

PHASE 2 OF THE HOPE BAY PROJECT  
DRAFT ENVIRONMENTAL IMPACT STATEMENT

## Appendix V5-11A

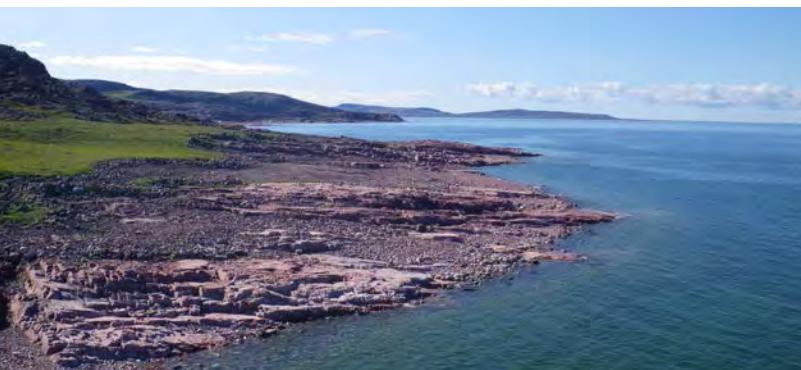
Hope Bay Belt Project: Marine Wildlife Baseline Report,  
2011



Hope Bay Mining Limited

# HOPE BAY BELT PROJECT

## Marine Wildlife Baseline Report, 2011



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## MARINE WILDLIFE BASELINE REPORT, 2011

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Hope Bay Mining Limited

Prepared by:



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Vancouver, British Columbia

HOPE BAY BELT PROJECT  
Marine Wildlife Baseline Report, 2011

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## Executive Summary

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This report provides the results of marine wildlife baseline surveys conducted in 2010 and 2011 for the Hope Bay Belt Project by Rescan Environmental Services Ltd. (Rescan), on behalf of Hope Bay Mining Ltd. (HBML). The Hope Bay Belt Property is located approximately 125 km southwest of Cambridge Bay, Nunavut, on the south shore of Melville Sound.

A caribou and seal aerial survey and a barge-based marine wildlife survey were conducted in 2010 within the marine Regional Study Area (RSA). A caribou and seal aerial survey was also conducted in 2011. The marine RSA encompasses an area of 14,378 km<sup>2</sup>.

Aerial surveys to document the location of caribou and caribou tracks in Melville Sound, upper Bathurst Inlet, and the Coronation Gulf were flown on June 3 to 5, 2010. The survey period corresponded to the latter part of the northern migration period for Dolphin and Union caribou. A total of 18 bull caribou and 114 caribou tracks were observed. The majority of caribou tracks were oriented in a northerly direction and followed shorelines along the Kent Peninsula. Nunavut-wide, Dolphin and Union caribou exhibit fidelity to crossing areas across Dease Strait and within the Coronation Gulf and Queen Maud Gulf (Poole et al. 2010). The orientation of caribou tracks recorded in the RSA suggest that these caribou may be using a crossing route from the northern edge of the Kent Peninsula towards Byron Bay on Victoria Island (Figure 1-1). This route has been used in previous years.

The presence of marine wildlife in the RSA was assessed through aerial surveys in the spring (concurrently with the caribou ice crossing study) and through a barge-based survey from August 10 to 12, 2010. The spring survey was used to document the presence of seal species in the RSA. A total of 777 seals comprised of 87 bearded seals, 386 ringed seals, and 322 unknown seals were observed, as well as 129 open breathing holes on the sea ice. Both ringed and bearded seals were more abundant in Coronation Gulf compared to areas within Melville Sound. During the August barge survey, two ringed seals, one bearded seal, one unknown seal, three common murres, and four pacific loons were observed. In addition, two unknown loons and one unknown gull were observed. None of the species recorded during the aerial and barge surveys are of conservation concern in Nunavut.

Incidental observations of caribou and caribou trails were also recorded during a caribou aerial survey conducted on May 22, 2011, as part of the annual Wildlife Mitigation and Monitoring Program (WMMP). A total of 10 caribou were observed on the ice, including six females and four unknown. Seventeen caribou tracks were recorded on the ice in Melville Sound, primarily to the west of Roberts Bay.

HOPE BAY BELT PROJECT  
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## MARINE WILDLIFE BASELINE REPORT, 2011

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## Glossary and Abbreviations

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Terminology used in this document is defined where it is first used. The following list will assist readers who may choose to review only portions of the document.

<b>COSEWIC</b>	Committee on the Status of Endangered Wildlife in Canada - A federal committee of experts that assesses and designates the level of threat to wildlife and vegetation species in Canada.
<b>GN DOE</b>	Government of Nunavut Department of Environment
<b>GPS</b>	global positioning system
<b>HBML</b>	Hope Bay Mining Limited
<b>Life History Period</b>	Periods of an animal's life that can be separated on the basis of certain characteristics, such as by animal behaviour, habitat use, or reproductive stage. For caribou, there are six general life history periods that can be separated by habitat use and animal behaviour; winter, spring migration, calving, post-calving, summer, and fall migration (including the rutting period).
<b>NPC</b>	Nunavut Planning Commission
<b>Rescan</b>	Rescan Environmental Services Ltd.
<b>RSA</b>	Regional Study Area
<b>SARA</b>	Species at Risk Act - A Canadian federal statute which is designed to meet one of Canada's commitments under the International Convention on Biological Diversity. The goal of the Act is to protect endangered or threatened organisms and their habitats. It also manages species which are not yet threatened, but whose existence or habitat is in jeopardy.
<b>WMMP</b>	Wildlife Mitigation and Monitoring Program

**HOPE BAY BELT PROJECT**  
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# 1. Introduction

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The Hope Bay Belt Property is located approximately 125 km southwest of Cambridge Bay, Nunavut, on the south shore of Melville Sound (Figure 1-1). The nearest communities are Omingmakto (75 km to the southwest of the property), Cambridge Bay, and Kingaok (Bathurst Inlet; 160 km to the southwest of the property).

The property consists of a greenstone belt running in a north/south direction, approximately 80 km long, with three main gold deposit areas. The Doris and Madrid deposits are located in the northern portion of the belt, and the Boston deposit is located in the southern end. The northern portion of the property consists of several watershed systems that drain into Roberts Bay, and a large river (Koignuk River) that drains into Hope Bay. Watersheds in the southern portion of the belt ultimately drain into the upper Koignuk, which drains into Hope Bay.

Hope Bay Mining Limited (HBML) is proceeding with the development of the Doris North Project. Required licences and permits are in place for the development of the Doris North Gold Mine, and construction of the project commenced in 2010.

HBML plans to develop additional deposits in the belt, and planning for this Phase 2 Project development has commenced. Baseline studies to support the permitting of the Phase 2 Project were carried out in 2009, and were continued in 2010 and 2011. The environmental baseline program conducted in 2010 was intended to fill in information gaps in order to support the permitting process for the Phase 2 Project. The site layout options considered for the 2010 Phase 2 environmental baseline program are shown in Figure 1-2.

Results from the 2010 Phase 2 Project environmental baseline program are being reported in a series of reports, as follows:

- 2010 Hydrology Baseline Report
- 2010 Freshwater Baseline Report
- 2010 Freshwater Fish and Fish Habitat Baseline Report
- 2010 Marine Baseline Report
- 2010 Marine Fish and Fish Habitat Baseline Report
- 2010 Terrain and Soils Baseline Report
- 2010 Country Foods Baseline Report
- 2010 Ecosystems and Vegetation Baseline Report

In addition, numerous reports are being produced as part of the Doris North Project compliance requirements, and many of these reports cover the geographical areas of the proposed Phase 2 Project. Examples of Doris North Project compliance reports generated in 2010 that are relevant to the proposed Phase 2 Project include:

- 2010 Meteorology Compliance Report, Doris North Project
- 2010 Hydrology Compliance Report, Doris North Project



Figure 1-1