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NUNAVUT WATER BOARD  
NUNAVUT IMALIRIYIN KATIMAYINGI  
OFFICE DES EAUX DU NUNAVUT

**File: 2BE-HOP0712/Amend**

December 15, 2010

Chris Hanks  
Director, Environment and Social Responsibility  
Hope Bay Mining Ltd.  
Suite 300, 889 Harbourside Drive  
North Vancouver, BC, V7P 3S1

Email: [chris.hanks@newmont.com](mailto:chris.hanks@newmont.com)

**RE: 2BE-HOP0712 Type "B" – Amendment No.5: Relocation of Windy Camp and Fuel Storage, Increase In Camp Water Use, Sewage Treatment Facility Modification and Reclamation of Closed Windy Camp and Patch Lake Infrastructure**

Dear Mr. Hanks:

Please find attached, Amendment No.5 to Licence No. 2BE-HOP0712 Type "B" issued to Hope Bay Mining Ltd. by the Nunavut Water Board (NWB) (**Motion 2010-23-L08**) pursuant to its authority under Article 13 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*. The terms and conditions of the original Licence and its subsequent amendments related to water use and waste disposal remain an integral part of this approval.

The NWB recommends that the Licensee consult the comments received by interested persons<sup>1</sup>. This information is attached for your consideration.

Sincerely,

Thomas Kabloona  
Nunavut Water Board  
Chair

TK/tla/pb

Enclosure: Licence No. **2BE-HOP0712 - Amendment No.5**  
Comments – KIA, EC, INAC, GN-CLEY

Cc: Distribution – Kitikmeot

<sup>1</sup> Kitikmeot Inuit Association dated July 20 and October 13, 2010; Environment Canada dated July 18 and October 22, 2010; Indian and Northern Affairs Canada dated July 30 and October 22, 2010; Government of Nunavut Department of Culture, Language, Elders and Youth dated July 5 and October 6, 2010.

## LICENCE AMENDMENT No. 5

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<b>Licensee:</b>	<b>HOPE BAY MINING LTD.</b>
<b>Licence No:</b>	<b>2BE-HOP0712 Type "B"</b>
<b>Licence Issued:</b>	<b>May 20, 2007</b>
<b>Amendment No.1 Issued</b>	<b>July 2, 2008</b>
<b>Amendment No.2 Issued</b>	<b>May 4, 2009</b>
<b>Amendment No.3 Issued:</b>	<b>July 20, 2010</b>
<b>Amendment No.4 Issued:</b>	<b>August 24, 2010</b>
<b>Amendment No.5 Effective:</b>	<b>December 15, 2010</b>
<b>Licence Expiry:</b>	<b>June 30, 2012</b>

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Pursuant to its authority under Article 13 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada* and the *Nunavut Waters and the Nunavut Surface Rights Tribunal Act*, with respect to an application for amendment dated May 26, 2010, made by Hope Bay Mining Ltd (HBML or Licensee), the Nunavut Water Board (NWB) hereby issues this amendment to Licence No. 2BE-HOP0712 with terms and conditions detailed below.

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### **Background and Application**

Licence 2BE-HOP0712 was issued May 20, 2007, with an expiry date of June 30, 2012, with respect to the use of water and deposit of waste, to allow for exploration activities for the Regional Hope Bay Exploration Program based out of the Windy Camp on the shore of Windy Lake complete with water source withdrawal from Windy Lake and waste water treatment and discharge, bulk fuel storage at Windy Lake Camp, the Patch Lake Major Drilling infrastructure at the north end of Patch Lake (including Bulk Fuel Storage), exploration drilling activities both land-based and on-ice, Landfarm construction, operation and closure,

The application for amendment includes the move of the entire Windy Camp (including fuel storage) to quarry site D located along the Doris-Windy all-weather road. Through decommissioning of the Patch Lake Major Drilling infrastructure, the bulk fuel storage tanks will be relocated to quarry site D. Upon completion of the camp and fuel storage relocation, reclamation activities will commence subsequent to the Board approval of an Abandonment and Restoration Plan for the sites.

The amendment application also included the request to increase the amount of water use from Windy Lake for domestic purposes at the new camp, of up to sixty three (63) m<sup>3</sup>/day to accommodate an increased camp capacity of 180 persons, the addition of up to 200 m<sup>3</sup>/day water use from Windy Lake, obtained seasonally as required from May through September, for dust suppression purposes along the Windy to Doris all-weather road, and the use of water from various sources for Drilling purposes of 80 m<sup>3</sup>/day, for a total water use of 343 m<sup>3</sup>/day.

With respect to the new camp's Waste Water Treatment Facility, HBML plans to utilize the membrane technology plant previously approved by the NWB in 2009 for use at the Boston

Camp. This facility will replace the Rotodisk facility originally permitted for the Windy camp. The freshwater intake and effluent discharge locations will remain unchanged.

The NWB received comments on the amendment application from the Kitikmeot Inuit Association (KIA), Indian and Northern Affairs Canada (INAC), Environment Canada (EC) and the Government of Nunavut Department of Culture, Language, Elders and Youth (GN-CLEY). The KIA and GN-CLEY had no concerns with respect to water and waste. Both INAC and EC found the amendment request to be generally acceptable.

Following the initial distribution of the amendment request, INAC commented that the proposed camp relocation represented a potential improvement to the Hope Bay Regional Exploration Project. Project operations based at quarry site D should have a lower risk of impacting nearby freshwater sources.

INAC also noted that the camp relocation application included plans to reclaim areas previously impacted by project activities. The NWB was notified on May 26, 2009 that HBML intended to submit a revised Abandonment and Restoration (A&R) Plan for the Windy Lake and Patch Lake facilities. However, this Plan has not yet been received. In the Amendment No.5 application, HBML proposed to submit the Abandonment and Restoration Plan by the end of December 2010, following consultation with the KIA.

In the submissions received from INAC and EC, both noted the request for an increase in water use for the camp, from twenty (20) m<sup>3</sup>/day, to sixty-three (63) m<sup>3</sup>/day. This is considered to be necessary by the Applicant for the increased camp population (an increase in maximum accommodation capacity from 90 to 180 people). INAC also raised the issue of additional water that may be required for dust suppression purposes along the all-weather road route between the Windy Camp and Doris North Camp. HBML provided a response to this issue on September 14, 2010 clarifying that an additional volume of water of approximately 200 m<sup>3</sup>/day, would be required on a seasonal basis from May through September for the all-weather road. HBML arrived at the estimate of 200 m<sup>3</sup>/day based on their experience watering the Doris North all-weather road, built between the Doris North site and Roberts Bay, which requires approximately 25 m<sup>3</sup> of water/km of road. The Doris-Windy all-weather road is approximately 8 km long.

In addition to providing a clarification concerning the volume of water required for dust suppression, HBML also submitted a memo<sup>2</sup> prepared by Rescan Environmental Services Ltd., assessing the potential effects of the proposed increased rate and volume of water withdrawal on Windy Lake, the project's water source. The memo states:

Historical data available for 2006, 2007, and 2009 indicate that the water level in Windy Lake fluctuates by approximately 20 to 30 cm during the ice-free season. In comparison, the estimated 1.4 cm decline in water level is expected to have no significant impact on lake water levels and hence fish habitat because it lies within the normal range of seasonal water level variation in Windy Lake. Lake water levels vary naturally on an hourly, daily, seasonal, and annual basis as a result of variation in precipitation, snowmelt runoff, evaporation, as well as ice

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<sup>2</sup> Memo to Chris Hanks, Hope Bay Mining Limited (HBML) from Rescan Environmental Services Ltd., re: Potential effects of water level drawdown in Windy Lake as a result of increased water use, dated September 14, 2010.

formation and break-up. Moreover, normal wind-induced wave action can cause local variation in the height of the wetted shoreline that exceeds 2 cm. (Pg. 2)

Upon review of the additional information submitted by HBML, parties were satisfied with the findings. In response, INAC recommended that the Licensee monitor Windy Lake's water levels, during periods of withdrawal for dust suppression purposes, to ensure that adequate outflow exists to support aquatic life. Given the significant volume of water that may be used during the summer months, the NWB agrees with INAC's suggestion.

### **Amended Terms and Conditions**

Having considered the amendment application, comments received and responses to additional information, Licence 2BE-HOP0712 shall be amended as follows:

Page 5 of Licence - Quantity of Water Not to Exceed:

**THREE HUNDRED FORTY THREE (343) CUBIC METRES PER DAY**

### **PART A: SCOPE, DEFINITIONS AND ENFORCEMENT**

Amend Item 1-Scope

This Licence allows for the use of water and the disposal of waste for an undertaking classified as Mining and Milling as per Schedule II of the *Regulations* at the Hope Bay Regional Exploration Project, located approximately 100 km south of Cambridge Bay and 50 km east of Umingmaktok, within the Kitikmeot Region, Nunavut.

General latitudes of 68° 12' 29.89' to 67° 29' 9.58"N and  
General longitudes 106° 50' 33.21" to 106° 4' 18.48"W

(Old) Windy Camp; located at Lat. 68° 3'N and Long. 106° 37'W

(New) Windy Camp to be relocated to Quarry D  
at Lat. 64° 4' 8"N and Long. 106° 36' 35"W

The revised scope of the Licence under Amendment No.5 includes the following activities incorporated from the original issued Licence and subsequent amendments:

Water use and waste disposal associated with the Windy Camp and associated infrastructure (fuel storage) including water intake at Windy Lake and a waste water treatment facility for treatment of camp sewage and greywater, the temporary use of water from Windy Lake and transport to the Doris Camp via winter road for potable use until the new treatment system is commissioned at the Doris Camp, Windy Lake Landfarm facility, Patch Lake Major Drilling facilities (and Bulk Fuel Storage) at the north end of Patch Lake, closure of the current Windy Lake Camp and Patch Lake Major Drilling infrastructure with the relocation of the bulk fuel storage facility tanks to the new Quarry D bulk fuel location, adjacent to the new camp.

## Amend Item 2. Definitions

**“Bulk Fuel Storage Facility”** means the fuel storage facilities, both at the Windy Camp and at Patch Lake, as described in the Renewal Application and supporting documents submitted March 12, 2007 or, upon closure of Patch Lake, means the fuel storage facility as described in SRK Consulting drawings WTF-01 to 06 dated April 20, 2010 submitted with the Amendment No.5 Application dated May 26, 2010.

**“Waste Water Treatment Facilities”** means the Rotating Biological Contact (ROTODISK™) facility as described in the Renewal Application and supporting documents submitted March 12, 2007, designed for the treatment of camp sewage and greywater or, when completed with the relocation of the Windy Camp to Quarry D, comprises the membrane bio-reactor and UV disinfection system and associated engineered structures and effluent discharge area designed to treat Sewage and greywater as described in the Amendment No. 5 Application, dated May 26, 2010.

## **PART B: GENERAL CONDITIONS**

### Insert Item 9

The Licensee shall review the Plans referred to in this Licence as required by changes in operation and/or technology and modify the Plans accordingly. Minor updates to the Plans are to be submitted with the Annual Report in the form of an addendum, and major revisions are to be submitted when required and shall be accompanied by a table of revisions or concordance sheet that provides an overview of the changes made to the plan, unless directed otherwise by the Board or Inspector.

## **PART C: CONDITIONS APPLYING TO WATER USE**

### Amend Item 1

The Licensee shall obtain all water for domestic camp use from Windy Lake for the Windy Camp or Doris camp, not exceeding sixty three (63) cubic metres per day. Drill water shall be obtained from local water source(s), detailed on the June, 2007 drawing entitled “Hope Bay Exploration Drilling Water Sources”, and may include additional water bodies proximal to the drilling targets that possess a surface area greater than or equal to 15,000 m<sup>2</sup>, or as otherwise approved by the Board. The total volume of water for drilling purposes shall not exceed eighty (80) cubic metres per day. In addition, the Licensee shall obtain all water for dust suppression on the Windy Lake all-weather road, not exceeding two hundred (200) cubic metres per day on a seasonal basis as required, from May through September. Total water use from all sources, for all purposes shall not exceed three hundred forty three (343) cubic metres per day.

## **PART D: CONDITIONS APPLYING TO WASTE DISPOSAL**

### Amend Item 11

The Licensee shall collect as required, all sludge generated by the Waste Water Treatment Facilities in 45 gallon drums and transport to the Boston Camp for proper disposal unless otherwise approved by the Board.

**PART E: CONDITIONS FOR CAMPS, ACCESS INFRASTRUCTURE AND OPERATIONS**

Insert Item 10

The Licensee shall provide to the Board for review and approval, at least sixty (60) days prior to commencing construction of the Bulk Fuel Storage Facility at Quarry Site D, for construction drawings stamped and signed by a Professional Engineer registered in Nunavut.

**PART I: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION OR TEMPORARY CLOSING**

Insert Item 16

The Licensee shall submit to the Board for approval, by January 31, 2011, a Final Abandonment and Restoration Plan for the old Windy Lake camp site and Patch Lake site prepared in accordance with the Mine Site Reclamation Guidelines for the Northwest Territories, 2006 and the INAC Mine Site Reclamation Policy for Nunavut, 2002.

**PART J: CONDITIONS APPLYING TO THE MONITORING PROGRAM**

Amend Item 6

The Licensee shall measure and record in cubic metres, the daily quantities of water utilized for each use including camp, drilling and all-weather road dust suppression purposes. The use of Windy Lake as a temporary water source for the Doris Camp shall also be recorded and reported as a separate use, within the annual report required under Part B, Item 2(i). In addition to the daily quantities of water used for drilling, the Licensee shall record each water source used in accordance with Part C, Item 1.

Insert Item 20

The Licensee shall monitor water levels in Windy Lake during open water, in order to verify that additional water withdrawal for dust suppression activities does not result in drawdown beyond naturally occurring levels.

In addition to the conditions amended above, and consistent with amended condition Part B, Item 9, the NWB requires that the Licensee submit to the Board for approval, with the 2010 Annual Report, revisions to the following plans to reflect the proposed changes to the project:

- Abandonment and Restoration Plan;
- Spill Contingency Plan; and
- Waste Water Treatment Facility Operation and Maintenance Manual.

**All remaining terms and conditions of the Licence 2BE-HOP0712 Type ‘B’ dated May 20, 2007, subsequently amended on July 2, 2008, May 4, 2009 July 20, 2010 and August 24, 2010 still apply.**

This Licence Amendment No.5 issued and recorded at Gjoa Haven, NU on December 15, 2010.

Approved by,



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Thomas Kabloona  
Nunavut Water Board  
Chair