable water will be sourced from groundwater wells, and sewage will be treated in a package treatment plant and discharged to a local wetland that reports to the Muketei River. Personnel will be moved in and out of the camp using the proposed First Nations-led local airstrip. During initial construction, the existing exploration camp will be utilized to support mine site construction activities, until permanent camp facilities have been established.

The underground mining operations will use electric powered equipment to the greatest extent possible. As such, most of the mine's mobile equipment will run on electricity rather than on diesel. This will reduce the ventilation requirements of the mine, the volume of ventilated air to be heated and overall diesel fuel consumption at the mine. Processing of the ore will occur underground and waste rock will be used for construction purposes or disposed of underground. Tailings generated by the processing facility will be thickened and converted into cemented and un-cemented paste backfill, which will backfill ore stopes and aggregate stopes. No surface disposal of tailings will occur.

The mine operations will be a net consumer of water, mostly being stored in backfill. Water will be recycled from mineral processes and will be generated by groundwater inflows into the underground openings. As such, discharge from the mine process is not expected. The surface sedimentation pond will collect runoff from surface infrastructure. Additional make-up water will be supplied by groundwater wells.

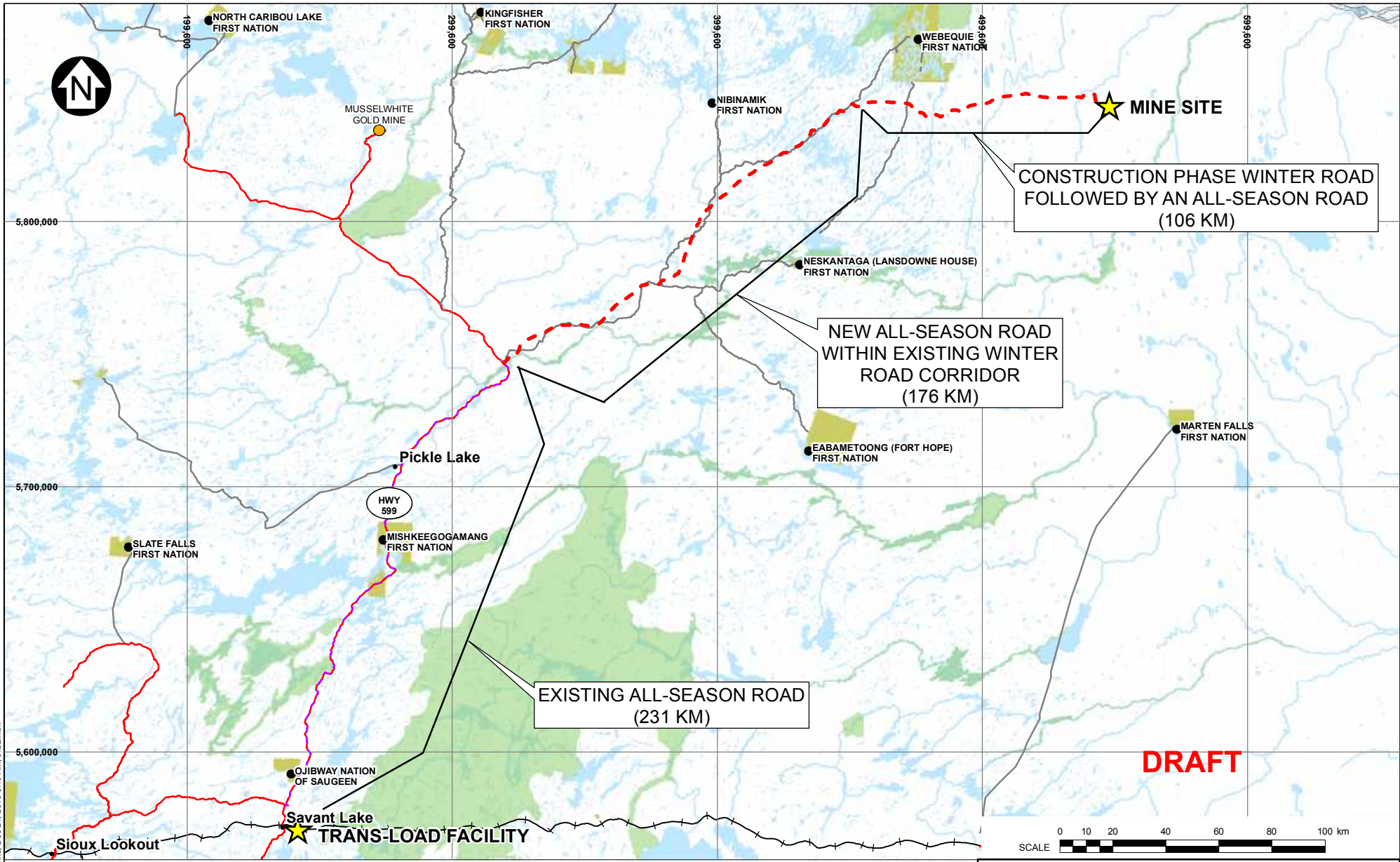
At the mine site, closure activities will include the removal of all surface infrastructure and all hazardous materials from the underground. The underground workings will be allowed to flood and the portal will be blocked with a concrete cap. Development areas will be scarified and either re-vegetated or allowed to re-vegetate naturally, as site conditions and climate allow.

4.2 TRANSPORTATION CORRIDOR

Access to the Project site will be developed to transport concentrate to market and to supply the equipment and materials required to build and operate the mine. The transportation corridor will consist of the following (Figure ES.3):

- A 282 km all-season road will be constructed from the Pickle Lake North Road (formerly Highway 808), starting north of Pickle Lake to the mine site. The new road will primarily follow an existing winter road alignment for the first 200 km.
- The existing Pickle Lake North Road and Highway 599 will be used to connect the new all-season road to the proposed trans-load facility located near the community of Savant Lake. This segment of the proposed corridor will be approximately 230 km in length.

All-season access to the Project site will be developed to transport concentrate to market and to supply the equipment and materials required to build and operate the mine (Figure ES.3).

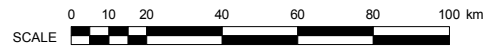


CONSTRUCTION PHASE WINTER ROAD FOLLOWED BY AN ALL-SEASON ROAD (106 KM)

NEW ALL-SEASON ROAD WITHIN EXISTING WINTER ROAD CORRIDOR (176 KM)

EXISTING ALL-SEASON ROAD (231 KM)

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- LEGEND:**
- ★ MINE SITE AND TRANS-LOAD FACILITY
 - COMMUNITY
 - OPERATING MINE
 - RAILWAY
 - EXISTING ALL-SEASON ROAD
 - CONCENTRATE HAUL ROUTE
 - PROPOSED ALL-SEASON TRANSPORTATION CORRIDOR
 - EXISTING WINTER ROAD
 - STEAM/RIVER/DRAINAGE
 - PARK
 - FIRST NATIONS RESERVE
 - WATER

- NOTES:**
- BASE MAP: © HER MAJESTY THE QUEEN IN RIGHTS OF CANADA DEPARTMENT OF NATURAL RESOURCES (2009). ALL RIGHTS RESERVED.
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NORONT RESOURCES LTD.	
EAGLE'S NEST PROJECT	
PROPOSED TRANSPORTATION CORRIDOR	
<i>Knight Piésold</i> CONSULTING	
P/A NO. NB102-390/1	REF NO. 32
FIGURE ES.3	
REV A	REV A

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The all-season road will be constructed over a three year period. Construction will begin by establishing a new section of winter road to connect the mine site with the existing annual winter road network. This will allow for the staging of equipment and supplies needed for the development of the mine site and the construction of the all-season road. Quarries and borrow sources will be developed at locations shown on Figures ES.4 and ES.5. Temporary construction camps will be established along the road alignment. These camps will be positioned at key locations, such as aggregate sources and major bridge crossings. Rock extracted from the underground aggregate stopes at the mine site may be used for construction on the east end of the road.

During operations, the all-season road will be used to bring in materials and supplies and to export concentrate and waste materials. Twelve (35 tonne capacity) trucks will transport concentrate to the trans-load facility each day. Additional trucks will deliver supplies to the mine site and dispose of solid waste to off-site licensed facilities.

It is expected that the all-season road will remain open after project completion to support access to the communities and other resource projects in the region. At this time, responsibility for road operations will be handed over to either the province or the local communities. In the unlikely event that responsibility for the road is not assumed by others, it will be decommissioned at the same time as the mine. In this scenario, culverts and bridges will be removed and natural drainage restored, and the road bed will be scarified and allowed to naturally re-vegetate.

4.3 TRANS-LOAD FACILITY

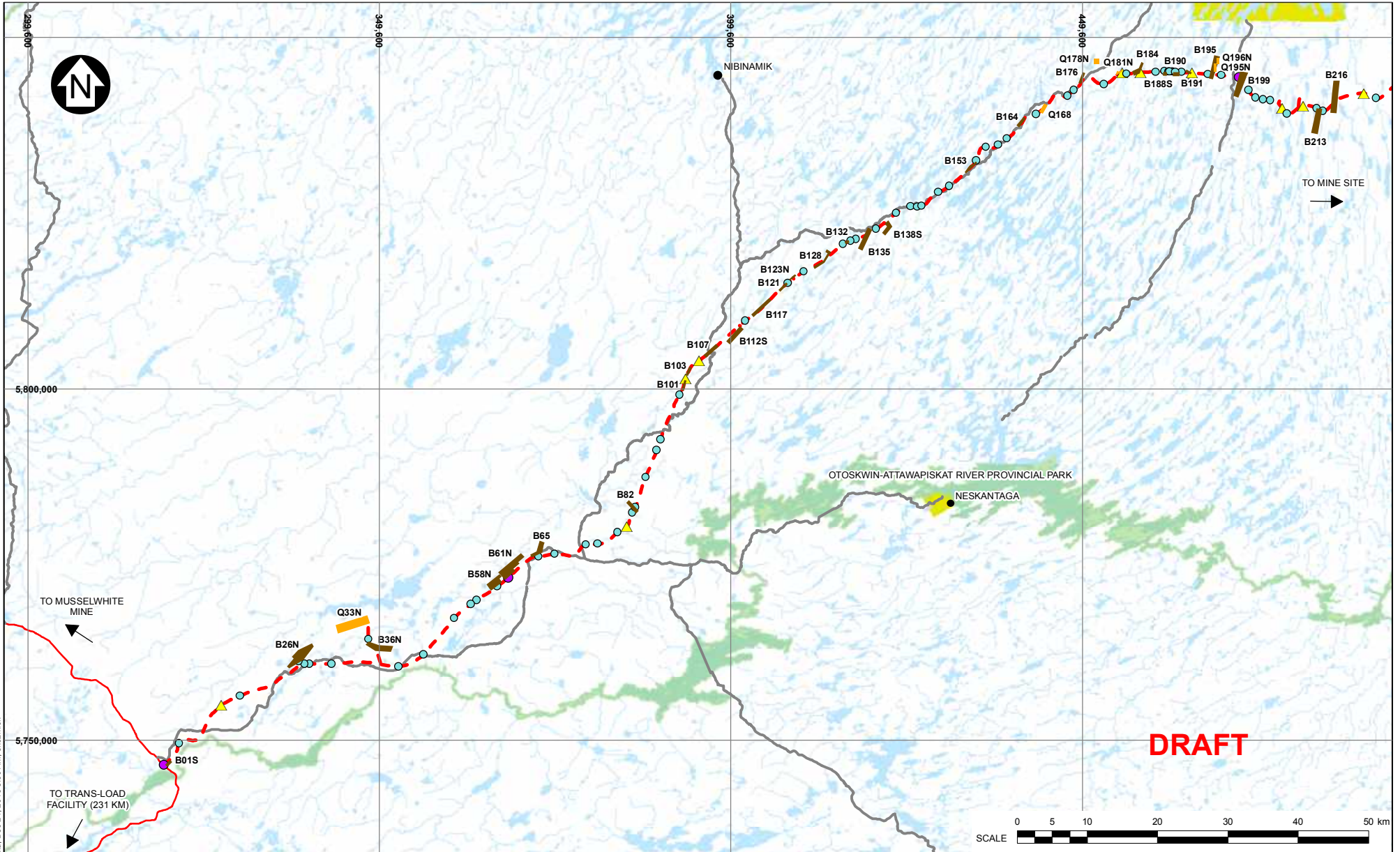
The trans-load facility will be located approximately 5 km east of the community of Savant Lake on the Canadian National Railway (CN) mainline (Figure ES.6). The facility will utilize a brownfield site that was formerly a rail siding used by the forestry industry. The trans-load facility layout will consist of the following components (Figure ES.7):

- Concentrate handling, storage and railcar loading facilities
- Administration and security buildings
- Power transmission line to existing power grid
- Backup diesel power generation facilities and fuel storage
- Equipment storage and maintenance facilities

Construction of the trans-load facility will be undertaken during mine and road construction. The existing disturbed area will be covered with asphalt and the existing railway siding modified. A power line will be re-instated along an existing right-of-way from Savant Lake to the facility, and truck unloading and rail car loading facilities will be constructed.

During operations, trucks will unload concentrate indoors. Concentrate will be reclaimed from an indoor stockpile and will be conveyed to railcars using a closed conveyance system. Minor offices and truck-washing facilities will be maintained at the trans-load facility.

At closure, all equipment, materials and any contaminated soils will be removed to licenced disposal facilities. The site will then be restored to its current condition as a former industrial site.



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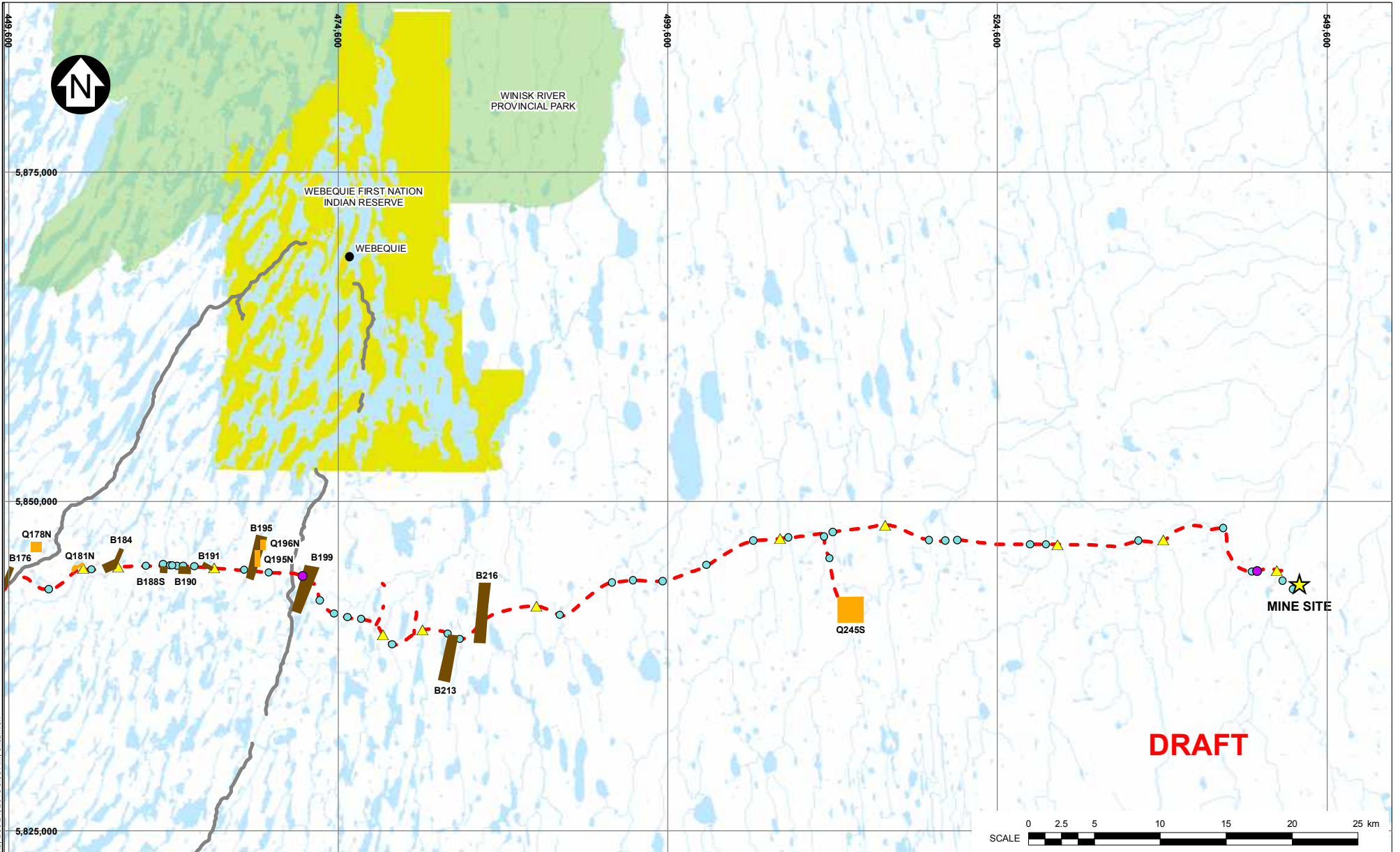
- LEGEND:**
- COMMUNITY
 - PROPOSED CULVERT CROSSING
 - △ PROPOSED BRIDGE CROSSING
 - ▲ CONSTRUCTION CAMP
 - EXISTING ALL-SEASON ROAD
 - EXISTING WINTER ROAD
 - - - PROPOSED ALL-SEASON TRANSPORTATION CORRIDOR
 - RIVER/STREAM/DRAINAGE
 - WATER
 - PROPOSED BORROW SOURCE
 - PROPOSED QUARRY SOURCE
 - FIRST NATIONS RESERVE
 - PROVINCIAL PARK

- NOTES:**
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 3. PROPOSED ALL-SEASON TRANSPORTATION CORRIDOR AND WATER CROSSING LOCATIONS PROVIDED BY KIEWIT INFRASTRUCTURE ENGINEERS (NOVEMBER 26, 2013).
 4. EXISTING WINTER ROAD NETWORK CREATED FROM DATA PROVIDED BY SNC-LAVALIN GROUP INC. (MARCH 24, 2011) AND DATA FROM THE OMNR LIO DATABASE (2009).

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EAGLE'S NEST PROJECT							
TRANSPORTATION CORRIDOR SOUTHERN PORTION							
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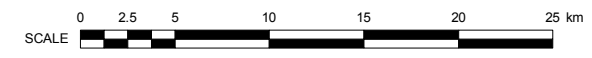
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LEGEND:

- ★ MINE SITE
- COMMUNITY
- PROPOSED CULVERT CROSSING
- △ PROPOSED BRIDGE CROSSING
- PROPOSED QUARRY SOURCE
- PROPOSED BORROW SOURCE
- FIRST NATIONS RESERVE
- PROVINCIAL PARK
- CONSTRUCTION CAMP AND LAYDOWN AREA
- EXISTING WINTER ROAD
- - - PROPOSED ALL-SEASON TRANSPORTATION CORRIDOR
- RIVER/STREAM/DRAINAGE
- WATER

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EAGLE'S NEST PROJECT

**TRANSPORTATION CORRIDOR
NORTHERN PORTION**

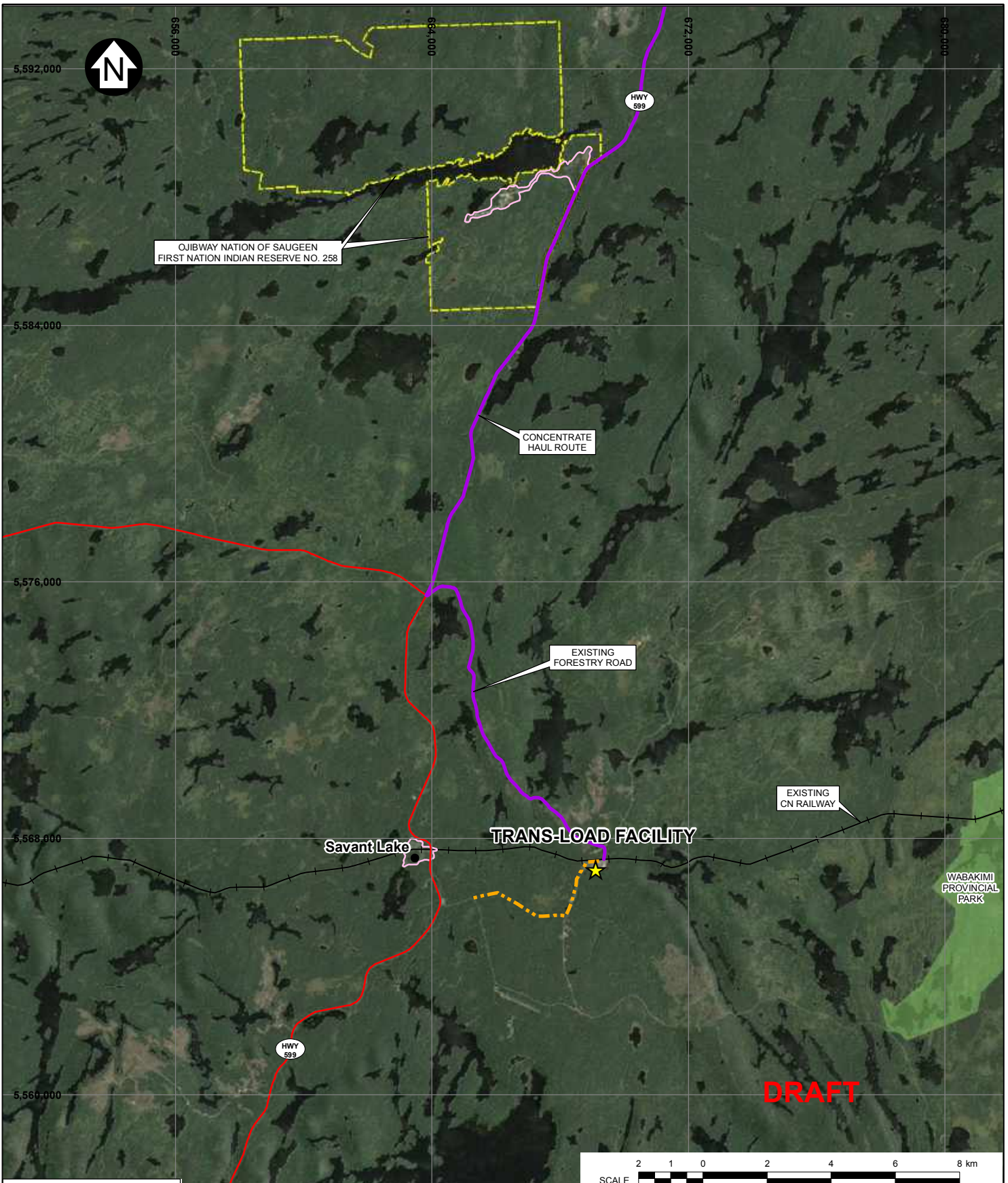
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CONSULTING**

P/A NO. NB102-390/1 REF NO. 32

FIGURE ES.5

REV A

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LEGEND:

- COMMUNITY
- ★ TRANS-LOAD FACILITY
- EXISTING ALL-SEASON ROAD
- CONCENTRATE HAUL ROUTE
- RAILWAY
- - - PROPOSED HYDRO CORRIDOR
- RIVER/STREAM/DRAINAGE
- WATER
- SETTLEMENT AREA
- FIRST NATIONS RESERVE
- PARK

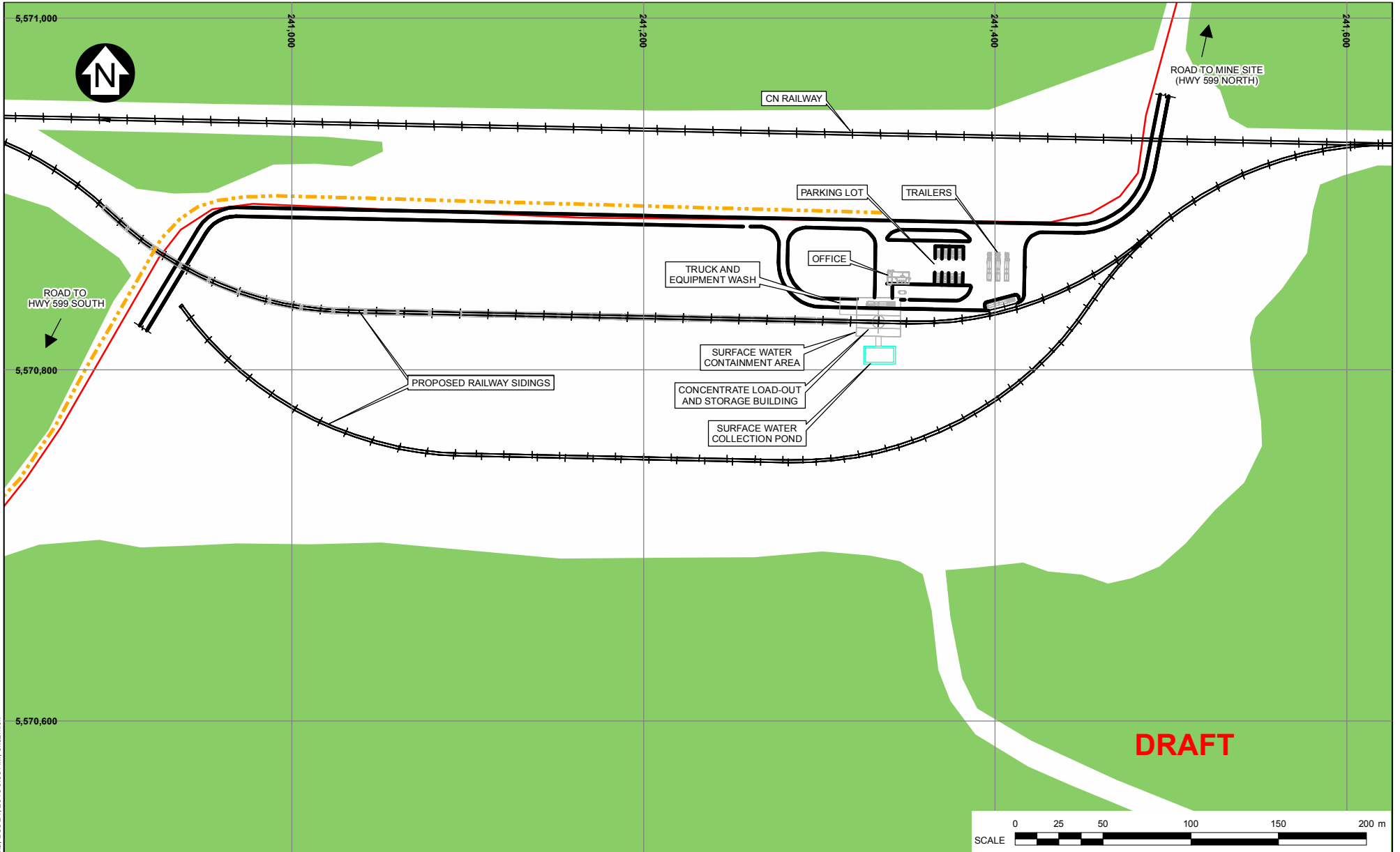
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EAGLE'S NEST PROJECT	
TRANS-LOAD FACILITY LOCATION	
<i>Knight Piésold</i> CONSULTING	PIA NO. NB102-390/1
REF NO. 32	REV A
FIGURE ES.6	

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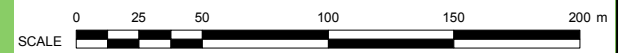


LEGEND:

- EXISTING ALL-SEASON ROAD
- RAILWAY
- - - PROPOSED HYDRO CORRIDOR
- PROPOSED INFRASTRUCTURE
- RIVER/STREAM/DRAINAGE
- WATER
- WETLAND
- SURFACE WATER COLLECTION POND
- FORESTED AREA

NOTES:

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EAGLE'S NEST PROJECT

TRANS-LOAD FACILITY LAYOUT

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P/A NO.
NB102-390/1

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FIGURE ES.7

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5 – CONSULTATION

Consultation and engagement of stakeholders is important throughout the project lifecycle. Project stakeholders include Aboriginal groups and individuals, local communities, nearby landowners and industry, the general public, government agencies, non-governmental organizations (NGOs), and elected officials.

Efforts have been to inform these communities and stakeholders of the scope and potential effects of the proposed Project and to understand and address their concerns and issues. During the last four years, the Project design has also advanced and engineering design has been refined as more information became available. Some of the modifications to the Project have been made in response to feedback received from First Nation communities and other stakeholders. Noront is committed to continuing a meaningful relationship with these parties through the sharing of information and on-going open dialogue.

5.1 ABORIGINAL CONSULTATION

The mine site is on the traditional lands of the following First Nation communities: Marten Falls, Webequie and Neskantaga. The transportation corridor crosses the traditional lands of these three communities along with the First Nation communities of Nibinamik and Eabametoong. Attawapiskat First Nation is downstream of the mine site. Aroland is located near to the terminus of a previously considered north-south transportation corridor and Noront has successfully concluded a Memorandum of Understanding (MOU) for the Project. Noront has determined that these seven communities are the primary communities for engagement and consultation as part of the EA process:

- Aroland First Nation
- Marten Falls First Nation
- Webequie First Nation
- Attawapiskat First Nation
- Neskantaga First Nation
- Eabametoong First Nation
- Nibinamik First Nation

The company has had several meetings with each of these communities.

Communities on the CEA Agency list that are not noted above will have access to the EA/EIS documents and plain language summaries of these documents in English, French, Cree, Ojibwe, and Oji-Cree. These communities or groups include:

- Bearskin Lake First Nation
- Ginoogamang First Nation
- Kasabonika First Nation
- Long Lake #58 First Nation
- Mushkegowuk Tribal Council
- Ojibway Nation of Saugeen
- Wawakapawin First Nation
- Windigo First Nation
- Winnumin Lake First Nation
- Constance Lake First Nation
- Independent First Nation Alliance
- King Fisher First Nation
- Matawa First Nations
- Muskrat Dam First Nation
- Sachigo Lake First Nation
- Weenusk (Peawunuk) First Nation
- Fort Albany First Nation
- Kashechewan First Nation
- Kitchenuhmaykoosib Inninwug
- Métis Nation of Ontario
- Mishkeegogamang First Nation
- North Caribou Lake First Nation
- Wapekeka First Nation

Early in the mine development process, Noront recognized the significance of the local Aboriginal people to the future of the Project. Noront also recognized that the local First Nation communities

have the potential to develop businesses to support the mine or to be employed by either the mine or by suppliers/service providers.

Initial engagement in 2009 and 2010 was by letters, telephone calls, emails and meetings with a few of the Chiefs and Councillors of some of the remote First Nation communities near the Ring of Fire. Since 2010, there has been regular communications by telephone, email and letters. Since hiring two former First Nation chiefs in 2010 to ensure appropriate attention was given to engaging First Nations, communications by telephone, email and letters have been made almost daily, attempting to connect with all local Aboriginal people in the Project area, both First Nation and Métis. Noront has visited the local First Nation communities, provided bursaries and scholarships, run youth camps, developed training alliances, and supported (in part) a drug diversion program in Marten Falls First Nation. Noront has also worked on other initiatives to engage the first Nation communities and to demonstrate its commitment to involving the local First Nation communities in the pending developments on (or near) their traditional lands. Noront developed the Mikawaa.com (Oji-Cree word for Discover) website to act as a portal for information exchange with local communities and the broader internet community. In over two and half years, Mikawaa was visited by 14,363 unique visitors. On average, visitors remained on the site for just under six minutes and view approximately five pages per visit. Of all visitors to the website in the past two and a half years, approximately 54% were new visitors.

In late 2011 and early 2012, Open House meetings were held in several communities (including the First Nations of Webequie, Neskantaga, Eabametoong and Mishkeegogamang) to explain the Project and the environmental assessment process, and to receive feedback from the communities. In the winter and spring of 2013, presentations were made in First Nation communities of Attawapiskat, Kashechewan (spring only) and Fort Albany. These meetings were also attended by representatives from the Federal and Provincial Governments and Cliffs Natural Resources. The format included presentation by the visitors followed by a question and answer period.

In the fall of 2013, Noront initiated a series of Open Houses in local communities to discuss presenting the results of the environmental investigations and to explain the next steps in the environmental assessment process. These included discussions regarding future engagement regarding the review of future environmental assessment documents, and to seek further opportunities for local communities to discuss the Project and present community concerns and issues. Noront also circulated some of the Technical Support Documents (TSDs) during these meetings to share the results of the baseline environmental studies with the potentially impacted communities, non-government organizations, and government agencies. These open houses will continue into 2014.

Noront has listened carefully to the comments and concerns of the local First Nation communities in order to understand their concerns and develop an appropriate response. This exchange of information has influenced the scope and design of the Project. It has also guided and fueled the efforts made to date on education and training of youth (and other band members) that may want to operate or be employed by businesses associated with the Project.

5.2 PUBLIC STAKEHOLDER CONSULTATION

Noront has participated in meetings of Chambers of Commerce, conferences on mining in Northern Ontario, and other community meetings and gatherings. Noront has organized, advertised and held

Open Houses in Thunder Bay (2012, 2013), Ignace (2012), and Pickle Lake (2012, 2013), where presentations have been made about the Eagle's Nest Project and feedback was received. Noront has presented information about the Project at several conferences. Meetings have been held with businesses, mayors and councillors of Thunder Bay, Timmins, Greenstone, Pickle Lake, Sudbury, and Ignace to discuss possible effects of the Project on their businesses and communities.

Concerns were raised regarding due process regarding the environment, Noront described the Environmental Assessment process and the multiple opportunities the public has and will have to comment to Noront and Federal and Provincial Government agencies.

5.3 NON-GOVERNMENT ORGANIZATIONS CONSULTATION

Noront has met with several NGOs since the start of the Project. Meetings took place as part of an Open House on the Project held in Thunder Bay and at the Greenstone Economic Development Corporation event in Geraldton in 2011. Noront has held technical discussions with the Wildlands League, together with the Wildlife Conservation Society - Canada, regarding Woodland Caribou and Wolverine. Issues have been raised by NGOs about thoroughness of the EA process, given that the Project is positioned within an almost completely undeveloped area, is located in one of largest wetland in the world, and is referred to as "pristine boreal forest". Cumulative effects associated with the development of mines and the associated infrastructure was of particular concern as was the potential effect of Project development on caribou.

5.4 GOVERNMENT CONSULTATION

Noront has had regular communications with key government contacts since 2010. Noront participates in regular (bi-weekly and occasionally weekly) teleconferences with representatives from the Ministry of Northern Development and Mines (MNDM), MOE, the CEA Agency, and more recently the Ontario Ministry of Natural Resources (MNR). The purpose of these calls was to update government representatives on developments related to the Project and to maintain continuous and open dialogue between Project executives, the EA/EIS team and the government.

Noront has also participated in a number of topic-specific meetings with the government. Meetings were held in 2011 to kick-off the EA/EIS study. In 2012, meetings took place to discuss ongoing and planned baseline studies and to discuss the selection of Valued Ecosystem Components (VECs). In 2013, meetings were held to discuss cumulative effects, geochemistry of the Project, and Project consultation.

Much of the consultation with Government has been on EIS and EA requirements and what Noront has to achieve to comply with these requirements. Aboriginal consultation, First Nation treaty rights and species of risk (particularly caribou and wolverine) have been the focus of multiple discussions.

6 – BENEFITS OF THE PROJECT

6.1 OVERVIEW

As a result of the environmental assessment process, Noront's selection of the Project design and activities are not based solely on engineering or economic determinants, but rather on a balanced approach that will guide the sustainable development, operation and closure of the Project. The benefits to Canadians of the environmental assessment process are described below.

6.2 MAXIMIZING ENVIRONMENTAL BENEFITS AND SUPPORTING SUSTAINABLE DEVELOPMENT

The EA process allows the effects of a project to be identified and mitigation measures implemented to reduce or avoid potential adverse effects. The EA of the Project has been carried out early in the Project planning, which allows some of the potential effects to be eliminated during the design process. In addition, the EA allows the positive effects of the Project to be identified. Through the EA process, Noront has identified a number of ways to align its Project with the needs and planning initiatives of the region.

The EA process is also a public process. The process seeks to engage potentially affected people, including the local Aboriginal and non-Aboriginal communities. The engagement process seeks both to inform interested and relevant stakeholders about the Project, and to seek feedback on the Project. The best projects consider and address stakeholder interests, aspirations and concerns. During the EA process and through preparation of this EIS/EA Report, Noront has identified a number of ways that the Project may contribute directly and indirectly to sustainable development in the region. These include:

- Establishing needed infrastructure in this remote part of the province, which will reduce the cost of establishing year-round road access to four remote First Nation communities; which in turn has the potential to substantially lower the cost of living within these communities and to help address poverty issues
- Selecting a all-season road alignment within an existing winter road corridor which research has shown to be either lower quality Caribou habitat, or habitat that Caribou already tend to avoid
- Optimizing the road alignment to avoid sensitive features identified by First Nation communities and to minimize major watercourse crossings to the extent possible
- Maximizing recycling of mine and process water to eliminate mine effluent discharges during the operation phase
- Investigating opportunities to bring grid power to the mine and First Nation communities (ongoing)
- Contributing to the economy of northwestern Ontario and, most significantly, to the economies of the remote First Nation communities, by establishing these remote communities as direct points of hire
- Providing training and employment opportunities to an under-employed part of the province

6.3 ABORIGINAL CONSULTATION AND PUBLIC PARTICIPATION

Aboriginal consultation and public participation leading up to the preparation of this EIS/EA Report and as described in Section 5, has influenced the Project design in a number of ways:

Selection of an East-West Aligned Transportation Corridor that is Congruent with Other First Nation Initiatives in the Region - The proposed transportation corridor is similar to a route proposed by the Neskantaga, Nibinamik, Eabametoong and Webequie communities as a way to connect their communities to the provincial highway system (Wawatay News, 2013a). The east-west transportation corridor follows an existing winter road and is well positioned to allow nearby First Nations or the Ontario government to construct connecting all-season roads between the communities and the Project road. Wataynikaneyap Power is proposing the development of a 230 kV alternating current transmission line from Dinorwic to Pickle Lake. The alignment is expected to be congruent with the Ontario Power Authority's Remote Community Connection Plan, which is supported by the Nishnawbe Aski Nation's 2009 resolution to formulate a strategy to establish hydro grid connections to remote First Nations.

Maximizing Placement of Infrastructure Underground and Minimizing the Surface Footprint - First Nation communities indicated to Noront a desire to minimize the surface footprint of the Project. This feedback, combined with the poor ground conditions at surface, has resulted in Noront favouring a development plan that maximizes the amount of underground infrastructure. Among other things, the mill will be underground and all tailings will be disposed of underground. These provisions reduce the footprint of the project and avoid the construction of a surface tailings pond.

Maximizing Aboriginal Training and Employment - Noront also heard a strong desire from First Nations to participate in the Project and to take advantage of training and employment opportunities. A key element of the Project, as described in Noront's Human Resources Management Plan, is meaningful participation with the Ring of Fire Aboriginal Training Alliance (ROFATA). ROFATA is a joint initiative of the Kiikenomaga Kilenjigewen Employment Training Services (KKETS), Noront and the Confederation College of Applied Arts and Technology. The parties are committed to working cooperatively to plan, promote, secure funding, deliver and expand opportunities for the development of a highly skilled Aboriginal workforce for activity associated with the Ring of Fire. The partners acknowledge and understand that the overall development within the Ring of Fire is a multi-year initiative that will apply learner-centred, innovative delivery approaches to preparatory programs, academic upgrading, foundations training and semi-skilled, skilled and professional education and training programs.

In August, 2013, the Ring of Fire Aboriginal Training Alliance (ROFATA) was awarded \$5.9 million in funding from the Government of Canada's Skills and Partnership Fund to provide employment in the mining sector for the people of Matawa First Nations until March 31, 2015.

ROFATA is an initiative assisting and supporting members of nine Matawa First Nation communities in pursuing specialized training and making informed career decisions in their transition from training to employment. The objectives are to (1) provide skills development and training to aboriginal participants for long-term meaningful employment and (2) promote skills development, labour market participation and inclusiveness through the effective and efficient development of training initiatives and supports that are aligned to identify labour market needs for the Ring of Fire.

Initial training will be conducted in the areas of:

- Mining Essentials
- A pre-employment training program
- Environmental Monitoring
- Line Cutting
- Security Guard
- Remote Camp Support
- Remote Camp Cook
- Underground Common Core
- Heavy Equipment Operator
- Pre-Trades (Carpentry/Electrical/Plumber/Welder/Heavy Duty Equipment Mechanic/Construction Craft Worker)

In addition, extraction of underground aggregate during construction will be used as an on-the-job training opportunity for local workers on the procedures of stope mining.

ROFATA trainees will be guided to long-term sustainable career pathways in the mineral and mining sectors or other resource related areas associated with the Ring of Fire.

Ongoing Aboriginal Consultation and Public Participation - Noront looks forward to ongoing and increased Aboriginal consultation and participation in the Project, both within and outside of the formal EA review process.

6.4 TECHNOLOGICAL INNOVATION

There are two key technological innovations proposed for the Project:

- Placement of mineral processing infrastructure and tailings and waste rock disposal underground
- Use of a specialized road design for road construction on muskeg, as applied elsewhere in the world

These are unique approaches to mine development. Construction using these innovations will provide valuable learning experiences that may set precedents and help guide future mine developments in the James Bay Lowlands or similar environments.

6.5 INCREASES IN SCIENTIFIC KNOWLEDGE

As part of the environmental assessment process for the Project, Noront collected information on the physical environment (meteorology, hydrology, soils and terrain) and biological information on the presence and distribution of fish species, vegetation and wildlife. Prior to the baseline studies carried out by Noront and other ROF proponents, limited environmental information was available for this part of the province. Noront participated in caribou studies and analyses as part of the Woodland Caribou Working Group along with the Ontario Ministry of Natural Resources and Golder Associates (on behalf of Cliffs Natural Resources). This information will help government staff better understand the species distribution and other environmental parameters that are needed to better guide future decisions.

6.6 COMMUNITY AND SOCIAL BENEFITS

The Project is expected to bring a number of benefits to the potentially affected First Nation communities, northwestern Ontario, and Canadians. Benefits include:

- Creating economic activity within local Aboriginal communities, northwestern Ontario and the province of Ontario
- Providing direct employment to approximately 780 individuals during construction and 390 individuals during operations
- Providing employment and business opportunities for Aboriginal people
- Generating tax revenues for provincial and federal governments
- Providing positive returns to Noront shareholders and lenders
- Creating a better quality of life for the residents of the local communities through Noront's involvement in improving educational, cultural and recreational facilities in the community
- Participating in agreements with local First Nations
- Indirectly supporting regional development initiatives

Modifications made to project design in order to address potential environmental effects will result in distinct indirect benefits to communities, including: employment opportunities; government revenue generation; enhanced access to wilderness areas for recreation; and increased community knowledge, awareness and engagement.

The Project is anticipated to increase federal, provincial and local governments' taxes and revenues through a combination of direct, indirect and induced effects.

While the Project itself is relatively modest in scale, development of the Project will mark an important new chapter in the story of northwestern Ontario. Establishment of an active mining operation in the ROF along with the associated year-round access will also provide community benefits through increased access and will reduce the costs of further mineral exploration and development. Both the costs and risks of mineral exploration and development in the region will be reduced.

7 – EXISTING ENVIRONMENT

7.1 OVERVIEW

Baseline studies were conducted to characterize the existing environmental components that were most likely to interact with and be affected by the Project. The existing environment was characterized in terms of the following components:

- Climate, air quality and noise
- Geology and geochemistry
- Water quality and quantity
- Terrain and soils
- Vegetation
- Wildlife
- Socio-economic

Environmental baseline data were obtained from reviews of existing literature, regional monitoring stations, and site specific programs. Where possible, additional baseline data were gathered through traditional knowledge studies. The existing environment can be summarized as follows:

7.2 PHYSICAL ENVIRONMENT

The following summarizes the physical environment:

Climate

The temperature throughout the region is generally homogenous and there is a north to south trend of increasing mean monthly and mean annual temperature. The mean annual temperature is -1.3°C. The mean annual precipitation at the mine site is 870 mm, is relatively homogenous throughout the region and falls predominantly as snow from late October to mid-April. Mean annual potential evapotranspiration was estimated to be approximately 470 mm and actual evapotranspiration was estimated to be 430 mm. Trends in increasing mean January and mean annual temperature are evident in long-term regional data. In addition, annual snowfall, rainfall and total precipitation have increased over the period of available data. Canadian Regional Climate Model data predict an increase in temperature and precipitation from 2000 to 2100, but no significant trend was evident over the proposed life of the Project (2015-2029).

Air Quality

The Project is located in a remote region of Ontario away from sources of anthropogenic air emissions. Air quality data were obtained from the several monitoring stations in northern Ontario and other remote locations in Canada to estimate concentrations of background air quality parameters for the Project. All of the background air quality values were identified as well below the applicable Ontario ambient air quality criteria (AAQC).

Noise

Background noise levels are consistent with rural areas dominated by natural sounds (Ministry of the Environment Class 3 Area). In the absence of the sounds of wind and local animals, such areas would typically have a background noise level of 20 to 30 dBA. Noise surveys conducted at the mine site and in the region by others confirm ambient noise levels of 25 to 37 dBA.

Geology

The mine site is underlain by rocks of the northwestern part of the Archean Superior Province, which is composed of a series of major Mesoarchean volcanic and plutonic belts trending from east-west that each formed as separate microcontinents and are separated by younger Neoproterozoic metasedimentary belts and crustal-scale faults. The Eagle's Nest deposit is a sub-vertically dipping body of massive magmatic sulphide composed of massive and net-textured sulphides (pyrrhotite, pentlandite, chalcopyrite, and the oxide magnetite) with little to no disseminated sulphides. The deposit is in a pipe-like form approximately 200 m long, up to several tens of meters thick and at least 1,650 m deep. The host rock of the Eagle's Nest ultramafic dyke is granodiorite that is thought to post-date the overlying formation, but predates the intrusion of the peridotite. The transportation corridor primarily overlays Canadian Shield tonalitic to massive granodioritic, bedrock and to a lesser extent, mafic metavolcanic bedrock. The Project area is situated within a stable Precambrian craton (continent), and no major active tectonic zones are known within hundreds of kilometres of the area.

Geochemistry

Testing of the various rock types associated with the underground mine was undertaken and shows that limited quantities of potentially acid generating (PAG) materials are present within the mine area. The ore and host rock are considered PAG based on sulphide content, neutralizing potential (NP)/acid potential (AP) and net acid generating (NAG) pH values. Tailings to be produced from processing the ore are also considered PAG. The aggregate to be produced from the mine development and from underground aggregate quarries (granodiorite) is not potentially acid generating (Non-PAG). The ore and host rock, and associated tailings, will be metal leaching if exposed to the atmosphere. Metals prone to leaching include aluminum, chlorine, cobalt, copper, iron, nickel, sulphate, vanadium and zinc. The aggregate to be produced from the mine development and from underground aggregate quarries (granodiorite) is not likely to be metal leaching.

Surface Water Quality

Baseline water quality was sampled seasonally at the mine site at several locations. In general, most sampled parameters were below the Provincial Water Quality Objectives (PWQO) and there was typically low variability between stations and among seasons. Noted exceptions include pH, which was more acidic in slower flowing or stagnant water than on larger rivers. The lowest DO concentrations were measured during the winter under ice cover and during summer when there is reduced precipitation, increased evapotranspiration, and lower surface water flows. Conductivity, TDS, alkalinity and hardness showed seasonal variation and concentrations were generally highest during the winter sampling events. Nutrient levels were typically below the method detection limits (MDLs) of the laboratory, with the exception of total phosphorus that typically peaked during the summer months. The majority of total and dissolved metals results were reported near to or below their respective MDLs. Elevated concentration of aluminum and iron were noted, which is typical of the Canadian Shield. Water quality was also sampled along the transportation corridor as part of the baseline aquatic data collection program and seasonally in two small water bodies near the trans-load facility. The majority of total and dissolved metals results at the trans-load were reported near to or below the MDLs with elevated concentrations of iron noted. Other parameters of interest measured during the surface water quality program included hexavalent chromium, low level mercury and methyl mercury, and radium-226. These parameters were not present in high enough

concentrations to be detected in the samples as their concentrations were below the lowest analytical concentration measured by the laboratory.

Surface Water Quantity

Stream flow data were obtained from regional stations operated by the Water Survey of Canada (WSC) and from Project stations installed along the transportation corridor and near the mine site. Peak instantaneous flows in the region commonly occur as a result of the spring freshet. On smaller streams, peak instantaneous flows may occur either as a result of snowmelt during the freshet or from intense or prolonged rainfall in summer or early autumn. The lowest flows observed at the Project stations occurred during summer months and are lower than the measured winter low flows at most stations. The lowest annual flows at the WSC stations occur during the winter months. Trends and year-to-year variability of streamflow at two of the WSC stations were examined. No significant trends were evident in the minimum or mean annual discharges in the Pineimuta or Attawapiskat River WSC flow data. Both stations had a significant negative trend in maximum discharge, which suggests that the severity of annual peak flows is decreasing. Throughout the Project region there are several types of wetland that will be crossed during the construction of the all-season road. The hydrologic conditions of these wetlands were assessed to inform the assessment of the potential effects of the Project. In general, fens and swamps are considered more sensitive to changes in water level and flow than bogs and peatland.

Groundwater Quality

Groundwater at the mine site area was observed to be neutral to slightly basic and none of the reported nutrient or ion concentrations exceeded the Ontario Drinking Water Standards (ODWS) limits. The groundwater chemistry in the overburden and groundwater wells is similar and dominated by Calcium/Bicarbonate ions. Most of the dissolved metal concentrations were reported at or below the MDLs. Iron (Fe) and Manganese (Mn) concentrations were the only dissolved metals that were reported above the ODWS. The groundwater samples from the trans-load facility had hardness values above the ODWS guideline and an average pH of 8.0. Major ion concentrations were relatively consistent among the samples and suggest that the groundwater is dominated by calcium bicarbonate ions. There were no dissolved metal concentrations reported above the ODWS limits. Groundwater at the trans-load facility was analyzed for volatile organic compounds and total petroleum hydrocarbon. One sample had a Toluene concentration of 1.74 µg/L, which is below the Health Canada aesthetic objective of 24 µg/L.

Groundwater Quantity

Groundwater at the mine site is present in the saturated organic material and in unstratified and stratified glacial till (composed of sand, silt and clay). There is also groundwater present in the near surface and deep bedrock. Hydraulic conductivities (K) are on the order of 10^{-4} m/s in the coarser overburden soils, 10^{-6} m/s for the organic soils, and as low as 10^{-7} m/s in the finer soils and bedrock. The hydraulic conductivity of bedrock generally decreases with depth. The groundwater level at the mine site ranges from 0 to 4.9 mbgs, with seasonal fluctuations between 0.5 and 1.5 m. The data show that groundwater generally flows west towards the Muketei River with a gradient of approximately 0.01 or lower. Groundwater velocity ranges from a high of approximately 2 m/d in the coarser overburden to a low of approximately 0.04 m/d in the bedrock. The groundwater levels at

the trans-load facility ranges between 3.5 and 7.7 mbgs and Hydraulic conductivities are on the order of 10^{-4} m/s in the coarser overburden soils and up to 10^{-7} m/s in the finer soils.

Terrain and Soils

Glacial processes are responsible for shaping the landscape of the region and the surficial materials around the mine site are composed primarily of stratified and unstratified tills and organic deposits. An embankment type esker runs roughly north-south through the mine site study area and there is evidence to suggest that several of the other upland areas may be part of a complex esker system. The surficial geology along the proposed all-season road alignment consists of glacial till, glaciofluvial ice-contact deposit, glaciolacustrine deposits, exposed bedrock and organic deposits. The surficial geology at the trans-load facility is predominantly poorly graded fine sand and silt with trace clay and trace gravel. The mine site is located within the southern limit of the zone identified as having sporadic discontinuous permafrost. Only a small portion of the transportation corridor is located in areas possibly having permafrost (i.e., isolated patches or sporadic discontinuous) according to local First Nation information. The majority of the transportation corridor is located in the zone with no permafrost. The regional soil order at the mine site is Organic and the soil orders along the transportation corridor are Organic and Brunisolic. The soil order at the trans-load facility is Podzolic. The organic soils at the mine site are characteristic of Fribrisols, which are composed largely of relatively undecomposed fibric organic material and are dominated by sphagnum mosses. The soils in better drained upland areas are characteristic of Brunisolic soils and soils in poorly drained upland areas are characteristic of Regosolic soils. The majority of soil metal concentrations were below criteria with the exception of Chromium (Cr), which exceeded CCME limits in two samples, and Selenium (Se), which exceeded CCME limits in one sample.

7.3 BIOLOGICAL ENVIRONMENT

The following summarizes the biological environment:

Vegetation

The Project is located within the Ontario Shield Ecozone (Figure ES.8). Woody wetlands and non-woody wetlands are the dominant landcover in the mine site area with conifer and deciduous forest associated with upland areas and riparian zones. Wetlands become less abundant along the transportation corridor and upland forests composed mainly of conifer trees begin to dominate the landscape approximately 60 km west of the mine site. Field surveys identified 177 plant species, 25 upland vegetation types and 17 wetland types in the regional study area. No rare plant species or communities were documented. Riparian ecosystems are common along the proposed transportation corridor.

Birds

In total, 130 bird species were observed, including six species listed as special concern under the *Ontario Endangered Species Act*: Bald Eagle, Canada Warbler, Common Nighthawk, Olive-sided Flycatcher, Peregrine Falcon, and Rusty Blackbird. The six most frequently occurring breeding bird species for the entire regional study area, in decreasing order, were Swainson's Thrush, White-throated Sparrow, Yellow-rumped Warbler, Ruby-crowned Kinglet, Hermit Thrush and White-winged Crossbill. The greatest number of bird species was associated with non-woody wetlands (56 species). It is estimated that 19 bird species migrate through the regional study area

including nine waterfowl, one seabird, one raptor, one shorebird, and seven other species. A total of 14 bird species were observed during the winter field studies suggesting these are year-round residents. A total of 14 raptor species were observed within the regional study area, but none were observed in the mine site area. Three of the bird species of conservation concern were found in the mine site area including Common Nighthawk, Olive-sided Flycatcher and Rusty Blackbird. Bird species richness (64 species) at the mine site was the highest of all locations.

Mammals

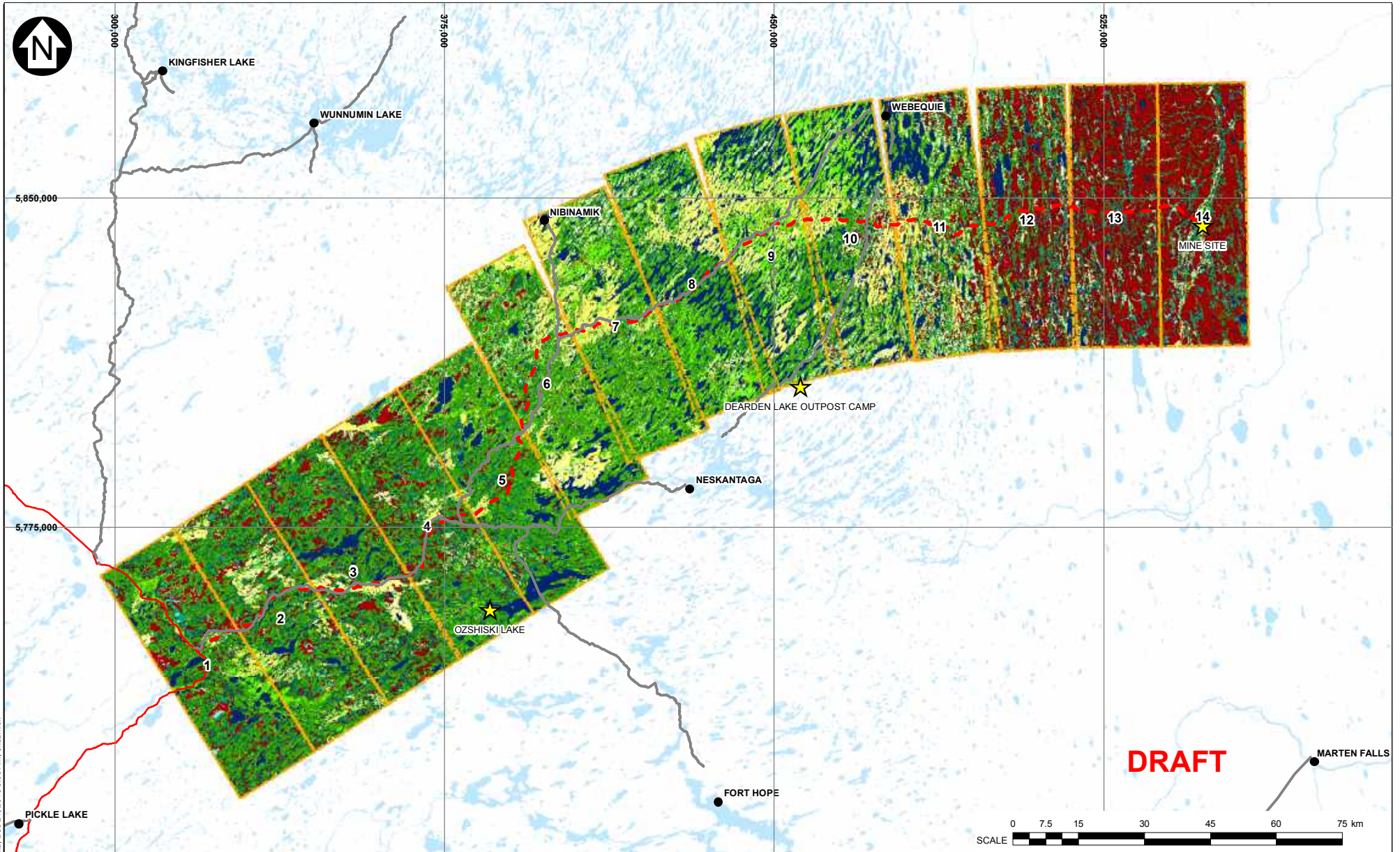
In total, 26 mammal species were detected in the regional study area, the six most abundant, from most to least abundant, included American Marten, Snowshoe Hare, Fisher, Moose, Northern Gray Wolf and Red Fox. These were also the most abundant mammals in the mine site area. The greatest number of mammal species was associated with the conifer forest (16 species). Two of the mammals found in the regional study area are “threatened” species and are protected under the *Ontario Endangered Species Act*: Wolverine and Caribou.

- **Wolverine** - Wolverines are not abundant in Ontario and were never abundant within any part their range due to their large home territory and relatively low reproductive potential. They are opportunistic, generalist carnivores that scavenge (carrion feeders) mainly in winter and prey on small game in summer.
- **Caribou** - An estimated 5,000 to 7,000 forest-dwelling Woodland Caribou remain in Ontario. Within the regional study area, the area of highest Caribou occupancy forms a broad band averaging 110 km wide, straddling the ecotone between the boreal shield and the Hudson Bay lowlands. The Ring of Fire, including the mine site, is situated within this high-occupancy band.

Aquatic

The fish-bearing waters near the mine site include the Muketei River, which supports a large bodied fish such as Northern Pike, Walleye, White Sucker and Shorthead Redhorse, as well as Lake Sturgeon. Ponds and streams around the mine site contain small-bodied fish species (i.e., cyprinids) and are disconnected from large water bodies that contain fish that are part of or support a commercial, recreational or Aboriginal fishery (i.e., the Muketei River). The most commonly found species were Finescale Dace and Brook Stickleback. The baseline aquatic assessments conducted on 39 streams along the proposed all-season road contained similar fish species. The fish species most commonly found in the surveyed streams less than 3 m wide were small-bodied forage fish species (i.e., cyprinids) or juvenile fish utilizing the stream as rearing habitat. Large-bodied fish such as Northern Pike, Walleye, White Sucker and Shorthead Redhorse were found in the larger surveyed streams (i.e., greater than 3 m wide). No fish were captured in five of the 39 streams. These capture results may be attributed to multiple variables including water quality, seasonal movements of resident fish, collection gear and/or connectivity to other fish-bearing waters. The five fish species most commonly found in the surveyed streams are as follows:

- White Sucker (46 % of streams)
- Brook Stickleback (41 % of streams)
- Pearl Dace (41 % of streams)
- Northern Pike (31 % of streams)
- Finescale Dace (31 % of streams)



DRAFT

- LEGEND:**
- ★ MINE SITE AND CAMP LOCATION
 - COMMUNITY
 - EXISTING ALL-SEASON ROAD
 - EXISTING WINTER ROAD
 - PROPOSED ALL-SEASON TRANSPORTATION CORRIDOR
 - RIVER/STREAM/DRAINAGE
 - WATER
 - FAR NORTH LAND COVER COMPOSITION RECTANGLE

- FAR NORTH LAND COVER CLASSES**
- 9 - CLOUD/SHADOW/UNKNOWN
 - 1 - CLEAR OPEN WATER
 - 2 - TURBID WATER
 - 6 - FRESH WATER MARSH
 - 8 - THICKET SWAMP
 - 9 - CONIFEROUS SWAMP
 - 10 - TREED PEATLAND
 - 11 - OPEN FEN
 - 12 - SPARSE TREED FEN
 - 13 - OPEN BOG
 - 14 - TREED BOG
 - 15 - SPARSE TREED
 - 16 - DECIDUOUS TREED
 - 17 - MIXED TREED
 - 18 - CONIFEROUS TREED
 - 19 - DISTURBANCE - NON AND SPARSE WOODY
 - 20 - DISTURBANCE - TREED AND/OR SHRUB
 - 21 - SAND/GRAVEL/MINE TAILINGS
 - 22 - BEDROCK
 - 23 - COMMUNITY/INFRASTRUCTURE

- NOTES:**
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 2. COORDINATE GRID IS IN METRES.
 3. COORDINATE SYSTEM: NAD 1983 UTM ZONE 16N.
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 5. EXISTING WINTER ROAD NETWORK CREATED FROM DATA PROVIDED BY SNC-LAVALIN GROUP INC. (MARCH 24, 2011) AND DATA FROM THE OMNR LIO DATABASE (2009).
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EAGLE'S NEST PROJECT							
LANDSCAPE COMPOSITION							
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P/A NO. NB102-390/1	REF NO. 32						
FIGURE ES.8							
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Other fish species that are not in the above list, but are typically considered part of a recreational, commercial or Aboriginal fishery, include Brook Trout and Lake Whitefish. There were no Brook Trout captured during the baseline studies and Lake Whitefish were only captured in the Muketei River near the mine site. The Pineimuta River located along the road alignment is the only watercourse other than the Muketei River likely to have Lake Sturgeon. This assumption is based on the size of the surveyed streams and their connectivity to known Lake Sturgeon populations (e.g., Otoskwin-Attawapiskat River).

7.4 SOCIO-ECONOMIC ENVIRONMENT

Overview

The Project is located in Northwestern Ontario in the Ring of Fire region, approximately 530 km northeast of Thunder Bay and 300 km north of Nakina. The mine site is located in a region that has seen limited industrial development. The Project (inclusive of the mine site, transportation corridor and trans-load facility) traverses the traditional territories of several First Nations including:

- Webequie First Nation
- Marten Falls First Nation
- Nibinamik First Nation
- Neskantaga First Nation
- Eabametoong First Nation
- Mishkeegogamang First Nation
- The Ojibway Nation of Saugeen

The closest communities to the mine site are:

- Webequie First Nation - approximately 75 km to the northwest
- Marten Falls First Nation - approximately 125 km to the south
- Neskantaga First Nation- approximately 125 km to the south-southwest

The nearest public infrastructure to the mine site is a winter road located approximately 100 km to the west of the mine site. This winter road services the remote First Nation communities of Webequie, Neskantaga, Nibinamik and Eabaemtoong. These communities are considered “remote” as they are not connected to the provincial highway system and instead rely on air service and winter roads for the movement of people and goods into the communities. These communities rely on diesel generators for power supply as there are currently no transmission lines joining to the provincial power grid.

The Ojibway Nation of Saugeen and Mishkeegogamang First Nation, as well as the non-reserve communities of Pickle Lake and Savant Lake, are road-accessible and are located along the Project’s proposed transportation corridor or near the proposed trans-load facility. Pickle Lake, Ignace and the Municipality of Greenstone are local non-Aboriginal municipalities near to the Project. Thunder Bay is the closest major regional centre.

The Attawapiskat First Nation has been considered a potentially affected community because of its location more than 250 km downstream of the mine site; the Muketei River located adjacent to the mine site drains to the Attawapiskat River.

Population Demographics

The total population of the regional study area is 207,888. The total registered Aboriginal population within the local study area is 15,541. First Nation communities in the local study area ranged in size from 100 to 1085 people; approximately half of the registered band members live on-reserve and half live off-reserve. The regional study area as a whole has experienced a decline in the population in the last decade, with several communities, however, experiencing population increases. The Aboriginal communities in the local study area host a young population; the median age in 2011 ranged from 18 to 31.

The vast majority of residents in the region identify knowing English as the only official language. The percentage of people speaking an Aboriginal language most often at home ranged widely from 1% to 93% for the First Nation communities.

Education, Training, Employment and Economy

The region has a lower level of educational attainment than Ontario and the remote First Nation communities have again a lower level of educational attainment. Most remote First Nation communities do not have secondary schooling available in the communities and therefore must access remote learning or travel to a larger centre to complete high school. Skills inventories and literacy and basic skills testing indicate that there is a deficiency in essential work place skills in the region, but a keen interest in upgrading and skills development and openness to alternative delivery methods including on-line learning.

The region has both lower employment participation rates and higher rates of unemployment in comparison to the rest of Ontario. This is more so in the remote First Nation communities with little private sector economy.

The key economic sectors within the region are: forestry and logging, mining, manufacturing, recreation and tourism, retail, utilities and construction, and health care. At a local scale, the economy is more dependent on government, transportation, renewable resources, tourism and arts and culture industries.

Human Health and Well-being

Individuals residing in Northwestern Ontario are shown to have a lower life expectancy at birth compared to the overall Ontario population. Food costs in the local study area communities are generally higher than that of the region and the rest of Ontario - this is particularly true for remote First Nation communities in the LSA. Compared to the provincial average, the region reports a higher prevalence of chronic health conditions and higher self-reported rates of smoking and drinking alcohol. Suicide and self-inflicted injuries were identified as the leading causes of death for First Nations youth and young adults.

Community Infrastructure and Public Services

Each of the nine First Nation Communities within the area has a band administration office responsible for the day to day management of the community including the provision of various federal and provincial service programs to on-reserve and off-reserve community members. Recreational facilities/infrastructure located within the communities includes baseball diamonds, arenas and gymnasiums. Most of the First Nation communities offer health services through health centres and clinics and access regional health centres through medical transportation programs. All

First Nation communities have schools providing elementary school education but only a minority offer secondary school education within the communities. There is a high proportion of social housing in the local study area and a majority require major repairs.

Regional initiatives currently underway in the study area include the Northern Ontario Fibre Project, which involves the connection of 26 First Nations to Industrial/Institutional Capable Broadband.

Government Policies, Planning and Initiatives

Currently, there are no approved community based land use plans established within the area of proposed Project development. First Nations are in various stages of the planning process established under Ontario's Far North Act. There are several Provincial Parks located in proximity to the proposed development area, although the Project does not cross any of the Provincial Parks.

Land Use

Traditional and non-traditional land uses in the region include hunting, trapping and fishing. Recreational activities consist of tourist lodges, fly-in camps and self-directed recreational activities.

The cornerstone of the local economy within the region has traditionally been the natural resources industry including mining and forestry. Within the local economies of the First Nation communities, health care, education and government are the key economic sectors. The First Nation communities have a high dependency on government transfers and programs for economic stability and community well-being.

8 – POTENTIAL EFFECTS OF THE PROJECT

8.1 ASSESSMENT METHODOLOGY

The assessment of the effects of Project components and activities on the environment is based on a comparison of the biophysical and socio-economic environments between the predicted future conditions with the Project and the predicted future conditions without the Project. Where public and Aboriginal perspectives on Project effects have been obtained, these perspectives are noted.

The effects assessment identifies potential effects of the Project, proposes mitigation measures, assesses the significance of residual effects, and carries forward any predicted residual effects of the Project into a cumulative effects assessment. The following outlines the steps taken in the effects assessment:

- Step 1: Select valued ecosystem components and provide rationale
- Step 2: Describe background conditions and setting
- Step 3: Define the spatial boundaries of the Project effects assessment
- Step 4: Define the temporal boundaries of the Project effects assessment
- Step 5: Identify any interaction(s) between a Project component or activity
- Step 6: Identify potential Project effects
- Step 7: Propose mitigation measures to reduce potential Project effects

If there is a residual effect:

- Step 8: Describe and assess significance of the residual effect
- Step 9: Describe and assess significance of cumulative effects

8.2 SELECTION OF VECS

Noront gave careful consideration to the selection of VECs for its assessment, listed in Table ES.1. VECs were generally identified on the basis that they were components important to the local communities, of conservation concern, or regulatory interest/concern.

Because the Project is located in a remote and relatively unstudied part of Ontario, it was necessary to undertake a number of baseline studies to support the environmental assessment. Baseline conditions are described in detail in a number of Technical Support Documents (TSDs) that accompany the EIS/EA Report.

Table ES.1 Selected Valued Ecosystem Components

Component	Valued Ecosystem Component
Atmospheric Environment	<ul style="list-style-type: none"> • Air quality • Ambient light • Climate
Acoustic Environment	<ul style="list-style-type: none"> • Sound levels
Water Quality	<ul style="list-style-type: none"> • Surface water quality • Groundwater quality
Water Quantity	<ul style="list-style-type: none"> • Surface hydrology • Physical hydrogeology

Component	Valued Ecosystem Component
Fish and Fish Habitat	<ul style="list-style-type: none"> • Fish habitat • Indicator species
Vegetation	<ul style="list-style-type: none"> • Upland ecosystems • Wetland ecosystems • Rare plant species
Wildlife and Wildlife Habitat	<ul style="list-style-type: none"> • Bird species of conservation concern • Waterfowl • Furbearers • Carnivores • Moose • Wolverine (species of conservation concern) • Woodland caribou (species of conservation concern)
Social Environment	<ul style="list-style-type: none"> • Community Dynamics • Human Health and Well-being
Economic Environment	<ul style="list-style-type: none"> • Training, Employment and Income • Local and Regional Economy
Built Environment	<ul style="list-style-type: none"> • Community Infrastructure and Public Services
Cultural Environment	<ul style="list-style-type: none"> • Cultural Resources • Aboriginal Resource and Land Use • Current Use of Crown Lands and Resources for Recreational Purposes • Navigable Waters

Local and regional study areas were identified by environmental component. Local study areas were defined as the zone where there is a reasonable potential for immediate interaction between Project components and the VEC. Regional study areas were defined by the extent that both direct and indirect effects may occur. The assessment identified temporal boundaries for the assessment based on a 16 year Project life followed by a post-closure monitoring phase that will end when the mine closure objectives have been achieved. The post-closure period will be at least 5 years.

8.3 BIOPHYSICAL EFFECTS

The Project is not expected to cause significant adverse effects to the biophysical environment. A summary of the effects assessment outcomes on individual valued ecosystem components follows.

Air Quality

The Project will increase baseline concentrations of suspended particulate matter and dustfall around the mine, the all-season road and the trans-load facility. The increases in particulate matter concentrations in air are expected to be relatively minor (below regulatory thresholds) and the dispersion of concentrate dust is expected to be negligible, due to implementation of the following mitigation strategies:

- Much of the mine infrastructure will be underground
- The concentrate handling process will be indoors and equipped with dust collection systems
- The trailers of the concentrate haul truck will be capped with hard covers.

Gaseous emissions due to combustion (sulphur dioxide, nitrogen dioxide and carbon monoxide) will be released from the power plant and surface vehicles at levels below regulatory thresholds.

Ambient Light

The Project will add lights to the nighttime landscape that currently has little artificial light (other than recent exploration activities in the Ring of Fire). Due to the low relief of the landscape, this light will be visible for some distance. However, most activities will be in the underground mine and there are no towers or head frames proposed that would have elevated lights. Overall, the contribution of ambient light is expected to be low magnitude.

Climate

The Project will involve the burning of fuel and the release of greenhouse gases. This effect is expected to be low magnitude in the context of the industry, the province and the country.

Sound

The Project will emit noise at levels that are expected to be above the natural baseline variability but within the applicable provincial limits.

Surface Water

The Project has limited interaction with surface water compared to most mining projects. There will be limited changes to surface water flows as no major water takes, diversions or discharges are proposed. At the mine, treated sewage and mine water will be released to a single wetland/stream system with limited connectivity to the Muketei River. These discharges will meet applicable regulatory limits and are not expected to adversely affect water quality in the drainage or the subsequent Muketei River. Other minor interactions include dust deposition (expected to be minor) and potential sedimentation during in-water activities (such as during stream crossing installations).

Groundwater

The underground will be dewatered during the operating life of the mine. This water will provide a portion of the make-up water that is needed for processing. Groundwater dewatering may result in minor localized effects to the wetland around the mine site during dry years and in the worst case scenario could reduce flows in the Muketei River by up to 5%. At closure, the mine workings will flood over approximately 20 years. Active flooding of the underground mine has been identified as an adaptive management measure if monitoring of groundwater seepage during operations suggests that groundwater quality may be adversely affected at closure. The water level of the flooded mine will be below ground surface, the mine openings will be sealed, and a very shallow gradient exists towards the Muketei River. These factors in combination will result in very little interaction between the mine water and the surrounding environment.

Other minor interactions expected to cause negligible effects to groundwater, include water well withdrawals and the installation of septic systems at the mine and trans-load facility. Quarries developed along the road may extend below the groundwater table, but no groundwater releases from the quarries is expected.

Fish and Fish Habitat

The Project will result in losses of fish habitat, mainly due to culvert and bridge installations along the transportation corridor. Lake Sturgeon are distributed in larger river systems throughout the region including the Muketei River near the mine site (confirmed) and the Pineimuta River (suspected). Noront has developed a conceptual fish habitat compensation plan that is intended to mitigate fish

habitat losses. Best practices will be implemented to minimize habitat alteration and potential sub-lethal effects due to sedimentation and in-water construction of watercourse crossings.

Upland Ecosystems

Vegetation in upland ecosystems will be removed or altered during cleaning activities associated with the mine site and transportation corridor development areas. No direct or indirect losses of vegetation are expected during the construction of the trans-load facility as the infrastructure will be placed within an already disturbed site. The removal of vegetation can result in the fragmentation of forest communities due to the developed spaces acting as barriers to plant distribution. In addition, new openings created by site clearing for construction may attract light demanding species that will locally change the species composition.

The area of upland ecosystems lost at the mine site will be approximately 15 ha, which equals approximately 2.7 % of the upland habitats in the mine site LSA. The area of upland ecosystems lost during the clearing of the 30 m right-of-way for the all season road will be approximately 518 ha, which equals approximately 0.7 % of the upland habitats in the transportation corridor LSA. The area of upland ecosystems lost during the clearing of the quarry and borrow sites will be approximately 4,839 ha, which equals approximately 11 % of the upland habitats in the transportation corridor LSA. The quarry areas identified are based on preliminary surveys of aggregate sources and are considerably larger than the final footprint. Indirect changes to vegetation in upland ecosystems are possible, but this loss would be limited to a few cases and will not occur on a large scale. Ecosystem losses are minor when compared to the regional study area. Indirect changes to upland habitats that could occur as a result of the Project include changes to surface drainage, erosion, and snow accumulation patterns.

Wetland Ecosystems

The Project will interact with wetland ecosystems during the development of the mine site and transportation corridor. The primary effect will be the physical loss of wetland ecosystems due to site clearing. In addition, road construction has the potential to have an indirect effect on a variety of ecosystem attributes, including biodiversity on adjacent wetlands up to 1 or 2 km from the road, if drainage features along the road are not sufficient to maintain the existing hydrology. The area of wetland ecosystems lost at the mine site will be approximately 18 ha, which equals approximately 1.3 % of the wetland habitats in the mine site LSA. The area of wetland ecosystems lost during the clearing of the 30 m right-of-way for the all season road will be approximately 327 ha, which equals approximately 0.9 % of the upland habitats in the transportation corridor LSA. The area of upland ecosystems lost during the clearing of the quarry and borrow sites will be approximately 1,375 ha, which equals approximately 3.8 % of the upland habitats in the transportation corridor LSA. These losses become minor relative to the size of the regional study area.

Rare Plants

No rare plant species were identified during baseline studies, however, rare plants and habitat may be lost during construction. The potential loss of rare plants could occur within the PDAs. As such, the potential loss of rare plants would be limited in extent. The potential loss of rare plants will be minimized by keeping the Project footprint as small as possible. It is assumed that the loss of rare plant species will be minimal to negligible as no rare plants were identified during baseline studies.

Invasive Plant Species

Non-native invasive plant species, or weeds, can alter nutrient cycling, competition, and the energy budget of an ecosystem. This can lead to a decrease in native plant community structure and species diversity, and changes to native species survival rates and relative abundance. The construction and operation of the Project has the potential to introduce non-native plant species and disrupt native plant communities. Measures will be undertaken by Noront to minimize the risk of invasive species introduction. Monitoring of invasive species and reporting to the Ontario Ministry of Natural Resources will form part of Noront's proposed biodiversity management plan.

Birds of Conservation Concern

Eleven bird species at risk (SAR) were identified as having the potential to occur within the Project area as follows:

- Canada Warbler
- Peregrine Falcon
- Common Nighthawk
- Short-eared Owl
- Olive-sided Flycatcher
- Barn Swallow
- Black Tern
- Yellow Rail
- Bald Eagle
- Golden Eagle
- Rusty Blackbird

Three bird SAR were observed within the mine site area: Common Nighthawk, Olive-sided Flycatcher and Rusty Blackbird. Three additional bird SAR were observed within the broader regional study area: Bald Eagle, Canada Warbler and Peregrine Falcon. Direct habitat losses will occur during the construction phase due to site preparation activities for the mine site and transportation corridor. These activities will likely have the greatest potential interaction with the bird species of conservation concern.

The total loss of preferred habitat located within the LSA due to physical loss of vegetation is 7.2 %. The estimated amount of habitat degraded within the LSA is approximately 143 ha. Overall there is an estimated combined loss of 4.3 % of preferred habitat within the RSA. The most affected habitats within the RSA, are bedrock sites, disturbance-treed and/or shrub, coniferous treed, deciduous treed, mixed treed and disturbance-non and sparse woody. The estimated amount of degraded habitat within the RSA is 2,099 ha.

Indirect habitat loss and degradation to bird SAR will be greatest during the initial construction phase of the Project. Provided that construction activities are located outside of the nesting season, sensory disturbances are likely to have a negligible effect on bird SAR or on the remaining breeding birds in the LSA.

Bird mortality related to vehicle collisions will not occur frequently. As such, these losses are not anticipated to affect the local bird populations. Raptors and migratory waterfowl have the potential for collision and electrocution from Project power lines. Power line mortalities are likely to be localized around the PDA.

Waterfowl

Waterfowl are a valuable resource harvested by the First Nation communities in the Project region. Within the RSA there are a large number of lakes, ponds, rivers and wetlands that provide suitable feeding and nesting habitat for a variety of waterfowl species. Twenty waterfowl species were

observed during the course of the baseline investigations within the RSA. Only one waterfowl species, Canada Goose, was observed at the mine site. Although, other waterfowl species were observed on the near-by Muketei River. The following is a list of waterfowl species observed within the RSA:

- American Wigeon
- Blue-winged Teal
- Brandt
- Bufflehead
- Canada Goose
- Common Goldeneye
- Common Loon
- Common Merganser
- Lesser Scaup
- Greater Scaup
- Green-winged Teal
- Long-tailed Duck
- Mallard
- Merganser spp.
- Northern Pintail
- Red-breasted Merganser
- Ring-necked Duck
- Snow Goose
- Tundra Swan
- White-winged Scoter

There is very little waterfowl habitat within the mine site LSA, thus habitat loss resulting from ground preparation activities at the mine site will be minimal. In addition, the majority of site development activities will take place away from open water and wetland habitats.

Based on the baseline breeding bird surveys completed, waterfowl use the RSA extensively for staging and feeding during migration and/or for breeding. Breeding habitats of the waterfowl that frequent the RSA differ between species. Direct loss of habitat along the transportation corridor will result from ground preparation activities.

Indirect habitat loss and degradation to waterfowl will be greatest during the initial construction phase of the Project. Provided that construction activities are located outside of the nesting season, sensory disturbances are likely to have a negligible effect on waterfowl.

Waterfowl are harvested by the First Nation communities. Creation of an all-season road will provide access for some Aboriginal and non-Aboriginal hunters to a larger area. Increased access is expected to increase hunting pressures on the migratory and resident waterfowl populations.

Furbearers

Local furbearers include Beaver, Muskrat, Snowshoe Hare, Fisher, Marten, Lynx and Red Fox. Most furbearers tend to be concentrated along the watercourses, either because they are directly associated with water habitats (e.g., Beaver and Muskrat) or because they prefer the forest and forest/shrubland habitats that border creeks and rivers (e.g., Marten, Lynx, and Red Fox). The removal and fragmentation of habitats will occur during the Project construction phase. The most affected habitat preferred by furbearers within the RSA is the mature forest stands and forest edges (e.g., coniferous treed, deciduous treed, mixed treed), which represent a small portion of removed habitat from the RSA (< 1.5 %).

The potential for mortality may occur if scavenging furbearers are attracted to domestic waste at the mine or construction camps. Some individuals can become accustomed to scavenging waste and demonstrate a general lack of fear of humans. Proper waste management measures, including worker education and the use of a dedicated waste management facility and incinerator will reduce the potential for animal attractants. When there is an immediate danger to human safety, all deterrent options will be investigated (e.g., air horns, cracker shells, non-lethal projectiles). The final

course of action to protect Project staff may include destruction of the nuisance animal as per MNR guidelines.

Carnivores

The Gray Wolf and Black Bear are the largest carnivores within the RSA and occur at low densities. Wolf numbers are generally dependant on ungulate abundance (e.g., Moose and Woodland Caribou) and the activity likely to have the greatest potential interaction with carnivores is associated with the effects of removal and fragmentation of forest cover on their prey species. This will mostly occur during the Project construction phase.

The most affected habitat preferred by carnivores within the RSA is the mature forest stands (e.g., coniferous treed, deciduous treed, mixed treed). These habitats do not represent a large portion of the habitat loss within the RSA (< 1.5 %). As such, this loss is not likely to have a negative effect on the carnivores near the PDA.

Wolves may exhibit avoidance behaviour until the local animals adjust to the presence of Project infrastructure. This process has already occurred to some degree around the existing exploration camps. Wolves have been documented within the exploration camp perimeter. They may be attracted by odours of food and domestic waste.

Carnivores also display scavenging behaviour that can attract them to road kill. Most animals will remove the carcass from the road to reduce the likelihood of attracting competitors. This behaviour increases the risk of vehicle-wildlife collisions and mortalities.

Moose

Moose are a critical resource for First Nation hunters as a supply of meat and hides. Moose hunting is also an important cultural pursuit. Clearing the PDA along the transportation corridor ROW (including the all-season road, spur roads and aggregate source areas) will remove or alter areas within the major habitat types preferred by local Moose. The most affected habitat preferred by moose within the RSA is the sparse treed and treed peatland habitats, of which < 1 % will be removed from the RSA. The area of degraded suitable habitat for these habitats is not likely to have an effect on the moose near the PDA.

Moose are considered to be relatively tolerant to human disturbances, but they may be affected by the visual and noise disturbances associated with infrastructure, vehicle traffic, foot traffic, and aircraft activity. These short-term disturbances may occur most frequently near the all-season road and during the operation phase near the mine site and trans-load facility.

Moose have been known to associate with disturbed corridors such as roads for ease of movement during winter months. Moose may also be attracted to the presence of deciduous vegetation in roadside ditches during the growing season as well as the runoff from salted roads in the spring. Therefore, there is an increased risk for vehicle collisions with moose along the transportation corridor.

Wolverine

Wolverine is a species at risk that is sparsely distributed across the study area. The direct loss of Wolverine habitat in the Project RSA is very small. Wolverines prefer large expanses of undisturbed landscape and tend to avoid humans. Roads can serve as a partial barrier to their movement.

When a 6.5 km disturbance buffer is applied around Project infrastructure to account for avoidance responses, direct and indirect habitat losses for high quality habitat are 3.7 %, medium quality habitat are 8.0 %, and low quality habitat are 3.8 %.

Of all anthropogenic causes, incidental trapping of Wolverines has the greatest potential to cause declines in their populations. Road development may result in higher incidences of vehicle collisions with Wolverine, particularly for young dispersing males. Increased movements by juvenile males also make them more susceptible than females to trapping (traditional and incidental). Finally, any reductions to the density of Woodland Caribou in the Project area will result in fewer carcasses (wolf kills), which are an important food source for Wolverine in the winter. Mitigation measures include minimizing the Project footprint and maintaining a narrow road ROW since Wolverine are less likely to cross a large roadway ROW. It is not expected that the Project will meaningfully increase trapping activity. Monitoring and reporting of Wolverine activity to the province will form part of Noront's biodiversity management plan.

Woodland Caribou

Is a species at risk in Ontario. Project related direct and indirect losses of Woodland Caribou habitat in the RSA has been estimated as follows:

- High quality - 0.4 % of the RSA
- Medium quality - 0.005 % of the RSA
- Low quality - 0.00001 % of the RSA
- Nil quality - 0.3 % of the RSA

These estimates include a 6.5 km degradation buffer around the transportation corridor and mine site. All of the habitat losses due to the PDA are extremely low, as are the amounts of habitat within the 6.5 km buffer. Due to the conversion of natural habitat to road, it is anticipated that Woodland Caribou will avoid suitable habitats adjacent to the new all-season road. This is primarily due to higher risk of predation by wolves and through the avoidance of sensory disturbances such as light and noise from road traffic and recreational activities.

Development and use of the transportation corridor will likely increase Woodland Caribou mortality due to vehicle collisions. However, due to their general avoidance of roads, it is highly likely that this source of mortality will be much lower than for other wildlife species. Woodland Caribou that are closer to corridors (roads, trails, seismic lines and pipeline corridors, etc.) are also at higher risk of predation by wolves. Wolves are known to use linear corridors to move through the landscape, since they can attain movement rates three times greater than movement through the surrounding forest.

It is estimated that approximately 1,000 ha of high suitability Woodland Caribou habitat will be lost due to construction of the Project footprint and that approximately 100,000 ha of high suitability Caribou habitat will no longer be used by Caribou due to their avoidance of Project infrastructure and associated sensory disturbances.

Wildlife Health

A Project's effects on wildlife health are typically considered as it relates to potential contamination of forage. Contamination is generally associated with pathways for chemical exposure and uptake by plants as a result of dust and emissions from the Project. The construction, use and closure of the Project infrastructure will likely cause increased dust emissions, however, the roads will be

constructed using inert aggregate and strict dust control measures will restrict meaningful emissions of concentrate dust from occurring. The aesthetic effects of dust settlement on vegetation within the degradation buffer may discourage herbivore browsing. Due to the proportionally small area within the buffer compared to the available habitat in the RSA the Project is not expected to affect wildlife health.

8.4 SOCIAL, ECONOMIC AND CULTURAL EFFECTS

The Project is not expected to cause significant adverse effects to the social, economic and cultural environments. The Project will, however, result in beneficial effects within the scale of the local study area. A summary of the outcomes of the effects assessment on individual valued ecosystem components follows.

Community Dynamics

A number of interactions between the Project and community dynamics were identified. The Project may result in demographic shifts within the remote First Nations communities as a result of employment by, or related to, the Project. Because the remote First Nation communities (as well as Thunder Bay) will be points of hire, individuals may choose to leave the community seeking improved amenities (i.e., schools, stores, etc.). Conversely, individuals may choose to return to their community if they are able to obtain local employment at the Project. The Project may also result in an influx of people in the region seeking direct, indirect or induced employment opportunities. The fly-in/fly-out operation may also allow residents within the region to decentralize, since such a work rotation allows for some geographic flexibility.

The Project's focus on local employment and training should in the long-term help improve the overall skill levels within the smaller communities. This may be off-set in the short-term by a temporary loss of existing skills in the community, as local workers seek new and possibly higher-paying jobs with the mine.

First Nation communities in the LSA are currently working towards completing Community Based Land Use Plans (CBLUPs) under the requirements of the *Far North Act*, 2010. These plans will identify how and where land use activities may take place (MNR, 2013). First Nations in the LSA are at various stages of creating their CBLUPs. None of the plans have been approved to date.

Human Health and Well-being

The Project is anticipated to interact with various factors contributing to human health and well-being. The results of a Screening Level Risk Assessment (SLRA) for human health concluded that the Project will not have adverse effects on human health. Surface water and groundwater will remain safe for potable uses and air quality is expected to remain below thresholds for health-based air quality criteria. No transport pathways into country foods were identified and, as a result, country food is anticipated to remain safe for consumption.

The Project is expected to improve food security in the remote First Nation communities primarily as a result of increased incomes from employment at the Project. With greater disposable incomes, individuals will be able to purchase the required amount of food and will have greater opportunity to harvest traditional foods.

Substance abuse has been identified as a problem within the study areas. The Project has the potential to both adversely and beneficially affect substance abuse. Due to increased income, individuals may be inclined to purchase more drugs or alcohol than previously. The development of the transportation corridor, and the mine site itself, may facilitate the transport of illegal substances and alcohol, further increasing their availability in communities. These adverse effects will be mitigated through a zero-tolerance policy towards alcohol and drug use while at work; those found with these items will be removed from the mine site. The Project may also change the perspectives individuals have towards drug use. Positive shifts in attitude toward drug and alcohol use will be realized as individuals have added structure and responsibility in their lives since they need to report to work on time and sober.

Parenting due to the Project may also change. Parenting may become more difficult due to the fly-in/fly-out nature of work at the mine site, while others may benefit from the increased confidence as a result of employment.

The overall quality of life within the potentially affected communities is anticipated to improve. Factors leading to beneficial changes include improved education levels and training and employment. The resultant income will increase individuals' ability to spend money on various recreational activities, while Impact Benefit Agreements (IBAs) have the possibility of improving the quality of life within the communities as a whole

Training, Employment and Income

The Project is expected to interact with training, employment and income through the creation of employment, increased training and skills development and increases in median income. Employment in the Project is anticipated to consist of approximately 780 direct jobs during the construction phase and approximately 390 direct jobs during the operation phase. Indirect and induced employment is estimated to be a factor of 2.5 to 1 for the Project (MAC, 2013). Currently, the region cannot meet the demand for semi-skilled to skilled labour.

The low educational attainment rates currently pose as a barrier to future employment. Noront, in partnership with Confederation College and Matawa First Nations, has developed the ROFATA. The education and training attainment rates are anticipated to improve through this partnership and other training programs in the region.

With the development of the Project and the subsequent creation of direct jobs, the individual income of those employed is expected to increase. Increases in income will vary by individual and household based on the length of time individuals remain employed at the Project and on their position. In general, average weekly wages in the mining industry are 60% higher than the Ontario's average industrial wage (Duncan and Murphy, 2012). Increases in income generally have a positive effect on the well-being of households, as well as on the local economy (Stevenson and Wolfers, 2013). In order to minimize the effects of poor spending decisions, Noront plans to provide personal life management training to its employees that will include aspects of money management.

Local and Regional Economy

The Project has the potential to interact with the local and regional economies through economic impacts, induced economic development and increased business opportunities. The estimated annual economic impacts (GDP Impact), on a moderate scale, are estimated to

be \$686,250,000 during the construction phase and \$1.215 billion during operations. Government revenues as a result of the Project, on a moderate scale, are estimated to be \$207,248,000 during construction and \$366,930,000 during operations.

The infrastructure associated with the developed of the transportation corridor has the potential to reduce the capital costs associated with the development of numerous other mineral deposits located in the Ring of Fire region; these effects are, however, uncertain.

The Project is expected to affect the local and region economy through expenditures on goods and services. These expenditures will help diversify the economy. The extent to which business opportunities translates into economic development benefits, depends on general economic conditions, the investment climate, and the competitiveness of local suppliers. Noront will require numerous construction, contracting, supply, and service companies and will contract local and regional businesses to supply materials, goods and services, whenever possible.

Community Infrastructure and Public Services

The Project is anticipated to interact with community infrastructure and public services through improved community access and through strain on the locally available infrastructure and services. The development of the transportation corridor has the potential to ease access to the remote First Nation communities. Although spurs leading off the proposed corridor are not planned by Noront, the communities themselves will need shorter winter road connections. Shorter winter roads will reduce travel times, improve the safety of travellers and potentially increase the length of the winter road season. The project is not anticipated to have residual effects on community access.

Infrastructure in the LSA is generally underutilized; however, the services provided are limited. The Project is expected to have a minimal effect on the size of the population in the LSA. As such, possible strains on local infrastructure are expected to be minimal.

Cultural Resources

Cultural resources include archaeological sites as well as sites deemed to be of cultural or spiritual importance to the local First Nation communities. A Stage 1 archaeological assessment was completed for the purposes of the environmental assessment/environmental impact statement. Prior to conducting any ground disturbance activities, Noront will conduct a Stage 2 archaeological assessment on sites identified as having high archaeological potential within the Project development area. Areas with high archeological potential are expected to be mostly along main rivers and eskers. Noront has established a Cultural Resources Action Plan to identify the manner in which potential archaeological sites will be managed.

To date, Noront has not identified sites of cultural or spiritual importance in the mine site area. During road alignment reconnaissance, Noront agreed to divert the road routing south of Webequie First Nation in order to avoid an area of cultural importance identified by the community. In order to help identify any potential sites of cultural or spiritual importance, Noront has developed an Aboriginal Traditional Knowledge Study Plan to help ensure that these sites are avoided, or mitigated appropriately. All work will be undertaken with the consent of the communities.

Aboriginal Resource and Land Use

The Project has the potential to interact with Aboriginal resource and land use. The Project is not anticipated to have adverse effects on hunting, fishing and plant harvesting opportunities. Trapping

will potentially be affected, as some traplines will be reduced and fragmented from the development of the Project and its associated infrastructure. However, changes to harvest volumes from trapping activity are not anticipated. Aboriginal commercial activities in the area include the provision of tourism services (mainly outpost camps). The development of the Project may result in improved access to the area as the cost associated with travel may be reduced. The development of the mine and related infrastructure will not take place in proximity to the outfitter camps/lodges.

Current Use of Crown Lands and Resources for Recreational Purposes

There are no direct effects to provincial parks or conservation areas from the Project. The transportation corridor will approach the Otokwin/Attawapiskat Provincial Park, but remain outside of the park boundary. Increased access to hunting is anticipated through the development of the all-season road. Disturbance to the Wildlife Management Units from the Project are minimal (<1%) and represent a small fraction of the Wildlife Management Units. The Project is also anticipated to have no direct effect on known existing outpost camps. The construction of the transportation corridor and mine may affect people's perception of the area as a remote, pristine wilderness area. Development of the mine and related infrastructure will not take place in proximity to the outfitter camps/lodges, as such, no effects are anticipated to the visual landscape. The Project will not result in the removal of, or restrict access to, existing fishing areas. Areas may become more accessible as result of the development of the transportation corridor. Overall recreational and tourism opportunities will not be restricted in the area because of the Project. It is possible that increased access will be created due to the construction and developed of the east-west corridor.

Navigable Waters

The installation of stream crossings (i.e., culverts and bridges) at watercourses located along the transportation corridor could potentially interfere with navigation. Based on the results of the navigable waters screening, the project will potentially affect the navigability of 66 watercourses located within the local study area. Based on the remote location of the Project and the current lack of access to the area, interference with navigability is unlikely. In addition, many of the watercourses are isolated from other known transportation routes, such as the Attawapiskat River. During the construction phase, it may be necessary to temporarily close watercourses to users for safety reasons. During these periods, the navigability of the watercourse would be limited or prohibited, necessitating temporary avoidance of the area or use of exit/entry points before and after the crossing location.

9 – CUMULATIVE EFFECTS ASSESSMENT

Cumulative effects are defined by the CEA Agency (1999) as “changes to the environment that are caused by an action in combination with other past, present and reasonably foreseeable future human actions”.

A cumulative effects assessment (CEA) was undertaken to evaluate the potential for any residual effects of the Project to interact with the effects of other projects or activities that overlap with the Project’s geographic extent and timeframe (past, present and reasonably foreseeable).

The CEA methodology included the following steps:

- Scoping:
 - Identify regional issues of concern
 - Identify spatial and temporal boundaries
 - Identify other actions that may affect the same VECs
 - Identify potential impacts due to the actions and possible effects
- Analysis of Effects:
 - Complete the collection of regional baseline data
 - Assess effects of the Project on selected VECs
 - Assess the effects of all selected actions on selected VECs
- Identification of Mitigation Measures
- Evaluation of Significance:
 - Evaluate the significance of residual cumulative effects
 - Compare results against thresholds or land use objectives or trends
- Follow-up: recommend regional monitoring and effect management

Past and present projects have been identified using various government databases. Other reasonably foreseeable projects were identified and considered providing that the project or activity met one or more of the following criteria:

- It had entered into a formal project approval or permitting process
- It was specified through discussion with regulators, Aboriginal groups and/or other stakeholders
- Sufficient project information exists to inform a CEA

The past and reasonably foreseeable projects that were identified included:

- Musselwhite Mine
- Victor Mine
- Mining and mineral exploration activities in the Ring of Fire region
- Abandoned Mines (all located off of Hwy. 599), including:
 - Albany River
 - Crowshore
 - Central Patricia and Central Patricia #2
 - Pickle Crow Gold Mine
- Decommissioned Mid-Canada Line military radar site at Winisk
- Traditional and recreational hunting, fishing and foraging activities
- Tourism and commercial recreational activities, including fishing and hunting and adventure tourism

- Air transport associated with remote communities in the region, outfitter camps and mineral exploration in the Ring of Fire
- The Caribou and English River Forest Management Units, located in the southern extent of the study area

The following projects have been identified as reasonably foreseeable on the basis that a regulatory application has been filed or approved:

- Marten Falls Logistics Airstrip, a permitted activity intended to support mine development in the Ring of Fire, including the Eagle's Nest Project
- Victor Mine Extension Project, for which a project description was filed with the federal and provincial governments in mid-2013
- The New Transmission Line to Pickle Lake Project - Wataynikaneyap Power is proposing the development of a 230 kV alternating current transmission line from Dinorwic to Pickle Lake

A residual effects interaction matrix was developed that listed the Project VECs with residual effects and summarized other projects/activities that have the potential to affect the same VECs. This interaction matrix identified where there was potential overlap of effects that need to be considered in the CEA.

A qualitative assessment of cumulative effects was undertaken using the same approach used to assess Project effects. Cumulative effects of the following Project residual effects were evaluated:

- Ambient air quality and dust deposition
- Climate change
- Increased noise levels
- Physical loss or alteration of vegetation
- Effects on Woodland Caribou
- Wildlife mortalities due to collisions
- Effects of increased harvesting as a result of increased access

None of the above cumulative effects are expected to be significant. In addition, other benefits are expected to accrue for a number of beneficial Project social and economic effects. Since effects on Woodland Caribou are multi-faceted and the Project is one of many pressures on Woodland Caribou, Noront will develop a facility-level biodiversity management plan. This plan will be developed in cooperation with regional wildlife management and on-going research activities related to Woodland Caribou and other species of concern.

10 – ADDITIONAL EFFECTS

10.1 EFFECTS OF THE ENVIRONMENT OF THE PROJECT

The assessment of effects of the Project on the environment includes the prediction of potential effects of extreme environmental conditions, such as natural hazards (severe/extreme weather and other external events) and climate change.

Environmental conditions with the potential to adversely affect the Project components and activities include:

- **Seismic Activity** - The Project is situated within an area with a very low seismic hazard rating and no major tectonic zones have been identified within hundreds of kilometres of the area. Measures to mitigate adverse effects due to seismic activity include ensuring that Project components and activities are designed to comply with current standards outlined in the Ontario Building Code .
- **Extreme Weather Events** - Weather events such as extreme precipitation can cause unauthorized discharges from water management structures (i.e., surface water collection pond) and can erode Project infrastructure. Design-based mitigation measures will be incorporated into the design of Project components and activities.
- **Forest Fire** - Wildfires have the potential to cause widespread damage to ecosystems and property if they are not contained. Mitigation measures for forest fires include clearing areas around site facilities and designing the mine site layout to minimize potential fire damage by fire to site infrastructure is minimized.
- **Climate Change** - Recent climactic observations and modeling suggest that temperature and precipitation will rise; however, over the timeframe of the Project, no significant trends are expected.

10.2 ACCIDENTS AND MALFUNCTION

The effects of possible accidents or malfunctions are assessed for all phases of the Project and include:

- **Fuel Spills** - Fuel spills could occur during transportation, within on-site storage facilities, or during transferring activities. Fuel spills could cause an effect to the terrestrial and aquatic environments. Third party contractors will be expected to have an emergency response plan and procedures in place and to adhere to Noront's Emergency Preparedness and Spill Contingency Plans.
- **Concentrate Incidents** - Concentrate incidents could occur during hauling and transportation as well as during transferring activities. Concentrate incidents could cause physical damage to terrestrial environment, flora, and/or increase sediment loadings to aquatic environments. Drivers will be required to abide by Noront's Road Management, Emergency Preparedness, and Spill Contingency Plans.
- **Chemical Spills** - Various other chemicals used on site could be released during transport or from on-site storage facilities. Chemical spills could cause an effect to the terrestrial and aquatic

environments. Chemical handlers will be required to abide by Noront's Road Management, Emergency Preparedness, and Spill Contingency Plans.

- **Uncontrolled Discharge from Sewage Treatment Plant** - In the event of a sewage treatment plant incident, partially treated or raw wastewater could be released to the receiving wetland. The quantity of water that will be released would be minimal and will be diluted in the receiving waters. Short-term releases are not expected to cause long-term toxicological effects to the receiving environment.
- **Embankment Failure (Surface Water Collection Ponds)** - Given that the ponds are storing water and given the limited duration of an incident associated with an embankment failure, no adverse effects are expected to the terrestrial or aquatic environments. Short-term increases in TSS may occur within adjacent aquatic habitats. However, a TSS increase is not expected to be an issue given that there are no waterbodies located in close proximity to the surface water collection pond.
- **Crown Pillar Failure** - Based on the location and nature of the crown pillar, environmental effects would be limited to the area located immediately above the crown pillar. Direct loss of terrestrial flora is possible. Unexpected surface and groundwater flows into the underground workings are also a possible consequence. Effects to surface water and groundwater quantities are possible as well. The crown pillar will be mined and backfilled early in the operations phase of the project development.
- **Explosives Incident** - The most probable explosives related accident scenario would involve bodily harm or damage to mine-related infrastructure, rather than an environmental interaction. There are minimal environmental impact concerns and any effects would be limited to the immediate blast area and would also be of short duration.

11 – ENVIRONMENTAL MANAGEMENT AND COMMITMENTS

Noront has developed a draft Environmental and Social Management Plan (ESMP). The ESMP includes an Environmental Management System as the overall framework for environmental management, as well as the following Environmental Management Plans (EMPs):

- Human Resources Management Plan
- Emergency Preparedness and Response Plan
- Spill Contingency Plan
- Health and Safety Plan
- Closure and Reclamation Plan
- Consultation Plan
- Water Management Plan
- Sediment and Erosion Control Plan
- Conceptual Fish Habitat Compensation Plan
- Biodiversity Action Plan
- Water Quality Monitoring Plan
- Road Management Plan
- Geochemical Monitoring Action Plan
- Aboriginal Traditional Knowledge Study Plan
- Cultural Resources Action Plan

Noront commits to the implementation of the ESMP as well as other commitments made within the EIS/EA Report, including:

- Geochemical sampling and testing of quarry and borrow materials
- Monitoring seepage during and after underground operations
- Additional assessments of fish habitat at the final road alignment transportation corridor water crossings
- Monitoring any change of residency of Project employees from the LSA. Qualitative data will be collected on community perceptions of the Project, including education and training attainment data
- Collecting additional ATK data as per the ATK Study Plan
- Submission of a revised assessment package to Transport Canada, including representative widths, depths, gradients and flow measurements of each crossing, as well as upstream and downstream photographic records
- Installation and monitoring of groundwater wells east of the mine site



12 – CONCLUSION

In summary, the Project will not result in significant adverse effects to the biophysical, social, economic and cultural environments. The Project will result in significant beneficial effects to the local communities and region through training and employment and improvements to regional infrastructure.

No significant cumulative effects are anticipated as a result of the Project in combination with other projects or activities.

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