



**Point Rousse Port Facility, Summary
Project Description, Pursuant to the
Canadian Environmental Assessment Act,
2012**

Baie Verte, Newfoundland and Labrador
November 2016

Anaconda Mining Inc.

**CEAA Project Description Summary
Point Rousse Port Facility
Anaconda Mining Inc.**

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Point Rouse Port Facility
Anaconda Mining Inc.

1.0 General Information and Contacts

Anaconda Mining Inc. (Anaconda) has constructed and is operating a new marine dock and loading facility, the Point Rouse Port Facility (the “Project”), at the existing Anaconda Pine Cove Gold Mine (the mine). The Project is located on the Point Rouse Peninsula, in the northern portion of the Baie Verte Peninsula, approximately 3 kilometres (km) northeast of the Town of Baie Verte in north central Newfoundland and Labrador (NL) (Figure 1).

The purpose of the Project is to provide a means for loading crushed mine waste rock from the existing mine site onto marine vessels for shipment to Charleston, South Carolina in the United States of America (USA), where it will be used as a compressive weight for the construction of a port facility foundation. Rather than storing it permanently in waste dumps on site, the Project will repurpose three million tonnes of the ten million tonnes of waste rock to be produced over the lifetime of the mine. Mining rates are not being increased to support the Project.

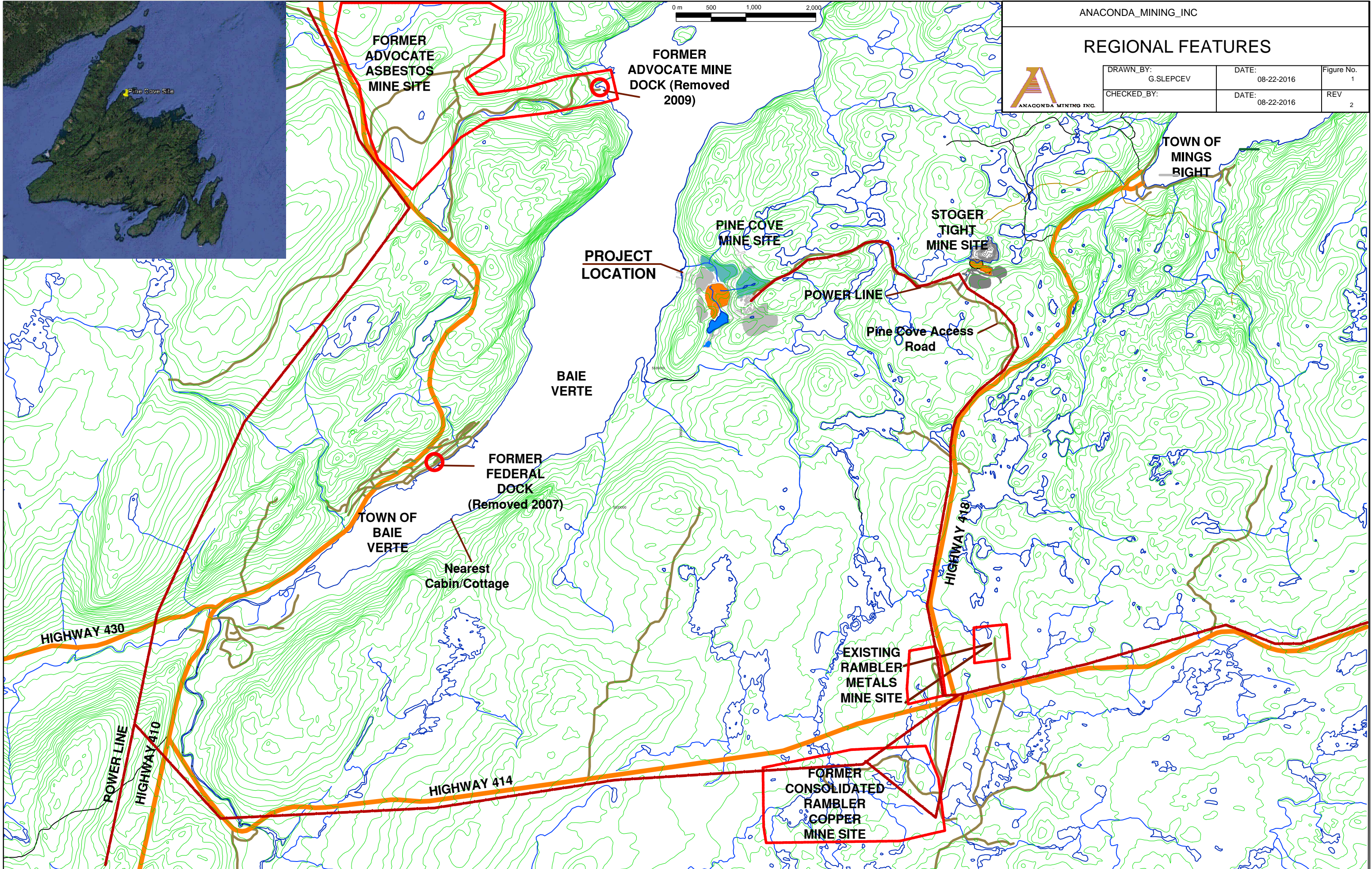
The entire Project duration, from start of construction through to the end of decommissioning, is 18.5 months. Shipping will occur over a 14-month period, at a rate of one vessel per week. Anaconda has no plans to extend the Project beyond this timeframe, nor contracts beyond this scope.

The Project generally consists of a new access road, crusher, crushed rock stockpile laydown area, conveyor loading system, shoreline and cribbed mooring bollards, rockfill approaches, and a temporary barge to convey the crushed waste rock to vessels for transport. Anaconda’s partner via royalty agreement, Shoreline Aggregates Ltd. (Shoreline Aggregates), has purchased the aggregate from Anaconda, has retained the shipping company Phoenix Bulk Carriers (Phoenix), and has an agreement in place with the purchaser in South Carolina.

Anaconda had originally determined that the proposed facility was not a designated project under the *Regulations Designating Physical Activities* pursuant to the *Canadian Environmental Assessment Act 2012* (CEAA 2012). The dock rockfill approaches are designed to handle ships no larger than 5,000 DWT, which is well below the 25,000 DWT threshold specified in the regulations. Although the barge accommodates ships that exceed the 25,000 DWT threshold, Anaconda believed CEAA 2012 would not apply, given the temporary nature of the barge. Anaconda obtained a legal opinion, which supported this rationale.

Anaconda proceeded to construct the Project with the understanding that all required authorizations had been obtained, based on the following consultation with provincial and federal regulators and receipt of corresponding authorizations and approvals:

- The NL Department of Environment and Climate Change (NLDEC) reviewed Project information and determined that Registration pursuant to the NL Environmental Assessment (EA) process was not required.
- The NL Department of Natural Resources (NLDNR) reviewed and approved an amendment to Anaconda's Development and Rehabilitation and Closure Plans. NLDNR accepted the rehabilitation and closure proposal and cost estimate for the Project. Anaconda posted the Financial Assurance for the rehabilitation and closure costs to NLDNR prior to construction (the Financial Assurance ensures that money is available to complete the rehabilitation of the dock facility were Anaconda to default on the Project).
- A Marine Security Plan was prepared and submitted to Transport Canada (TC).
- Fisheries and Oceans Canada (DFO) Fisheries Protection Program (FPP) was consulted and advised Anaconda that the Project will not contravene subsection 35(1) of the *Fisheries Act* or sections 32, 33, or 58 of the *Species at Risk Act (SARA)*, provided their recommended mitigation measures were followed.



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REGIONAL FEATURES



DRAWN_BY: G.SLEPCEV	DATE: 08-22-2016	Figure No. 1
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The Canadian Environmental Assessment Agency (“the Agency” or “the CEA Agency”) became aware of the Project when federal funding was sought by Shoreline Aggregates. Upon review of the Project information, the Agency determined that the Project does indeed constitute a Designated Project under CEAA 2012, as the barge is designed to handle ships up to 50,000 DWT (i.e., in excess of the 25,000 DWT threshold). At the time of this determination, Anaconda had substantially completed Project construction. Some minor work was completed after this determination, but solely for the purpose of protecting the work completed to date.

Work to date has been completed in an environmentally responsible manner, consistent with Anaconda’s commitment to responsible development at this site and in this region and in accordance with Anaconda’s approved Environmental Protection Plan (EPP). Anaconda adhered to regulator-approved environmental protection protocols during construction, including specific mitigation measures as recommended by provincial and federal regulators. NLDNR and DFO personnel conducted site visits both prior to and during construction.

Anaconda’s detailed environmental protection and management plans, used for all aspects of planning, design, construction, and operation at its properties and facilities, will be employed throughout all Project phases. Anaconda has successfully developed and operated a fully permitted/approved 1,000 tonnes per day (t/d) (nominal) open pit gold mine and milling process since 2008, and has maintained an excellent relationship with provincial and federal regulators.

Project name and contact information are listed below in Table 1-1.

Table 1-1 Project Name and Contact Information

Name of the designated project:	Point Rousse Port Facility
Name of the proponent:	Anaconda Mining Inc.
Address of the proponent:	P.O. Box 238 Baie Verte, NL A0K 1B0
Chief Executive Officer:	Dustin Angelo President, CEO and Director 150 York Street, Suite 410 Toronto, Ontario M5H 3S5 Telephone: 416-604-6622 Email: dangelo@anacondamining.com
Principal Contact Person:	Jordan Cramm Project Development Coordinator P.O Box 238 Baie Verte, NL A0K1B0 Telephone: 709-800-7332 Email: jcramm@anacondamining.com

The following federal, provincial and municipal agencies have been consulted regarding the Project:

- Canadian Environmental Assessment Agency (the Agency)
- Fisheries and Oceans Canada (DFO)
- Transport Canada (TC)
- NL Department of Environment and Climate Change (NLDEC)
- NL Department of Natural Resources (NLDNR)
- Town of Baie Verte

Anaconda has not identified any Aboriginal groups that may be interested in, or potentially affected by, the Project (see Section 6). As the Project is a relatively small addition to the existing and permitted mine operation, Anaconda has not conducted Project-specific public consultation (see Section 7).

NLDEC confirmed that the Project is not a designated undertaking under Part III of the *NL Environmental Assessment Regulations*, made under the authority of the *NL Environmental Protection Act*, and is therefore not subject to the NL EA process. The Project is considered an addition to the previously-approved Pine Cove Property (the Property). The current mine footprint, components (including the waste rock dump), production levels, infrastructure and activities on the Property were already registered with and released from the NL EA process in 1992, 1997 and 2005.

The Project is subject to the *NL Mining Act* and, pursuant to section 6 of the *Act*, required filing of an amended Development Plan. On May 24, 2016, Anaconda submitted to the NLDNR an addendum to the Pine Cove Property Development Plan and Rehabilitation and Closure Plan to address the Project, to which the mine EPP was appended. NLDNR approved the amendment on June 2, 2016 and the Financial Assurance requirements for rehabilitation activities have been posted by Anaconda.

The Project lies outside of the Baie Verte and Ming's Bight municipal planning boundaries and does not occur within a regional planning area (e.g., regional resource management plan, conservation plan, etc.). A regional study (as defined in sections 73 to 77 of CEAA 2012), has not been conducted in the Project area. The existing environment surrounding the Project and potential environmental effects of Anaconda's mining operations are well understood, and numerous environmental baseline studies have been conducted on and surrounding the Property.

2.0 Project Information

Key aspects of this Project are summarized as follows:

- The Project is a relatively small addition to the existing, fully permitted mine, which has been in production since 2008. Extensive environmental studies, permitting, and monitoring have been conducted in the Project area.
- The Project schedule is 18.5 months in duration (from construction to decommissioning), and will ship three million tonnes of waste rock over a 14-month period at a rate of one vessel per week. Anaconda has no plans to extend the Project beyond this timeframe, nor contracts beyond this scope.

- The Project will allow waste rock that would otherwise be permanently stored in waste rock dumps to be reused, thereby reducing the overall environmental footprint of the mine.
- Anaconda carefully considered various designs and alternatives to construct a temporary dock and loading structure at the site. Using a temporary floating barge to support the ship-loading conveyors eliminates the need for a large, permanent wharf structure, thereby greatly reducing the marine footprint of the Project.

2.1 Designated Activity Provisions

Anaconda submitted Project information to the Agency to determine potential applicability of CEAA 2012. Based on correspondence dated August 26, 2016, the Agency considers the Project to be a designated activity pursuant to paragraph 24 (c) of the Schedule to the *Regulations Designating Physical Activities* (the Regulations), which lists as the designated project: “the construction, operation, decommissioning and abandonment of a new marine terminal designed to handle ships larger than 25,000 DWT (dead weight tonnage) unless the terminal is located on lands that are routinely and have been historically used as a marine terminal or that are designated for such use in a land-use plan that has been the subject of public consultation.”

A “marine terminal” is defined under section 1 of the Regulations as “an area normally used for berthing ships and includes wharves, bulkheads, quays, piers, docks, submerged lands and areas, structures and equipment that are connected with the movement of goods between ships and shore and their associated storage areas.” Further, the Agency noted, based on information provided by Anaconda, that the Project is not located on lands that are routinely and have been historically used as a marine terminal or that are designated for such use in a land-use plan that has been the subject of public consultation.

The Agency has stated that the Project is a designated activity based on the following factors:

- The Project involves the construction, operation, decommissioning, and abandonment of an area normally used for berthing ships.
- The loading barge is used as a structure or piece of equipment connected with the movement of goods between ships and shore.
- The loading barge is a component of the marine terminal, and is designed to handle ships up to approximately 50,000 DWT in size, which exceeds the 25,000 DWT threshold in paragraph 24 (c) of the Schedule to the Regulations.

Sections 16 (g) and 17 (g) of the Regulations do not apply to the Project, as it does not involve a new stone quarry, nor an increase in footprint or production capacity of an existing quarry (as described in Section 1.1 of this Project Description). The Project is not a component of a larger project that is not listed in the *Regulations Designating Physical Activities*.

2.2 Project Components and Activities

The Project involves transporting waste rock from the mine site to the rock crusher, crushing the waste rock to the desired size, and loading the crushed material onto vessels, as follows:

- Waste rock, sourced either from the existing North Pit Waste Dump (NPWD) at the mine site or directly from the existing open pit mine, is transported to the rock crusher via truck or loader, either from the existing NPWD or directly from the mine.
- The crusher reduces the rock particle size to the desired gradation (32 mm minus) and stockpiles the material via conveyor in the designated crushed rock stockpile area.
- From the crushed rock stockpile, the material is loaded onto a covered conveyor system using a wheeled loader. An overland conveyor system transports the material from the stockpile across the rockfill approach and onto the barge.
- The overland conveyor deposits the rock material directly onto a ship-loading conveyor system located on the barge, which delivers the material to the ship's load holds.

Project physical works, illustrated in Figures 2, 3 and 4, include the following components:

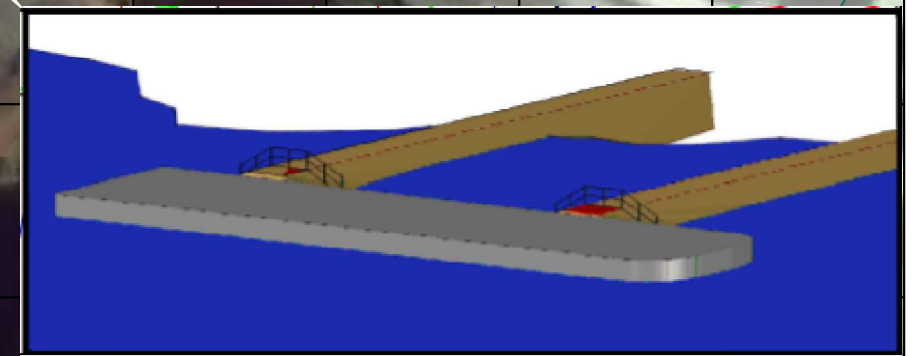
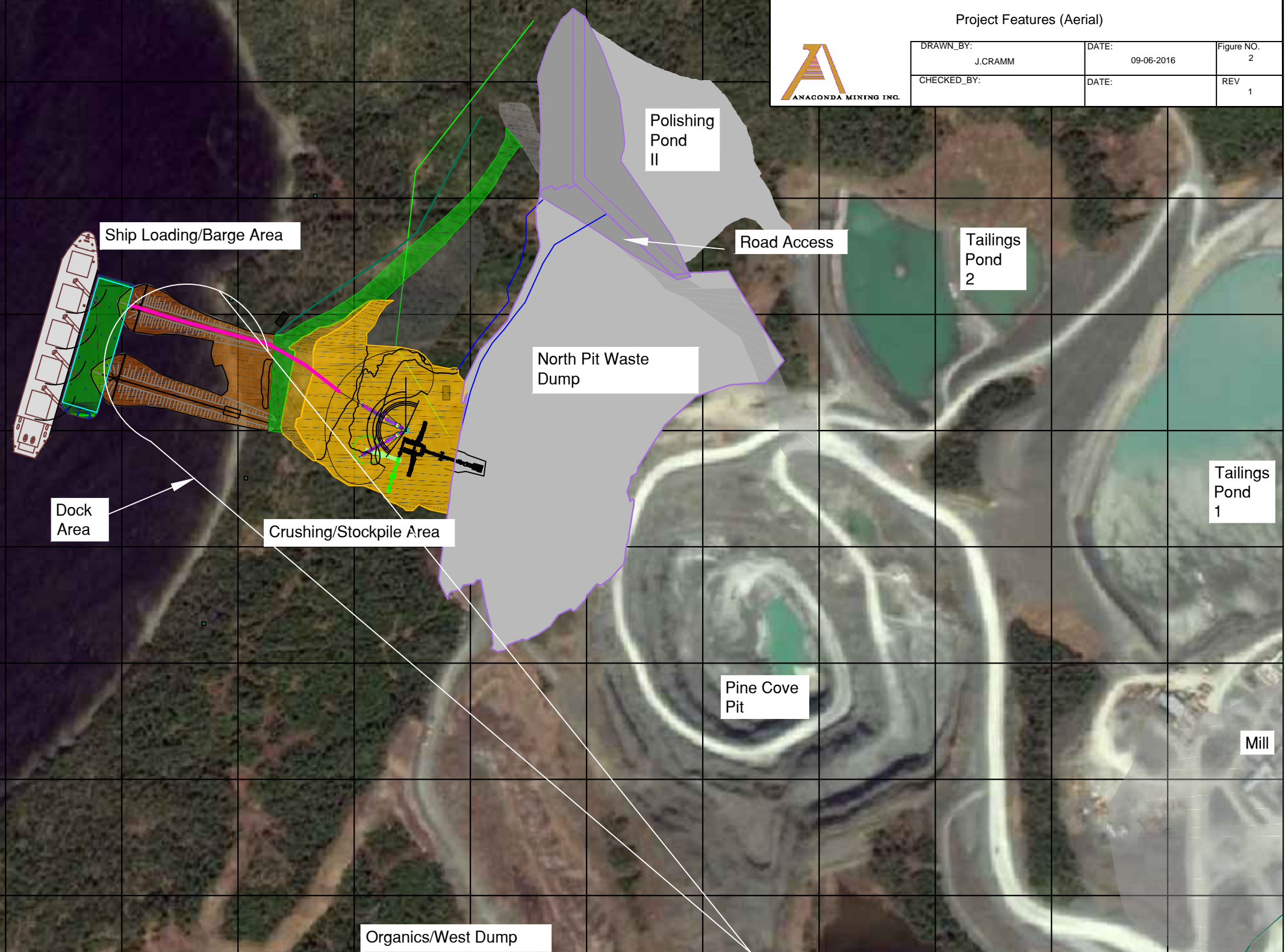
- **Access Road**
 - Approximately 400 m of new access road from the NPWD to the crusher, crushed rock stockpile, and dock/loading facility.
 - The maximum width of the access road is 15 m, with approximately 5 m adjacent right-of-way on each roadside, to accommodate power lines.
 - No culverts or bridges were required to accommodate the access road.
- **Crusher and Conveyor**
 - Mobile crusher and conveyor system on a wheeled chassis, supplied and operated by Shoreline Aggregates for the duration of the Project.
 - Concrete pads were not required for the placement or operation of this equipment.
- **Crushed Rock Stockpile Laydown Area**
 - Approximately 0.6 ha area located approximately 70 m from the high water mark, with a slope from the stockpile to shore of approximately 10%.
 - Accommodates a maximum of 200,000 tonnes of crushed waste rock at a time.
- **Dock**
 - Designed to handle ships no larger than 5,000 DWT, the dock consists of:
 - Northern and southern rockfill approaches (measuring 70 m by 30 m and 100 m by 30 m, respectively);
 - Two timber cribs (each measuring 8 m by 8 m); and
 - Four shore-based concrete mooring bollards constructed on bedrock (each measuring approximately 3 m by 3 m).
- **Barge**
 - Dual-purpose 12,000 tonne docking flat deck barge, the Nunavut Spirit, rented by Phoenix from McKeil Marine, a Canadian marine services provider.
 - Measures 32 m by 122 m and designed to accommodate marine vessels up to approximately 50,000 DWT.
- **Vessels**
 - Four marine vessels of modern Ultramax design, with 50,000 DWT capacity, hired on an as-required basis.
 - Shipping activities are being undertaken by Phoenix, a division of the publicly-traded Pangaea Logistics Solutions Ltd., headquartered in Newport, Rhode Island. The contractual relationship is between the Phoenix and Shoreline Aggregates.
- **Site Facilities and Utilities**
 - Temporary mobile trailer housing office space, lunchroom and washroom facilities.

- Generator supplying power to operate site infrastructure (e.g., crusher, conveyors) until the second quarter of 2017, when the Project will be connected to the Newfoundland Hydro power grid (NL Hydro upgrades to local area systems and Anaconda installation of capacitors for safe operations of larger equipment have delayed Project access to the power grid).
- Power lines connecting Project infrastructure to the existing mine facilities will generally follow the access road to the dock site for ease of access and maintenance.

Project Features (Aerial)



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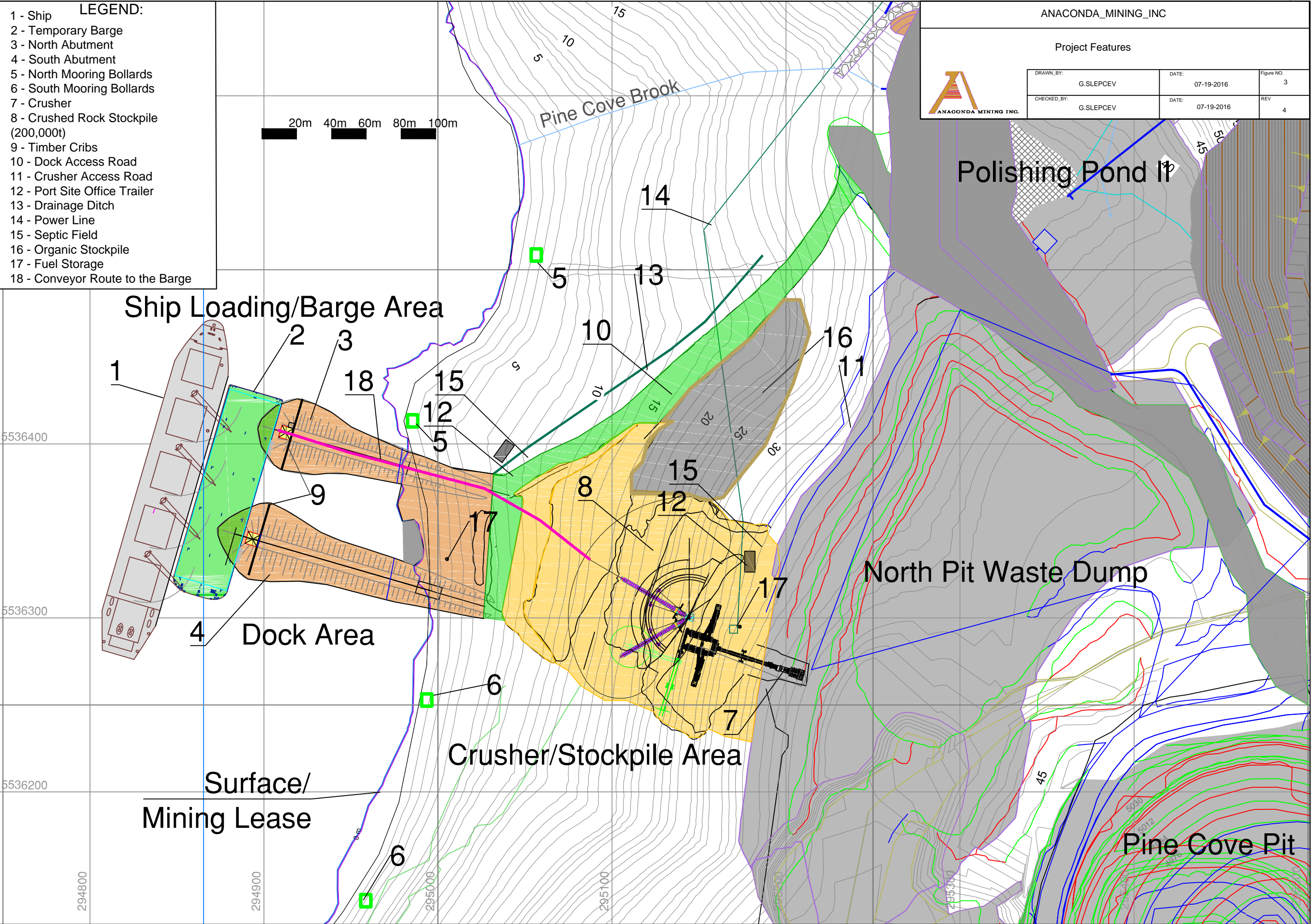


- LEGEND:**
- 1 - Ship
 - 2 - Temporary Barge
 - 3 - North Abutment
 - 4 - South Abutment
 - 5 - North Mooring Bollards
 - 6 - South Mooring Bollards
 - 7 - Crusher
 - 8 - Crushed Rock Stockpile (200,000t)
 - 9 - Timber Crib
 - 10 - Dock Access Road
 - 11 - Crusher Access Road
 - 12 - Port Site Office Trailer
 - 13 - Drainage Ditch
 - 14 - Power Line
 - 15 - Septic Field
 - 16 - Organic Stockpile
 - 17 - Fuel Storage
 - 18 - Conveyor Route to the Barge

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Project Features

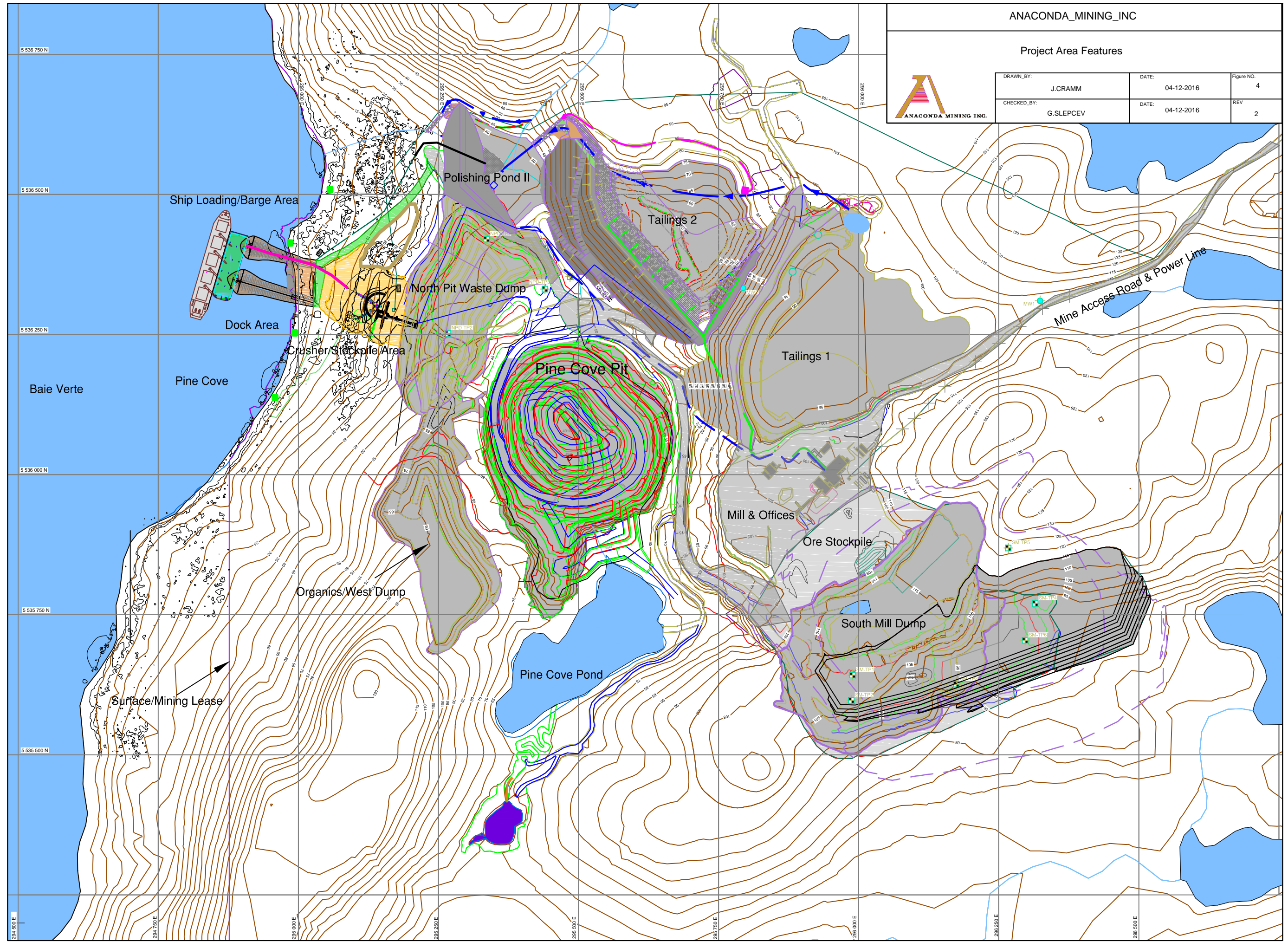
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Project Area Features



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2.3 Emissions, Discharges and Wastes

Project activities may generate emissions and wastes including the following:

- Criteria Air Contaminants (CAC) - sulphur oxide (SO_x), nitrogen oxide (NO_x), particulate matter (PM), volatile organic compounds (VOC), carbon monoxide (CO), ammonia (NH₃), ground-level ozone (O₃) and secondary PM) (all Project phases).
- Greenhouse Gases (GHGs) generated by diesel fuel combustion in stationary and mobile equipment - carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O) (all Project phases).
- Fugitive dust generated by heavy equipment travelling on 700 m of unpaved roads (all Project phases), clearing and grading of the access road and installation of the dock (construction phase), and crushing, conveying and loading of the waste rock (operation phase).
- Sewage effluent (all Project phases).
- Domestic garbage, waste construction materials, waste oil, grease and other materials (all Project phases).

GHD Limited (GHD) completed an assessment of GHG emissions attributable to Project operations. Emission factors from two different reporting programs were applied in the emissions calculations, including The Climate Registry (TCR) 2015 Default Emission Factors and 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories. As NL does not currently prescribe specific GHG calculation methodologies for reporting purposes, GHD applied industry best practices and calculation methodologies that are consistent with the federal GHG reporting program the Environment and Climate Change Canada (ECCC) GHG Emissions Reporting Program (GHGRP). A summary of GHG emissions attributable to the Project is provide in Table 2-1. GHG emissions attributable to the Project are below the reporting thresholds prescribed by the GHGRP and the NL *Management of Greenhouse Act*, at 50,000 and 15,000 metric tonnes, respectively.

Table 2-1 GHG Emissions Summary for the Project (GHD 2016)

GHG Emissions Summary	GHG Emissions based on TCR Emission Factors (kg)			GHG Emissions based on IPCC Emission Factors (kg)		
	CO ₂	CH ₄	N ₂ O	CO ₂	CH ₄	N ₂ O
Emissions	10,990,184	442	449	10,649,773	447	193
Total CO ₂ e (metric tonnes)	11,135			10,718		

Project-related atmospheric emissions are minimized through the application of the following mitigation measures:

- All vehicles and heavy machinery are equipped with the required emission control equipment, which is regularly inspected and maintained in good working order.

- All vehicles and heavy equipment being used for the Project comply with the NL Air Pollution Control Regulations.
- Crushing, conveying and loading components are covered to minimize fugitive dust emissions.
- Dust control agents (e.g., water) are used on an as-needed basis.

Phoenix assures that vessels are in compliance with the regulations for the North American Environmental Control Area. This legislation, applicable in Canada and the USA, restricts fuel consumption to 0.1% sulphur content marine gas oil. No fuels are supplied at the Project site. Refuelling occurs at Charleston where the fuel suppliers only offer Ultra Low Sulphur Diesel (ULSD) with a maximum sulphur content of 0.01%, which is substantially lower than the legislated requirement.

Anaconda's Waste Management Plan (WMP), in place for the operating mine, is also being applied to this Project. The WMP addresses all forms of waste including mine and mill waste, construction waste, recyclable and non-recyclable waste, metals, domestic waste, as well as hydrocarbon and hazardous waste. In accordance with the WMP, all waste is properly separated, handled, and stored or removed from site based on best practice and available methods. Waste materials generated during all Project phases were and will continue to be disposed of at an approved facility, in compliance with the NL *Waste Material Disposal Act* and in accordance with Anaconda's approved EPP and WMP.

During construction, sewage effluent was handled via an approved portable facility, with holding tanks emptied by a pump truck on a regular basis and effluent disposed of at an approved off-site facility. For the operations phase, an approved septic system has been installed, in accordance with NL's *Environmental Control Water and Sewage Regulations*.

Hazardous materials such as engine oil, hydraulic fluids and diesel fuel are stored in appropriate containers at a designated location, covered and dyked for spill containment. Two tanks are located onsite (18,000 L tank near the loading equipment, 22,000 L tank at the crusher), in compliance with NL's *Storage and Handling of Gasoline and Associated Products Regulations*. Any hazardous waste will be disposed of by a qualified contractor based on volume, at an approved site for the corresponding waste type.

Ship refuelling occurs in Charleston and ship fuel is not stored at the Project site. Phoenix assures that ships adhere to all relevant laws, regulations and permits, and meet all regulatory requirements pursuant to the *Canada Shipping Act* and attendant regulations including the *Oil Pollution Prevention Regulations* and *Ballast Water Control and Management Regulations*). It should be noted that there is no "tanker" traffic associated with the Project; there is no bulk oil/fuel transport, nor oil/fuel transfer to or from ships while at the dock facility. As per the regulations, neither bilge water nor ballast water is discharged at the Project site.

There are no planned liquid discharges associated with any Project phase. Anaconda's EPP and Contingency (Spill Response) Plan detail measures to prevent and respond to accidental liquid discharges, including ensuring emergency spill kits are placed strategically around the site and all workers are trained in spill response.

A drainage collection system is in place on the site, which collects surface runoff in a settling basin to facilitate a passive filtration process. Conveyors are covered to prevent sediment runoff into Pine Cove in the event of rainfall during ship loading. A series of sediment traps have been placed around the perimeter of the barge to trap any sediment before any water enters the marine environment. A small powered sweeper has been positioned on the barge to clean-up coarser product.

Several phases of Acid Rock Drainage (ARD) studies have been completed on all of the rock types to be excavated from the open pit mine, including the waste rock materials that are being crushed and shipped as part of this Project. The initial phases of ARD test work conducted in 2006 and 2007 included 'static' laboratory test work on samples of exploration drill core. The test work and resulting analysis showed that the waste rock materials from the mine open pit would be non-acid generating. Further 'kinetic' work was completed in 2008 and 2009, which included humidity test cells on 2 representative samples of waste rock material. The results of these long-term tests confirmed that the waste rock materials would be non-acid generating (Anaconda Mining Inc. 2010).

The phased ARD study work was reported to NLDNR over the development and operations phase of the mine open pit as part of the *Mining Act* requirements for development and closure planning of the mine. The results were accepted, allowing waste rock storage at surface without the requirement for ARD mitigation during operations or at closure.

2.4 Project Phases and Scheduling

The Project schedule is presented in Table 2-2. Specific dates of Project phases and activities are provided in Table 2-3.

Table 2-2 Project Schedule

Activity	Week/Month																															
	June 2016				July 2016				August 2016					September 16				Q4 2016			Q1 2017			Q2 2017			Q3 2017			Q4 2017		
	06-Jun	13-Jun	20-Jun	27-Jun	04-Jul	11-Jul	18-Jul	25-Jul	01-Aug	08-Aug	15-Aug	22-Aug	29-Aug	05-Sep	12-Sep	19-Sep	26-Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Construction																																
Clearing/Grubbing	█	█																														
Access Road	█	█	█																													
Crushed Rock Stockpile Laydown Area			█	█																												
Dock Approaches								█	█	█	█	█	█																			
Crusher/Conveyor Setup									█	█	█	█	█	█																		
Mooring Bollards									█	█	█	█	█																			
Dock Cribs										█	█	█	█	█	█																	
Barge Setup															█																	
Operations																																
Crushing																		█	█	█	█	█	█	█	█	█	█	█	█	█	█	
Loading and Shipping																		█	█	█	█	█	█	█	█	█	█	█	█	█	█	
Decommissioning																																

Note: Specific dates for each activity are provided in Table 2-3.

Table 2-3 Dates of Project Phases and Activities

Activity	Start Date	End Date	Duration
Construction	June 6, 2016	September 16, 2016	3.5 months
Clearing/Grubbing	June 6, 2016	June 20, 2016	2 weeks
Access Road	June 7, 2016	June 28, 2016	3 weeks
Crushed Rock Stockpile Laydown Area	June 23, 2016	June 28, 2016	1 week
Dock Approaches	July 26, 2016	August 30, 2016	1 week
Crusher/Conveyor Setup	August 8, 2016	September 9, 2016	1 month
Mooring Bollards	August 10, 2016	August 30, 2016	3 weeks
Dock Cribs	August 15, 2016	September 15, 2016	1 month
Barge Setup	September 14, 2016	September 16, 2016	2 days
Operations	September 20, 2016	November 20, 2017	14 months
Crushing	September 20, 2016	November 20, 2017	14 months
Loading and Shipping ¹	September 20, 2016	November 20, 2017	14 months
Decommissioning²	November 2017	December 2017	1 month

Notes:

1. At this time, it is assumed ships will not be operating in January and February due to ice conditions.
2. Rehabilitation and closure of the Project will be carried out as part of the overall Pine Cove Property Rehabilitation and Closure Plan.

2.4.1 Construction

Approximately 400 m of new, unpaved access road was required to access the dock facility and crusher. The road was constructed using rockfill sourced from the waste rock storage areas and crushed stone produced at the mine site was used for road topping. The approximately 0.5 ha area used for access road development was cleared and grubbed prior to placement of rockfill. All grubbing and organic material was stockpiled separately to be used in the rehabilitation phase of the Project. Approximately 30,000 tonnes of waste rock from the mine was used for construction of the road structure. Drainage ditches were placed beyond the shoulders of the road to manage surface water runoff. The road was constructed in approximately three weeks. No culverts or bridges were required to accommodate the access road. No blasting was required for access road construction.

Preparation of the crushed rock stockpile area was completed in one week and required clearing, grubbing and the placement of a rockfill pad over an approximately 0.6 ha area. All grubbing and organic material has been stockpiled separately to be used in the rehabilitation phase of the Project. Waste rock from the mine was used for rockfill construction of the stockpile pad. The drainage ditch previously located at the toe of the NPWD embankment was relocated to the toe

of the crushed material stockpile area for surface water runoff management. The set-up of the crusher/conveyor system occurred over a one-month period.

As per the requirements of NLDNR and NLDEC, all grubbed organic material has been stockpiled and utilized for progressive and/or final rehabilitation. The existing organic material stockpile has a footprint of 10,800 m², is 4 m in height and is located north of the crushed rock stockpile. Prior to this Project, the organic material stockpile contained approximately 20,000 m³ of material from stripping of the expanded mine TMF. This Project added approximately 5,000 m³ of material to the stockpile. The stockpiled organic material will be used for rehabilitation and closure of the Project.

The dock infrastructure includes two rockfill approaches, two crib structures, and four mooring bollards. The rockfill approaches were constructed by placing clean rockfill in the water with an excavator, thereby minimizing water disturbance. A floating silt fence was installed to minimize dispersion of suspended solids beyond the immediate area. The cribs were constructed of 0.25 m by 0.25 m by 12.2 m timbers on a sloped rockfill launch pad, to a height of approximately 3 m. The constructed cribs were launched and sunk into position with ballast rock on a prepared rockfill mattress at the end of the rockfill approach areas. Once the cribs were firmly seated on the bottom, they were built-up to the final elevation, leveled, and filled with ballast rock, ranging in size from 0.25 m to 0.50 m, placed by an excavator from a barge. The overall dock footprint is 6,000 m².

The mooring bollards were constructed on and anchored to exposed bedrock along the shoreline adjacent to the dock structure. The approximately 3 m by 3 m concrete foundations for the steel mooring bollards were poured directly on the bedrock surface.

The construction of the dock (i.e., rockfill approaches, timber cribs, mooring bollards and barge placement) occurred over a six-week period. No blasting (either in-water or on-land) or dredging was required for dock construction.

In addition to equipment already in use for the overall mining operation, the following heavy equipment was required during construction:

- Three 460d rock trucks
- One 470 excavator
- One 700j dozer
- One 270 LC long-reach excavator

2.4.2 Operations

The duration of the operations phase, from start of rock crushing to shipping of the last load, is approximately 14 months. Operations are currently underway. During normal daytime mining operations, haul trucks (44 tonne capacity) dump waste rock directly from the mine to the crusher. The distance that these trucks travel from the open pit mine to the crusher is the same distance that would otherwise be travelled to dump waste rock to the NPWD; therefore, the Project does not increase this trucking activity.

The number of truck trips per day to the crusher is variable and dictated by the open pit mining requirements (mining in ore versus mining in waste). Generally, it is anticipated that trucks traveling from the mine open pit directly to the crusher will deliver approximately 1.5 million tonnes of waste rock over the course of the Project, with an average of 95 truck trips per day to a maximum of 135 trips per day during peak aggregate production, if sufficient waste rock is available from the mine open pit.

Loaders are used to load waste rock from the NPWD to the crusher during night and weekend shifts when haul trucks are not operating. This activity is directly attributable to the Project as it is not already being carried out as part of the mining operation. It is anticipated that 1.5 million tonnes of waste rock will be transported from the NPWD to the crusher. The loader capacity is approximately 10 tonnes. The average number of loader trips is 415 per day, to a maximum of 1,000 trips per day during peak production. The travel distance for the loader from the NPWD to the crusher is approximately 30 m.

Once material enters the crushing circuit, it is processed at an average rate of 500 tonnes per hour and stored in the crushed rock stockpile area. The crusher will be operated as required to stockpile sufficient crushed rock to match the shipping schedule as outlined below. Stockpiled crushed rock is then be loaded onto an overland conveyor system which moves the rock across the north approach of the dock and onto the barge. The overland conveyor loads the rock material directly onto a ship-loading conveyor system on the temporary barge, which delivers the rock directly to a docked ship's cargo hold.

The loading process takes approximately 3 to 4 days per vessel. Figures 2 and 3 illustrate the conveyor layout and arrangement along the northern approach and the temporary barge, and the conveyor connection route from the crushed rock stockpile to the ship.

In addition to equipment already in use for the overall mining operation, the following equipment is required during operations:

- Three 844 John Deer loaders
- One 470 excavator
- One C130 Jaw Plant w/ 90 Ton Live Truck Box
- One Surge Bin Hopper
- One 1 m by 18 m (36' by 60') Portable transfer conveyor (Dual Hopper)
- Two HP300IOC Cone Plants
- Two Screen Plants with rear feed conveyor
- One 1.5 m by 31 m (54' by 100') Pit Portable Radial Stacker
- One 1 m by 31 m (36' by 100') Pit Portable Radial Stacker
- One portable hydraulic Grizzly feeder
- One 1.3 m by 46 m (42' by 150') portable conveyor
- Two 1.3 m by 31 m (42' by 100') portable conveyor
- Two 1.3 m by 52 m (42' by 170') Magnum Stackers

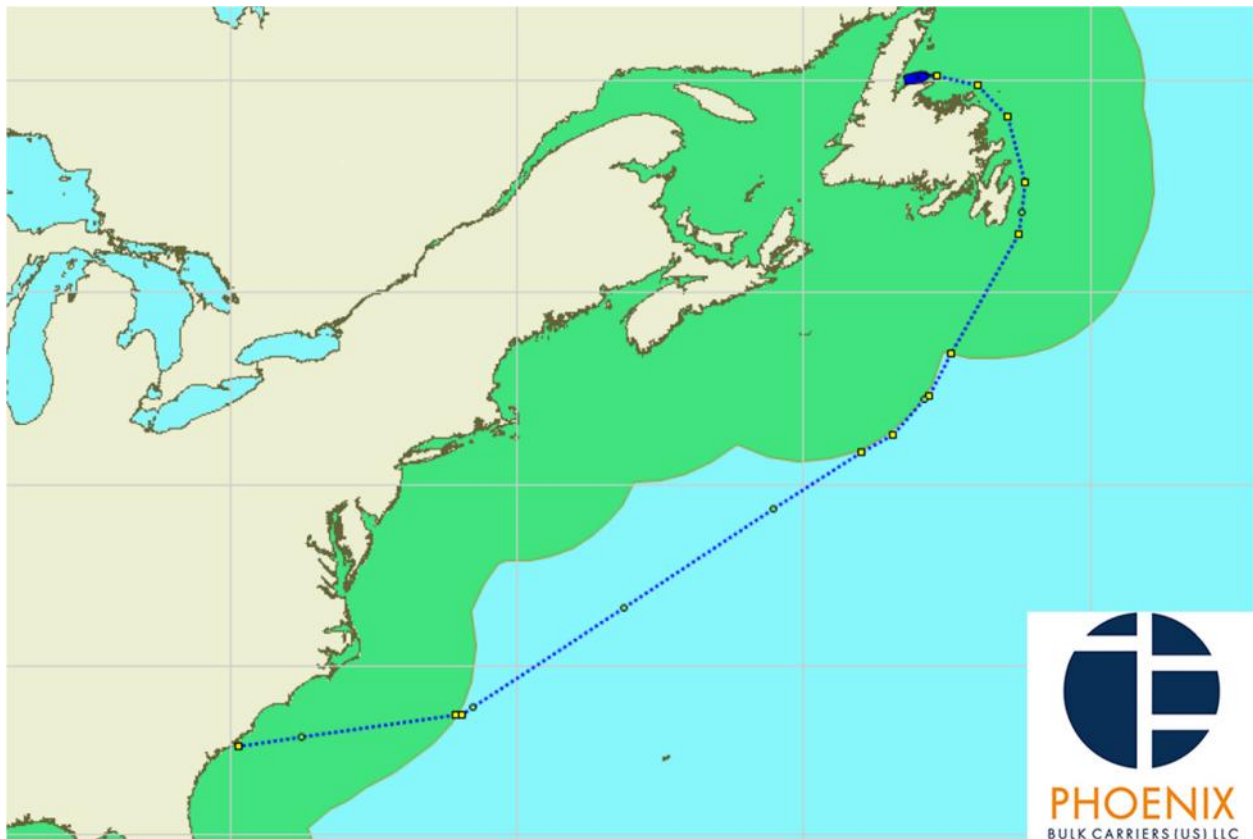
One vessel per week is planned, for an average monthly shipping rate of 290,000 tonnes per month, with the remaining 100,000 tonnes shipped in the final month. At this time, it is assumed

shipping will not occur in January and February due to ice conditions. TC has approved the navigational route (Figure 5), which follows established shipping lanes, was planned by a professional sea captain to account for the conditions specific to the region, including depth and presence of hazards.

The navigational route follows established shipping lanes from Port Rouse to Charleston. The shipping lane in Baie Verte was established through transporting asbestos to Europe and the USA via large marine vessels. Along the eastern coast of Newfoundland, vessels will follow the route currently used by ships transporting concentrate between Voisey's Bay, Labrador and Long Harbour, NL. The navigational route from southeastern Newfoundland to Charleston follows the Great Circle shipping lanes used by vessels travelling between Europe and the USA.

The navigational route has been determined to be the safest route for the ships to traverse to service the dock facility. All vessels are equipped with modern navigational aids and will employ pilots licensed in Canada. Potential conflict with other vessels will be minimized through adherence with the *Navigation Safety Regulations*, *Merchant Shipping (Safety of Navigation) Regulations*, and *Ship Station (Radio) Regulations*.

Figure 5 – Navigational Route between Charleston, South Carolina and Port Rouse, Baie Verte, NL



2.4.3 Decommissioning

The barge, crusher and conveyors will be removed once the final shipment of crushed rock has been loaded and shipped. The office, lunch room and washroom facilities are mobile and can be used elsewhere upon closure. These facilities will be relocated to another project or sold depending on Anaconda's plans and requirements in the area. Wooden power poles and electrical lines will be removed; it is Anaconda's understanding that NL Hydro will be able to reuse these materials for other Anaconda projects or for other area users. Decommissioning of the dock approaches, cribs, and mooring bollards, as well as the road and crushed rock stockpile areas, will be incorporated into the Rehabilitation and Closure Plan for the overall Property as described below.

2.4.4 Rehabilitation and Closure

Anaconda has included the requirement to rehabilitate the Project-related disturbed areas in a recent update to their Pine Cove Property Rehabilitation and Closure Plan, approved by NLDNR. Financial Assurance has also been posted to cover these rehabilitation and closure costs, as is required by NLDNR. The plan sets out the measures to be taken to restore the Property as close as reasonably possible to its former condition or to an alternate use or condition that is considered appropriate and acceptable by the applicable regulators. The plan addresses physical and chemical stability, natural aesthetic requirements, revegetation, wildlife, water management, air quality, noise levels, and long term land use.

The current schedule is to start mine rehabilitation in 2018, with a 2022 closure date. The Project features and infrastructure will be rehabilitated as part of Anaconda's ongoing progressive rehabilitation activities. The general rehabilitation activities associated with the Project are as follows:

- The timber cribs will be removed and either demolished for disposal at an approved/permitted location or disassembled for reuse in another aspect of the project (e.g., pipeline sleepers).
- Rockfill approaches will be removed using a long reach excavator from a barge and/or from the approach or shoreline. Floating silt curtains will be used to minimize dispersion of suspended sediments beyond the immediate area. DFO will be consulted to determine any specific requirements at the sea floor, including potentially leaving some rockfill material in place as structure for marine habitat.
- Mooring bollards and their concrete foundations will be demolished and disposed of at an approved facility.
- Rockfill above the high tide mark, including further upland along the laydown areas, access roads and stockpile areas, will be removed and/or contoured to match the natural topography, and organics/overburden will be placed over disturbed areas and scarified to promote natural revegetation. Seeding will be undertaken to minimize surface erosion and assist in bank stabilization.

Materials will be reclaimed for salvage wherever possible, and any materials deemed unsalvageable will be disposed of in accordance with the NL *Waste Material Disposal Act*.

3.0 Project Location

Exploration activity on the Pine Cove Property began in 1985 and there have since been several transfers of ownership. The Pine Cove mill and mine have been in production since 2008 and Anaconda assumed complete ownership in 2011. The 160 ha Property, located at 49°57'40.54"N, 56°7'51.64"W, includes the open pit mine, tailings and waste rock management areas, a mill building, temporary office and washroom trailers, conveyors, a road network and other associated infrastructure (Figure 4). The Project required the development of approximately 4 ha on the western side of the Property. There is marginal beach between the tidemark and the abruptly-rising back slope. Photos of the Project site are provided in Appendix A.

Substantial marine industrial traffic and activity has been undertaken in Baie Verte. The Project is located approximately 1 km southeast of the former Baie Verte (Advocate) Asbestos Mine Dock (active 1963 to 2009) and approximately 50 m from the former federal wharf, the TC Transit Wharf (active 1963 to 2005) (Figure 1). The TC wharf was also used by tankers to offload oil to the Irving Oil and Golden Eagle (Ultramar) tank facilities located in Baie Verte.

Access to the Pine Cove Property is via Route 410, a paved highway that extends northeast approximately 65 km from the Trans-Canada Highway to the Town of Baie Verte, then via the La Scie Highway (Route 414) extends eastward from Route 410 for approximately 17 km to its junction with the Ming's Bight Highway (418). Approximately 8 km north of the junction, the Pine Cove Forest Access Road (an all-weather gravel road) heads roughly westward for 5.5 km to the mine site.

The Baie Verte area is serviced by the Deer Lake Airport, located approximately 160 km southwest of Baie Verte. The mine is connected to the provincial power grid (Newfoundland Power) via a 4 km 25 kV distribution line located along the access road. The mine has backup power generation for some essential services. Connection of the Project to the provincial power grid is anticipated to occur in the second quarter of 2017. Until then, power for the Project will be supplied by generator.

Proximity of the Project site to various features is outlined in Table 3-1.

Table 3-1 Proximity of the Project to Various Environmental Features

Nearest Feature	Name	Distance from Project
Residence	Town of Baie Verte	3 km
Seasonal residence	Private cabin	4 km
Federal water	Atlantic Ocean	3 nautical miles (nm)
Private campground	Flatwater Pond	25 km
Provincial Park	Waterway Provincial Park	60 km
Important Bird Area	Bell Island South Coast	90 km
Migratory Bird Sanctuary	Shepherd Island	92 km

Table 3-1 (continued) Proximity of the Project to Various Environmental Features

Nearest Feature	Name	Distance from Project
National Park	Gros Morne National Park	110 km
Marine Protected Area	Wadham Islands	170 km
Aboriginal community	Qalipu Mi'kmaq First Nation*	60 km
Federal Reserve Land	Samia Jij Miawpukek Reserve	232 km
Province	Quebec	200 km
Provincial Wilderness Reserve	Middle Ridge Wilderness Reserve	200 km
Country	USA (state of Maine)	924 km
Federal Wildlife Reserve	No federal wildlife reserves in NL	N/A

Note: Qalipu First Nation is comprised of communities and wards across NL and the closest community is Sop's Arm in White Bay, approximately 60 km from the Project.

3.1 Land and Water Use

The land-based portion of the Project is located on Anaconda's existing mining lease (granted by NLDNR Mineral Lands Division) and existing surface lease (granted by NL Department of Municipal Affairs – Crown Lands Division). These leases extend to the shoreline (Figure 3). The Project lies outside of the Baie Verte and Ming's Bight municipal planning boundaries and does not occur within a regional planning area (e.g., regional resource management plan, conservation plan).

The Project is located in provincial waters and only the vessels traverse waters under federal jurisdiction. While provincial jurisdiction of waters generally ends at the low water mark under Canada's *Constitution Act* (1867), provincial jurisdiction in NL extends to the 3 nautical mile (nm) Territorial Sea limit (Supreme Court of Canada, 1984). The waters of Baie Verte are not administered by a Canada Port Authority under the *Canada Marine Act* and its regulations. An authorization relating to a water lot or use of the marine/coastal area is not required.

It is Anaconda's understanding that the Project does not require access to, use or occupation of, or the exploration, development and production of lands and resources currently used for traditional purposes by Aboriginal peoples.

4.0 Federal Involvement

Shoreline Aggregates has applied for federal funding in support of this Project. No federal lands have been used for the purpose of carrying out the Project, nor any granting of interest in federal land. The vessels traverse waters under federal jurisdiction, however these are not under the care and control of Anaconda.

Anaconda has consulted with the CEA Agency, TC and DFO regarding potential authorizations. DFO Fisheries Protection Program issued a letter of advice indicating that the Project will not contravene subsection 35(1) of the *Fisheries Act* or sections 32, 33, or 58 of the *Species at Risk*

Act, provided their recommended mitigation measures are adhered to (Anaconda applied the recommended mitigation measures during construction).

Federal authorizations and approvals outlined in Table 4-1 may be required for the Project.

Table 4-1 Anticipated Federal Authorizations and Approvals for the Project

Agency	Authorization/Approval	Notes
CEA Agency	Environmental Assessment as per subsection 8(1) of CEAA 2012.	To be determined.
TC – Marine Security	Approval of a Marine Security Plan under the <i>Marine Transportation Security Regulations</i> .	Plan has been approved.

5.0 Environmental Effects

The Project site is immediately adjacent to Anaconda’s Pine Cove Mine, which has been in production since 2008. The existing environment and potential effects of the Project on the surrounding environment are well understood, given the extensive environmental studies, permitting and monitoring which have been conducted in the Project area.

In accordance with ECCC’s *Metal Mining Effluent Regulations* (MMER), NL *Environmental Control (Water and Sewage) Regulations* and Anaconda’s provincial Certificate of Approval, Anaconda has implemented an environmental monitoring program for the mine. The program includes deleterious substance monitoring, acute lethality testing, environmental effects monitoring, and sub-lethal toxicity testing. Sampling is conducted at regular intervals from mine site-wide monitoring stations and samples are analyzed externally at accredited laboratories. The data is routinely uploaded to ECCC’s Regulatory Information Submission System, which monitors for potential environmental impacts that could be linked to the mining operation, and detailed monthly reports are submitted to NLDEC. Biological monitoring is also carried out as part of the environmental monitoring program. Anaconda has completed two Environmental Effects Monitoring (EEM) studies (2010 and 2013), with the third study design currently being reviewed by ECCC. Results to date have been in compliance with MMER and provincial regulations.

The Baie Verte Peninsula coastline is rugged and highly irregular with cliffs and steep slopes prevailing. On the Pine Cove Mine Site, moderate to steep slopes above Baie Verte rise to a maximum elevation of 120 m, averaging 60 to 70 m above sea level. The terrain at the Pine Cove Property is generally rolling, with gradients over portions of the site ranging up to 22%. The surrounding terrain is typical of the Newfoundland upland areas, with relatively dense vegetation and tree cover, interspersed with small ponds and bogs. The grey volcanic bedrock in the area is overlaid with a thin layer (0-2.5 m) of unconsolidated material comprised of peat, loose brown sand and gravel. While no groundwater studies have been conducted on the Property, the open pit has been developed down to 30 m below sea level, with no significant groundwater inflows observed to date.

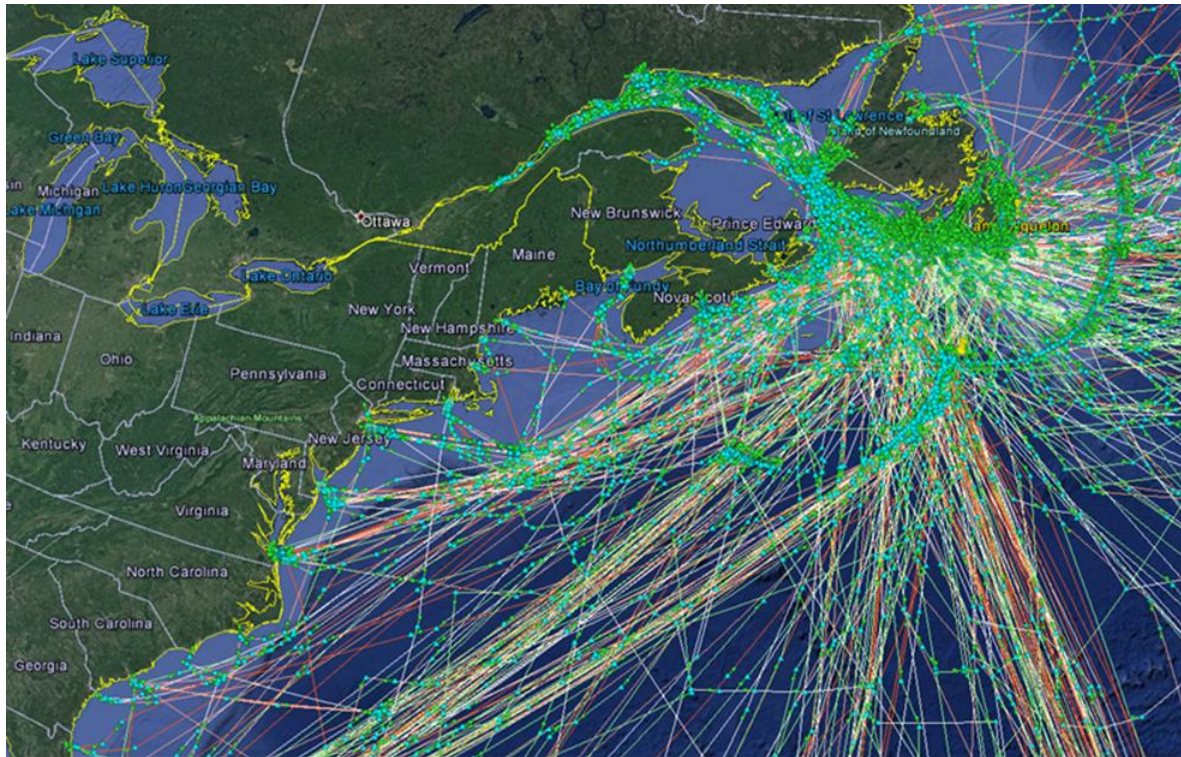
The Project occurs within the North Shore Forest subregion of the Central Newfoundland Forest ecoregion. Black spruce and balsam fir are widespread, with primarily mountain alder swamps. Vegetation around the Property consists of mature spruce and fir, largely cutover, with re-growth of alder, birch and willow. The timber was largely harvested in the 1990s, and much of the remaining mature timber has been blown down due to exposure to wind. The Atlantic Canada Conservation Data Centre (AC CDC) indicates there are no records of terrestrial or aquatic vegetation species of conservation concern within 5 km of the Project site. Expert Opinion Maps suggest that Mountain Holly Fern is possible, and Boreal Felt Lichen is possible but unlikely, within 5 km of the Project site.

The primary large mammal species in the area is moose, with black bear, furbearers (e.g., snowshoe hare, mink) and other small mammals (e.g., meadow vole and little brown bat) also occurring, though not typically observed on the Property given the mining activity. AC CDC indicates that there are no records of terrestrial species of conservation concern within 5 km of the Project site. AC CDC Expert Opinion Maps suggest polar bear (spring and summer) and Newfoundland Marten are possible but unlikely within 5 km of the Project site.

Unlike many of the surrounding communities, Baie Verte is not a fisheries-based community. Only 35 of its residents hold a fishing license, and there are no boat-building facilities, processing plants, community stages, or marine service centres. There are no aquaculture facilities in the Project area, including along the shipping route. Commercial fishing for snow crab, northern shrimp, surf clam, Greenland halibut (turbot), yellowtail flounder and redfish, and seal fishing occurs along the shipping route. From South Carolina to Baie Verte, the route traverses Northwest Atlantic Fisheries Organization (NAFO) Divisions 6, 4 and 3.

Marine traffic around, to and from the island of Newfoundland is extensive (Figure 6). In addition to the commercial fishing activity that occurs in the region, there is also marine traffic associated with domestic and international shipping, as well as with the offshore oil and gas sector.

Figure 6 – Shipping Routes in the North Atlantic Ocean



5.1 Atmospheric Environment

The Baie Verte Peninsula is sparsely populated with small towns, the largest of which is the Town of Baie Verte located 3 km from the Project, with an approximate population of 1,400. Predominant industries are small logging and saw mill operations and mining (including Anaconda's Pine Cove Gold Mine and Rambler Metals and Mining's Ming Copper Mine), with other light commercial businesses. The nearest commercial/industrial centres are the Town of Grand Falls-Windsor (approximately 120 km from the Project) and the City of Corner Brook (approximately 170 km from the Project site).

Based on the lack of industry in the Project area, the existing atmospheric environment in the area is considered typical of rural, non-industrialized areas. While there is no air quality monitoring in the Project area, NLDEC stations in Grand Falls-Windsor and Corner Brook indicate low to very low levels for all measured contaminants, including particulate matter less than or equal to 2.5 microns (PM 2.5), O₃, NO, Nitrogen dioxide (NO₂), NO_x, CO, and SO₂.

Potential local sources of air emissions include the former Advocate Asbestos Mine (approximately 4 km west of the Project), characterized by exposed asbestos-bearing mine waste rock and tailings, and the former Consolidated Rambler Copper Mine (approximately 8 km to the southeast), characterized by exposed acidic and metals laden mine waste rock and tailings. Rambler Metals and Mining operates an underground mine site approximately 7 km southeast of the Project site, with copper and gold processing facilities located at the Nugget

Pond Mill, approximately 30 km southeast. The Pine Cove Gold Mine (immediately adjacent to the Project site) is not currently subject to air quality monitoring or reporting under provincial or federal regulations.

Similarly, the lack of industry in the Project area results in very low baseline noise levels, and the region's variable topography and mixed terrain (bogs/wetlands and forest) attenuate noise propagation. The nearest noise contributor is the immediately-adjacent Pine Cove Gold Mine, which is not currently subject to noise monitoring or reporting under provincial or federal regulations. It is believed that noise does not affect residents, as Anaconda has not received a noise complaint since it assumed full ownership of the mine in 2011. There were no air quality or noise concerns expressed during the previous provincial EA processes for the Pine Cove Gold Mine.

Noise is generated by vehicles and heavy equipment during all Project phases, however the number of vehicles and equipment required for the Project is a fraction of those already in use for the overall mine operation. The crushing and conveying process generates noise during Project operation. Given the distance of the Project from the nearest receptor, the operations at the existing mine, the natural attenuation given the topography and surrounding forested terrain, the short Project duration, and Anaconda's commitment to use, inspect and maintain noise-suppression equipment, the Project is not expected to contribute to ambient noise levels in the area during any Project phase.

As described in Section 2.3, GHG emissions attributable to the Project are below the reporting thresholds prescribed by the GHGRP and the *NL Management of Greenhouse Act*, at 50,000 and 15,000 metric tonnes, respectively. Given that the Project-related GHG emissions do not exceed applicable regulations, the Project is not expected to result in residual adverse environmental effects to the atmospheric environment.

5.2 Freshwater Species and Habitat

Pine Cove Brook, located on the western shoreline of the Baie Verte Peninsula, flows in a westerly direction and empties into Baie Verte, a large bay of the Atlantic Ocean. The total Pine Cove watershed is approximately 1.6 km². Water features at the Project site are identified on Figure 7. Surface water quality monitoring in 2010 and 2013 found that Pine Cove Brook had elevated levels (compared to the reference area) of trace elements (cyanide, copper and molybdenum) and supporting variables (pH, alkalinity, nitrate, and hardness and conductivity), with evidence of linkage to Pine Cove Mine effluent.

Potential fish habitat on the Property has been substantially altered over the course of mining operations. With DFO authorization, surface water on the Property was altered and habitat constructed to compensate for fish habitat loss in Pine Cove Brook and Pasture Pond. Freshwater habitat within the Pine Cove watershed is primarily within the habitat compensation portions, developed to offset habitat loss in Pine Cove Brook and Pasture Pond. Monitoring of this habitat compensation area, immediately south of Pine Cove Pond, indicated presence of brook trout (*Salvelinus fontinalis*). Habitat monitoring of the compensation area ceased with the introduction of the new *Fisheries Act* in 2012.

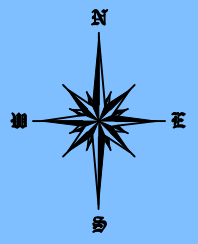
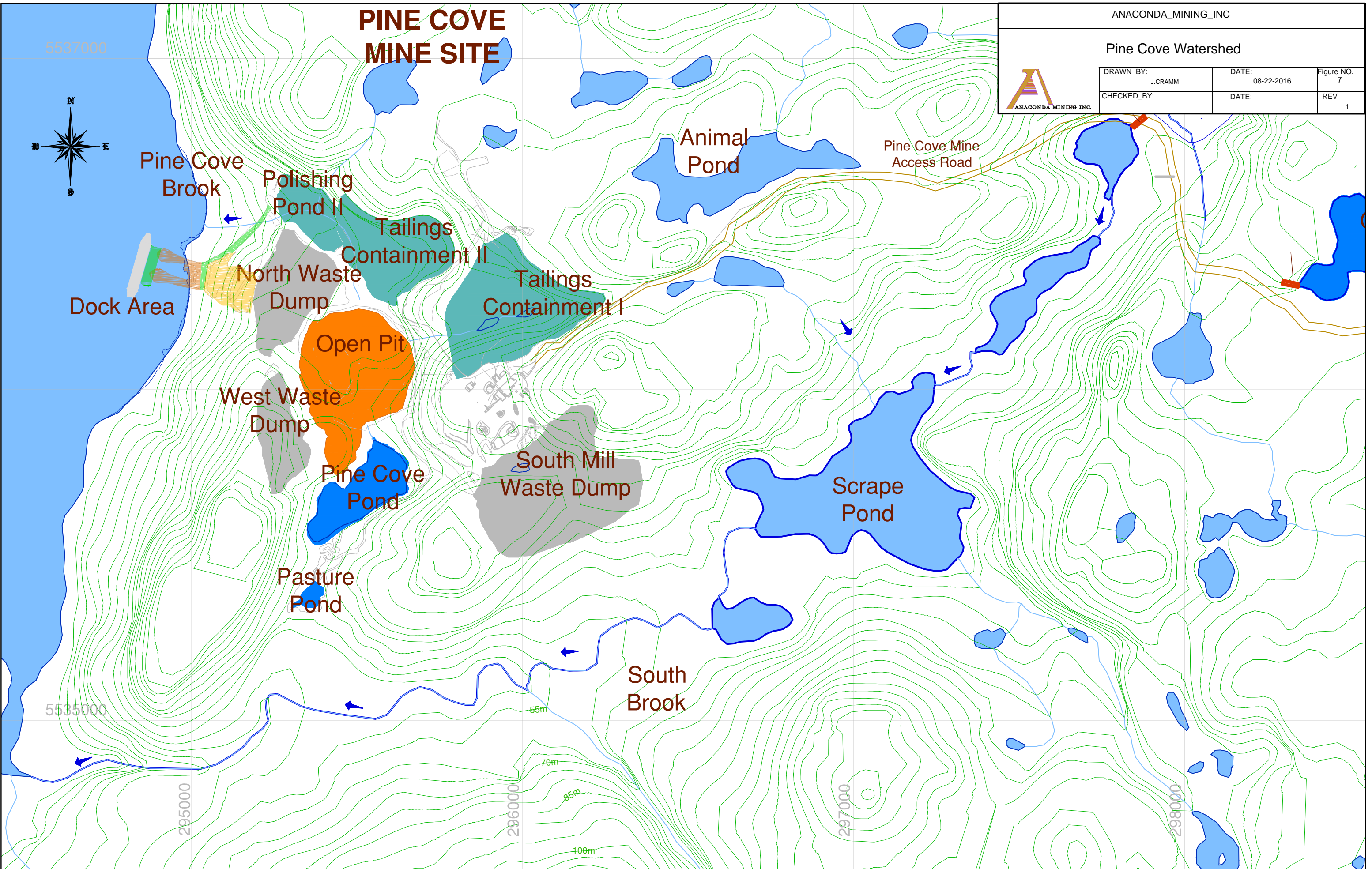
The AC CDC indicates that there are no records of freshwater species of conservation concern within 5 km of the Project site. AC CDC Expert Opinion Maps suggest occurrence of Banded killifish is possible (Special Concern under *SARA*; Vulnerable under NL *Endangered Species Act*), however brook trout is the only species that has been observed over the course of numerous field surveys.

The Project area has been impacted by mine construction and operation, and does not provide high suitability habitat for aquatic species. The access road did not require construction of culverts or bridges. Project activities are not expected to interact with freshwater species or habitat. Operation activities have the potential to increase sedimentation in the waterbodies, due to sediment runoff from land, and from the conveyors and barge; however, a drainage collection system is in place on the site, which collects surface runoff in a settling basin to facilitate a passive filtration process. Potential environmental effects of and mitigation measures related to accidental events and malfunctions are described in Section 5.3.

Pine Cove Watershed



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5.3 Marine Environment

Water levels and currents in Baie Verte are strongly influenced by local tides and wind conditions. Baie Verte receives discharges from several watersheds, the largest being the South West Brook which flows through the Town of Baie Verte. There are minor inputs from the municipal waste water system, local surface drainage (e.g., storm drains), drainage from the former Baie Verte (Advocate) Asbestos Mine and small-scale discharges from marine boats. Asbestos particles are known to occur in the waters of Baie Verte as a result of the historical mining activities at the Baie Verte (Advocate) Asbestos Mine. In addition, the discharge from the former Consolidated Rambler Copper Mine to the bay over several decades may have elevated background metal concentrations in Baie Verte Bay.

EEM studies for the Pine Cove Mine have not included testing of marine water quality, however the EEM study design currently with ECCC for review includes marine monitoring points. A site reconnaissance conducted in July 2016 included collection of marine water quality samples, with concentration of metals at 15 ug/l for Aluminum, 35 ug/L for Copper, and 35 ug/l for Iron.

General habitat at the Project location was characterized based on underwater footage of the dock location from May 2016. The extent of the footage allowed for only a high-level summary. Seabed and habitat features throughout the surveyed area are generally uniform, and the site does not represent a unique or limited habitat type within the area. Species of flora and fauna were typical (sea stars, brittle stars, sea urchins, sea scallop, horse mussels), with distributions consistent with depth and substrate type. A single sculpin and toad crab were also observed. Attachment surfaces for algal growth were limited within the area; algae were typically associated with cobbles and boulders on the seabed. The area had little structural complexity or variability, protection from wave exposure along the shoreline, and little cover on the seabed for juvenile fauna.

Marine plants with potential to occur in the area include eelgrass, seaweeds and kelp, and invertebrates include jellyfish, American lobster, and several crab, shrimp and mussel species. Basking shark, blue shark, and porbeagle shark are known to occur in the area, as are ground fish species including Atlantic cod, halibut, flounder and turbot. Atlantic wolffish (species of special concern), Northern wolffish (threatened) and Spotted wolffish (threatened) have the potential to occur in the area. Marine mammals observed in the area include pilot, minke, and blue whales (endangered), as well as harbour porpoise (threatened) and Atlantic white-sided dolphins. Leatherback sea turtles (endangered) have also been documented.

Potential adverse effects to fish and fish habitat and marine plants during Project construction included direct loss of marine habitat, decrease in water quality due to sedimentation and a resulting temporary avoidance of the area by fish, and introduction of alien/invasive species. The rockfill approaches and timber cribs resulted in a loss of fish habitat and direct impact to marine plants of approximately 6,000 m². The majority of the marine habitat is bedrock with gravelly sand, and the Project area would contribute only marginally to the region's fisheries productivity, as evidenced through DFO's letter of advice. The side slope of the approaches will provide additional fish and marine plant habitat, and with the temporary nature of the Project (18.5 months), it is anticipated that benthic flora and fauna will repopulate the area following construction.

Construction

While construction activities had the potential to decrease water quality in the watershed and bay due to sediment runoff from land, shoreline erosion, and suspension of sediment in the water column, and to introduce alien/invasive species, specific mitigation measures were implemented to minimize the potential for these adverse effects. Marine infrastructure was constructed during low tide to the extent possible, infill was placed in location with an excavator rather than end dumped, and there was no in-water blasting, pile-driving or dredging.

A floating silt curtain was installed around the in-water works to restrict suspended sediment to the immediate area, as recommended by DFO. Visual monitoring of turbidity and total suspended solids (TSS) was conducted on an ongoing basis to ensure the silt curtain is effective and remains securely installed. Shoreline erosion was minimal as the substrate is predominantly bedrock. The potential for surface runoff was mitigated through the use of sediment and erosion control structures, and the site was secured and construction activities suspended during inclement weather.

While construction equipment and vehicles used at previous worksites had the potential to introduce alien and invasive species to the watershed and marine environments, construction equipment was operated from above the water, and any equipment with potential to become immersed was inspected and properly cleaned.

The following mitigation measures were implemented during construction to minimize potential adverse effects to fish and fish habitat, as recommended by DFO:

- Project construction was carried out such that sediment and other Project-related materials were not permitted to enter Baie Verte or adjacent waterbodies.
- Rock material was clean, free of fine materials and of sufficient size to resist displacement during peak storm and/or flood events.
- Rock material was not end dumped, but was dumped on land and placed on station using an excavator.
- To the extent possible, the work was carried out during low tide and low wind/wave conditions to minimize turbidity and to minimize the area affected by turbidity.
- Floating sediment curtains were employed throughout construction of the approach to contain any sediment/turbid water within the Project area.
- Shoreline disturbance was restricted to the immediate work area. Shoreline areas disturbed by Project activities were stabilized as soon as possible to prevent erosion.

DFO determined that, with adherence to the above-noted mitigation measures, the Project would not result in serious harm to fish, nor contravene section 35(1) of the *Fisheries Act* or sections 32, 33 or 58 of the *Species at Risk Act*. DFO conducted site visits on July 12, 2016 and August 4, 2016, and observed that recommended mitigation measures were being applied. Given adherence with all recommended mitigation measures proposed by DFO, residual adverse environmental effects to the marine environment did not result due to Project construction.

Operation

Operation activities have the potential to decrease marine water quality due to sediment runoff from land, and from the conveyors and barge. A drainage collection system is in place on the site, which collects surface runoff in a settling basin to facilitate a passive filtration process. A series of sediment traps have been placed around the perimeter of the barge to trap any sediment before any water enters the marine environment. Conveyors are covered to prevent sediment runoff into Pine Cove in the event of rainfall during ship loading.

Vessel traffic and ship loading associated with Project operations have the potential to adversely affect marine mammals and sea turtles. An increase in underwater noise during ship loading activities may adversely affect marine mammals, and vessels may collide with sea turtles and marine mammals while in transit. Operational activities are not anticipated to affect fish and fish habitat. It should be noted that introduction of alien/invasive species from ballast water discharge at the Project site will not occur, as ballast water will not be discharged at the Project site as per Canadian regulations.

Increased underwater noise from marine vessels and ship loading may affect marine mammals by masking sounds, disrupting communication and echolocation, and resulting in navigational and behavioural (feeding and socializing) changes. Marine mammals may be displaced from the area, however this would decrease the likelihood of vessel collisions and would likely be temporary, given the short Project duration.

Vessel collisions with marine mammals and sea turtles are possible given the increase in marine traffic. The Canadian Coast Guard's Notice to Mariners requires that all vessels adhere to the following mitigation measures, which minimize the likelihood of vessel collisions:

- Hunting, chasing, following, dispersing, driving, herding or encircling any marine mammal is prohibited.
- If a marine mammal is observed, vessels must either stop or travel parallel to the observed marine mammal.
- Speed cannot be resumed until the marine mammal is at least 400 m away.
- High density fishing areas are to be avoided (marine mammals are often located in areas of high fish concentrations).

Speeds within Baie Verte are anticipated to be less than 2 knots, as the vessels must turn 180 degrees once they reach the dock for loading. Outside of Baie Verte, ships will generally travel at a speed of approximately 14 knots. Given the low frequency of Project-related marine traffic (one vessel per week), the short duration of Project operations (14 months), and adherence to the above-noted mitigation measures, Project operations are not expected to result in residual adverse environmental effects to the marine environment.

Decommissioning

Potential adverse effects to marine flora and fauna during Project decommissioning include a decrease in water quality due to sedimentation, and introduction of alien/invasive species. These effects would be temporary and localized, and Anaconda will employ the relevant mitigation measures described above, including site stabilization, silt curtains and proper equipment cleaning. In consultation with DFO, some rockfill may be left in place, should this be considered to have a positive effect and/or minimize adverse effects to fish and fish habitat and marine plants.

Given that Anaconda will employ all recommended mitigation measures proposed by DFO, Project decommissioning is not expected to result in residual adverse environmental effects to the marine environment.

Accidental Events

Spills or releases of hazardous substances (e.g., fuels, oils and lubricants) from accidents or malfunctions of vehicles, equipment and vessels are possible during all Project phases. Such accidental events have the potential to result in adverse environmental effects to soil, sediment and water, including decreasing the quality of terrestrial, freshwater and marine habitat through contamination, and lethal and sub-lethal effects to marine biota. An accidental spill or deposition of waste rock into the marine environment, most likely from a vessel collision, could result in a localized loss of fish habitat and direct mortality of marine biota.

The likelihood of an accidental spill or release of hazardous substances occurring and the extent of resulting environmental effects are minimized through adherence to applicable mitigation measures throughout all Project phases. Fuel and other hazardous materials are securely stored, vehicles and equipment are refueled at a designated area away from the shoreline, and marine vessels are not refueled at the site. Equipment and vehicles are inspected and maintained in good working order, and any leaks are addressed immediately. Emergency spill kits are onsite at all times. Mitigation measures to avoid collisions, such as adhering to posted speed limits and reducing steaming and approach speeds in inclement weather, will reduce the likelihood of an accidental spill or release, including accidental deposition of waste rock to the marine environment, from a vessel.

5.4 Avifauna

A wide range of land, shore and marine birds occur in the Baie Verte area, including migratory bird species as defined in the *Migratory Birds Convention Act*. The abundance of high profile raptor species such as bald eagle and osprey is likely low in the area due to absence of suitable cliff-nesting habitat, and stunted forest growth is unsuitable for raptor nests. AC CDC indicates that there are no records of bird species of conservation concern within 5 km of the Project site. AC CDC Expert Opinion Maps suggest occurrence of Ivory Gull, Red Crossbill and Rusty Blackbird is possible. The maps also suggest Short-eared Owl are possible but unlikely to occur within 5 km of the Project site. The Project site is located within Barrow's Goldeneye range.

Construction

Potential effects to migratory birds during Project-related construction activities include behavioural changes, and accidental mortality and destruction of active nests. While the presence of heavy equipment and associated noise and disturbance during construction activities had the potential to result in short-term, temporary displacement and interference with feeding, migration and breeding, construction-related noise was reduced by minimizing equipment and vehicle idling, using appropriately-sized equipment for the task, employing mufflers/silencers/enclosures as applicable, and conducting preventative maintenance on equipment and vehicles.

Approximately 4 ha of vegetation was cleared for the development of the access road and the laydown area for the crusher and crushed rock stockpile, which had the potential to result in direct mortality through accidental destruction of active nests. Due to the Project schedule, it was necessary to conduct clearing and infilling activities during the bird breeding season (April 15 to August 15). As per Anaconda's EPP, clearing activities were conducted using handheld equipment (e.g., chainsaws) to allow the operator better visibility to observe vegetation and to take the necessary action in the event an active nest was observed (e.g., stop clearing). Additionally, Anaconda employees walked the area to be cleared multiple times before and during clearing activities and no active nest were observed. Land grubbing, clearing and grading in the Project footprint and any temporary work areas (e.g., staging and storage areas for construction-related equipment and materials) were reduced to the extent possible and restricted to those areas absolutely necessary to carry out the Project. Given that no active nests were encountered during construction and that the above-noted mitigation measures were employed, Project construction did not result in residual adverse environmental effects to avifauna.

Operation

Operational activities such as vessel traffic and ship loading may increase noise-related disturbance to birds that forage in the surrounding coastal environment, however given the existing mining operation, Project-related operational activities are not anticipated to noticeably increase the noise levels in the Project area.

Increased shipping activity associated with operational activities may disrupt marine birds in the waters off the Project site and along shipping routes. Possible effects of marine vessel traffic on birds in the offshore environment include behavioural changes (e.g., avoidance, stress response) that may have energetic consequences, and loss of suitable foraging habitat as vessel traffic can reduce bird use of vessel disturbed areas. Project-related vessel activity will be intermittent (one vessel per week) and of short duration (14 months), and will only incrementally increase vessel traffic in Baie Verte and along shipping routes. The likelihood of marine bird displacement due to Project-related vessel traffic is minimized by maintaining decreased navigational speeds (i.e., 2 knots) when entering Baie Verte, avoiding concentrations of marine birds, and using existing shipping lanes. For seabirds it is possible that the vessels' lights may attract nocturnal species, particularly in poor weather. However, the remoteness of the area of operation from major seabird breeding colonies combined with standard mitigation protocols would also suggest that any effect would be highly unlikely to have any measurable population level impact.

For worker safety, portions of the Project area must be well-lit with high intensity lighting at night. Although the lighting is directed as narrowly as possible by shielding, these lights may have disorienting effects on migrating birds, particularly on foggy and overcast nights, causing potentially fatal collisions. To reduce the risk to migrant birds, the minimum amount of pilot warning and obstruction avoidance lighting is used on tall structures. High intensity lights, including floodlights, are turned off at night outside of working hours, whenever possible.

Given the operations at the existing mine, the short Project duration, and adherence to the above-noted mitigation measures, Project operations are not expected to result in residual adverse environmental effects to avifauna.

Decommissioning

Potential effects during Project decommissioning will be temporary and localized, and are anticipated to be similar to those during construction activities, including behavioural changes (altered foraging, displacement) resulting from increased noise and disturbance. Applicable mitigation measures for construction activities, such as heavy equipment and vehicle noise reduction, will also be applied during decommissioning activities. With adherence to the above-noted mitigation measures and given the short duration, Project decommissioning is not expected to result in residual adverse environmental effects to avifauna.

Accidental events

Accidental spills or releases of fuels, oils or lubricants from vehicles or equipment, or from marine vessels, most likely resulting from a vessel collision, could result in the direct physical exposure of birds to hazardous substances within the affected area, with possible lethal and sublethal effects. The likelihood of an accidental spill or release of hazardous substances occurring and the extent of resulting environmental effects are minimized through adherence to applicable mitigation measures throughout all Project phases (e.g., securely storing fuel and other hazardous materials, refuelling vehicles and equipment at a designated area, maintaining equipment and vehicles in good working order, immediately addressing any leaks). Marine vessels are not refuelled at site, and emergency spill kits are onsite at all times. Mitigation measures to avoid collisions, such as adhering to posted speed limits and reducing steaming and approach speeds in inclement weather, will reduce the likelihood of an accidental spill or release during transit and docking.

5.5 Federal Lands and other Provinces and Countries

The Project site is not in close proximity to any federal lands (92 km), another province (200 km) or country (924 km).

While GHG emissions have the potential to affect federal lands, another province or country, the GHG emissions attributable to the Project are below the reporting thresholds prescribed by the GHGRP and the *NL Management of Greenhouse Act* (50,000 and 15,000 metric tonnes, respectively). Given that Project-related GHG emissions do not exceed applicable regulations,

the Project is not expected to result in residual adverse environmental effects to federal lands, another province or country.

Project vessels will traverse waters under federal jurisdiction (3 nm from the Project site). The shipping route (Figure 6), which follows the established shipping lanes described in Section 2.4.2, has been determined to be the safest possible, planned by a professional sea captain to account for the conditions specific to the region, including depth and presence of hazards.

Given the low frequency of Project-related marine traffic (one vessel per week), the short Project operation duration (14 months), and adherence to the mitigation measures described in Section 5.3 and 5.4, the Project is not expected to result in environmental effects on federal lands (including waters), in a province other than Newfoundland and Labrador, or outside of Canada, during any Project phase.

5.6 Aboriginal Peoples

The Property was registered with and released from the NL EA process in 1992, 1997 and 2005. It is Anaconda's understanding that NL Department of Labrador and Aboriginal Affairs (NLDLAA) participated in review of the applications. NLDLAA did not indicate any conflicts with Aboriginal resource use or land claims, and did not issue any conditions or requirements regarding consultation with Aboriginal communities. Traditional Land Use or Traditional Ecological Knowledge studies could not be identified for the area.

The existing and available information does not indicate that Aboriginal peoples currently undertake traditional land and resource use activities within or near the Project area. Anaconda is not aware of any traditional Aboriginal fishing or hunting occurring near the Project area.

The Qalipu First Nation has no reserve land; it is made up of 66 traditional Mi'kmaq communities, spread out over 9 Electoral Wards. The closest Qalipu community to the Project is Sop's Arm, located approximately 60 km southwest in White Bay.

The Miawpukek Band Reserve is located in Conne River (south coast of Newfoundland), 232 km from the Project site. Approximately 860 people live on the 36 km² reserve. The Miawpukek Band does not currently have established traditional rights outside of the reserve boundaries and Anaconda is not aware of any Aboriginal fishing or hunting occurring near the Project area. Several Aboriginal groups hold communal commercial fishing licenses for areas along the shipping route, as summarized in Table 5-1.

Table 5-1 Aboriginal Communal Commercial Fishing Licenses Along the Shipping Route

Aboriginal group	License details
Labrador Inuit (Nunatsiavut Government)	<ul style="list-style-type: none"> • Three inshore groundfish enterprises that are licenced to operate in 3KL. • Two seal licences that permit access in SFAs 4-33 (Atlantic-wide).
Labrador Innu (Innu Nation)	<ul style="list-style-type: none"> • Mid-shore enterprise (65 to 100 ft) with a groundfish licence permitting access to a variety of areas (Atlantic-wide) including 3KLMN. • An Area 6 (3K) shrimp licence attached to this enterprise. • Inshore enterprise with a mobile gear and fixed gear groundfish licence that can operate in 3KL.
NunatuKavut Community Council	<ul style="list-style-type: none"> • Nine inshore enterprises with access to 3KL groundfish. • Two of the nine enterprises also have an Area 6 (3K) shrimp licence. • Two seal licences permitting access in SFAs 4-33 (Atlantic-wide).
Conne River Mi'kmaw (Miawpukek First Nation)	<ul style="list-style-type: none"> • Nine enterprises that permit access to 3KL. • Three tuna licences that permit access to 3LN. • One seal licence that permits access in SFAs 4-33 (Atlantic-wide).
Qalipu Mi'kmaq First Nation Band	<ul style="list-style-type: none"> • One inshore enterprise with groundfish licence permitting access to 3K and a shrimp licence for Area 6 (3K), as well as pelagic fishery access (herring, mackerel, and capelin) which occurs close to shore in 3KL.
Mi'kmaq Alsumk Mowimsikik Koqoey Association	<ul style="list-style-type: none"> • One enterprise with a groundfish licence permitting access to 3KL.

Source: AMEC 2014

6.0 Engagement and Consultation with Aboriginal Groups

Anaconda is not aware of any traditional Aboriginal hunting or fishing occurring near the Project area, and no concerns have been raised to date about the existing activities, despite conducting development and operational activities in the area for nearly 8 years.

Anaconda presented to Qalipu members at the Mawio'mi 2016 (March) Aboriginal Business Forum regarding Anaconda's overall project, including the dock facility and waste rock repurposing plans (the Project). This engagement resulted in the hiring of four Qalipu youth, to review opportunities to repurpose waste from the operation, including waste rock (from mining) and fine sand (from processing). Students are hired as part of the Youth Employment Program (Green Program) supported by National Research Council Canada's Industrial Research Assistance Program.

Anaconda continues to engage with Qalipu members regarding this and other opportunities related to its short and long term plans in the region. The Qalipu First Nation has not raised any concerns regarding Anaconda's current activities or plans.

7.0 Consultation with the Public and Other Parties

As the Project is a small addition to the existing Pine Cove Property, Anaconda had not previously engaged in a Project-specific public consultation process and, to date, no concerns have been raised about the Project. However, Anaconda will host a public information session in Baie Verte

in November, to provide a forum for two-way communication about the Project, both to inform the local community about the Project and to solicit any comments or concerns from the public and stakeholders. Comments, questions and concerns will be recorded and made available to regulators for review.

Anaconda has consulted with federal and provincial government agencies regarding the Project, as summarized in Table 7-1.

Table 7-1 Summary of Consultation with Regulatory Agencies

Regulatory Agency	Consultation Details
Federal	
CEA Agency	On July 28, 2016, Anaconda provided the Agency with Project information to seek guidance with respect to whether the Agency considered the Project to be a designated activity. By written correspondence dated August 26, 2016 the Agency stated it was of the view that the Project comprised a designated activity and directed Anaconda to submit a project description.
DFO - FPP	In May to July 2016, Anaconda submitted Project information, drawings and underwater video and photos to DFO. DFO and Anaconda also met on-site on July 12, 2016 and August 4, 2016. By written correspondence dated May 30, 2016 and July 21, 2016, DFO stated that the Project would not result in serious harm to fish and would not adversely impact listed aquatic species provide its recommended mitigation measures are implemented. The Project does not contravene section 35 (1) of the <i>Fisheries Act</i> , or sections 32, 33 or 58 of the <i>Species at Risk Act</i> .
TC – Marine Transportation	In accordance with the <i>Marine Transportation Security Regulations</i> , Anaconda submitted a Marine Security Plan to TC for review and approval. TC has approved the plan.
TC – Navigation Protection Program (NPP)	Through self-assessment, Anaconda determined the Project was not subject to NPP review or approval under the <i>Navigation Protection Act</i> .
Provincial	
NLDEC	Anaconda submitted Project information to NLDEC on April 18 and 19, 2016 to confirm that the Project was not subject to the NL EA process. NLDEC replied on August 19, 2016 and confirmed NL EA process does not apply.
NLDNR	On May 24, 2016, Anaconda submitted an addendum to the Pine Cove Property Development Plan and Rehabilitation and Closure Plan to NLDNR to address the addition of this Project. NLDNR approved the amendment on June 2, 2016 following a site visit. NLDNR visited again on August 25, 2016 during construction.

Appendix A

Photos



Photo 1: Project site (to the right) pre-construction



Photo 2: Dock configuration as constructed

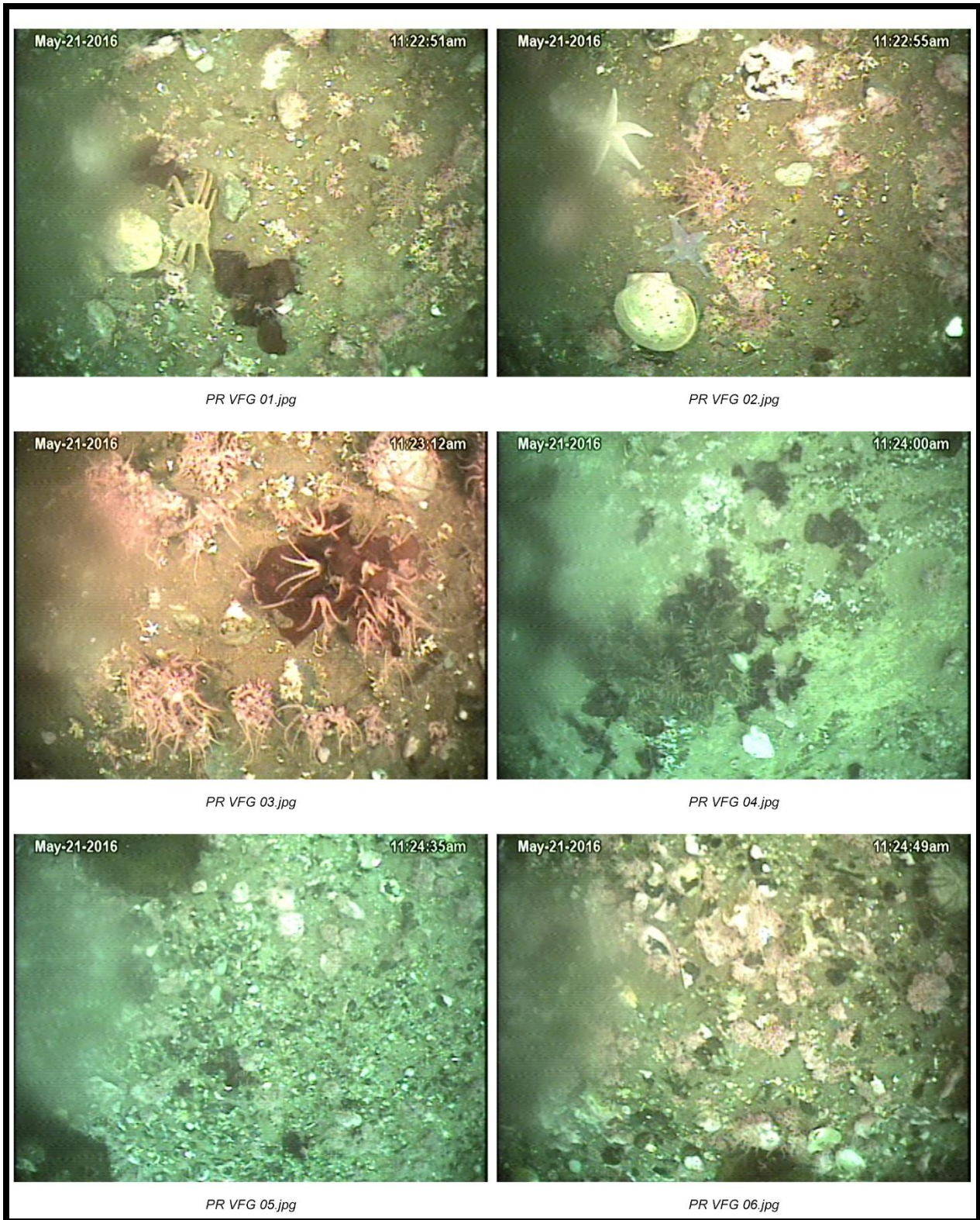


Photo 3: Select video frame grabs from footage at dock area