NWB Annual Report **Year being reported:** 2013

License No: 2BE-HOP1222 **Issued Date:** June 30, 2012
Expiry Date: June 30, 2022

Project Name: Hope Bay Regional Exploration Project

Licensee: TMAC Resources

Mailing Address:
Suite 901 - 372 Bay Street
Toronto, Ontario
M5H 2W9

Name of Company filing Annual Report (if different from Name of Licensee please clarify relationship between the two entities, if applicable):

Licence 2BE-HOP1222 was issued June 30, 2012 to Hope Bay Mining Ltd. Effective June 18, 2013, the NWB authorized the assignment of Licence 2BE-HOP1222 from Hope Bay Mining Ltd. To TMAC Resources Inc.

General Background Information on the Project (*optional):

Licence 2BE-HOP1222 allows TMAC to carry out activities in support of exploration drilling at the Hope Bay Regional Exploration Project and the Windy Camp, which supports exploration activities.

Licence Requirements: the licensee must provide the following information in accodance with

Part B | Item 2

A summary report of water use and waste disposal activities, including, but not limited to: methods of obtaining water; sewage and greywater management; drill waste management; solid and hazardous waste management.

Water Source(s): Domestic from Windy Lake; drill water from local water sources

Water Quantity:

22995 cu.m	Quantity Allowable Domestic (cu.m)
1627 cu.m	Actual Quantity Used Domestic (cu.m)
29200 cu.m	Quantity Allowable Drilling (cu.m)
2319 cu.m	Total Quantity Used Drilling (cu.m)
30600 cu.m	Quantity Allowable Dust Suppression (cu.m)
731 cu.m	Total Quantity Used Dust Suppression (cu.m)

Waste Management and/or Disposal

- [x] Solid Waste Disposal
- [ ] Sewage
- [x] Drill Waste
- [ ] Greywater
- [ ] Hazardous
- [ ] Other:

Additional Details:

The Hope Bay Project was placed into Care and Maintenance in October 2012. Occupancy of the Old Windy Camp ended October 23, 2008 and dismantling and reclamation of the area is on-going.

Water was used from Windy Lake to supply domestic water to Doris Camp in accordance with 2BE-HOP1222 Part C, Item 1. Water was also used for dust suppression along the Windy-Doris All Weather Road in accordance with the terms of the licence. Water used for drilling is taken from the closest lake to each drill using a similar system to the domestic system, or for drill locations accessible by road or winter ice road, water is hauled by truck from Windy Lake. In the case of regional drilling, water is taken from the closest lake to the drill site in accordance with Part C Item 1. Both the volume of water consumed down hole and volume of water that is unused but recirculated back to the water source by drills is metered and reported. Drill cuttings produced under this licence are deposited at Windy in the slit trenches. Some drill cuttings were deposited in a depressiong by Quarry 2 at Doris.

The Waste Water Treatment Facility for management of domestic sewage at Old WIndy Camp was removed in 2010 to the Boston Camp.

The Landfarm at Windy Camp and Bulk Fuel Storage Facilities at Windy Camp and Patch Lake have been dismantled and are in the process of reclamation. No effluent is produced at these locations. Water accumulated in Quarries A, B and D will be managed in accordance with the approved *Quarry A, B, D Management and Monitoring Plan* and the relevant sections of Part D of the licence. No discharges occurred in 2013.

A list of unauthorized discharges and a summary of follow-up actions taken.

Spill No.: (as reported to the Spill Hot-line)

Date of Spill:

Date of Notification to an Inspector:

Additional Details: (impacts to water, mitigation measures, short/long term monitoring, etc)

Please see Item 3 of attached Annual Report Supplement for a list, including details, of all unauthorized discharges that occurred in 2013 under licence 2BE-HOP1222.

Revisions to the Spill Contingency Plan

Other: (see additional details)

Additional Details:

See Item of attached Annual Report Supplement for details.

Revisions to the Abandonment and Restoration Plan

Additional Details:

A revised Closure Plan for the licence will be submitted concurrently to the NWB with this annual report.

Progressive Reclamation Work Undertaken

Additional Details (i.e., work completed and future works proposed)

Reclamation activities pertaining to 2BE-HOP1222 were undertaken between June and August 2013; see Item 6 of attached Annual Report Supplement for details

Results of the Monitoring Program including:

The GPS Co-ordinates (in degrees, minutes and seconds of latitude and longitude) of each location where sources of water are utilized;

Details described below

Additional Details:

Drilling water source coordinates are maintained on file by the TMAC Geology Department for all water sources utilized proximal to the drill targets.

The GPS Co-ordinates (in degrees, minutes and seconds of latitude and longitude) of each location where wastes associated with the licence are deposited;

Details described below

Additional Details:

Monitoring Stations HOP-2 and HOP-3 had no discharge because Windy Camp was closed in 2008 and these facilities were not operational in 2013. Discharges did not occur at the monitoring station HOP-4 because the landfarm at the location was dismantled in 2008.

Monitoring Stations HOP-5 and HOP-6 had no discharges in 2013, as these fuel storage facilities were decommissioned in 2012.

No discharges occurred at Quarries A, B or D (HOP-7a, b and d) as no water accumulated at these locations.

Results of any additional sampling and/or analysis that was requested by an Inspector

Additional sampling requested by an Inspector or the Board (See below)

Additional Details: (date of request, analysis of results, data attached, etc)

A Salinity Monitoring Program was undertaken at the Patch Cuttings Consolidation Sump to develop mitigation measures as requested by the Inspector.

Any other details on water use or waste disposal requested by the Board by November 1 of the year being reported.

Select

Additional Details: (Attached or provided below)

N/A

Any responses or follow-up actions on inspection/compliance reports

Inspection and Compliance Report received by the Licensee (Date):

Additional Details: (Dates of Report, Follow-up by the Licensee)

Details are set out at Item 4 of the attached supplement.

Any additional comments or information for the Board to consider

Please see attached supplement for additional information requirements set out in Licence No. 2BE-HOP1222.

Date Submitted:	March 31, 2014	
Submitted/Prepared by:	Lea-Marie Bowes-Lyon	
Contact Information:	**Tel:**	(416) 628-0216
	Fax:	
	email:	lea-marie.bowes-lyon@tmacresources.com

GPS Coordinates for water sources utilized

Source Description	Latitude			Longitude		
	Deg °	Min '	Sec "	Deg °	Min '	Sec "
HOP-1 - Raw water supply intake at Windy Lake	68	3	38	106	37	6

GPS Locations of areas of waste disposal

Location Description (type)	Latitude			Longitude		
	Deg °	Min '	Sec "	Deg °	Min '	Sec "

2013 2BE-HOP1222 Type B Water Licence Annual Report Supplemental Document

Hope Bay Regional Exploration Program

Nunavut Water Board

Prepared by
TMAC Resources Inc.
Toronto, ON

Prepared for
Nunavut Water Board
Gjoa Haven, NU

March 2014

Executive Summary
2BE-HOP1222 Annual Report

TMAC Resources Inc. ("TMAC") has filed its Annual Report on its activities during 2013 under Water Licence No. 2BE-HOP1222 issued by the Nunavut Water Board. As set out in Part B Item 2 of the Licence, the report includes information with respect to the following topics:

- a summary report of water use and waste disposal activities
- a summary of all information requested and results of the Monitoring Program
- a list of unauthorized discharges and a summary of follow-up actions taken
- a brief description of follow-up actions taken to address concerns detailed in inspection and compliance reports prepared by the Inspector
- an update to the Spill Contingency Plan, if required, including contact information in the form of an addendum
- a description of all progressive and/or final reclamation work undertaken, including photographic records of site conditions before, during and after completion of operations
- a summary of modification and/or major maintenance work carried out on the water supply and waste disposal facilities, including all associated structures, and an outline of any work anticipated for the next year
- a summary of any specific studies or reports requested by the board, and a brief description of future studies planned or proposed
- any other details on water use or waste disposal requested by the board

Atanguyan Naetomik Okaohen
2BE-HOP1222 Ukeotoagaagan Unipkaak

TMAC Resources Inc.-kon ("TMAC-kon") tonihimaliktaan Ukeotoagaagan Unipkagiyaktik havaamigun 2013-mi ilagani Imaknik Atoknigagun Laeseoyum Napaani 2BE-HOP1222-mi toniyaohimayok Nunavumi Imalikiyin Katimayinin. Okaotaoyomi Ilagani B Titigaknigani 2 Laeseoyum, unipkaak ilakaktok hivonikhiyotikhanik ukuniga:

- naetomik okaohik imaknik atoknigagun atakugutiniklo havaoheoyonik
- naetomik okaohik tamaenik hivonikhiyotikhanik tukhigaoyonik kanogilinigilo Amigiyotinun Havaami
- titigaknigin agiktaohimagitun kuvipkaeyotin naetomiklo okaohik kigoagun havaanik
- naetomi okateagun kigoani havaanik ihoakhiyaagani ihomalutaoyun okateakhimayun ihivgeokhiyotinik atoteaknigagulo unipkaagini Ihivgeokhiyin
- kaogiliniganik Kuviyokakan Havaakhanun Opaogaeyaon, piyageakakan, okakatikhaniklo hivonikhiyotinik makpigaami oegugilogo
- okateagutin tamaeta atoenaktun kigulelo nunan utiktiniganun havaagiyaoyun, ilakaklotik piksaleoganik iglukpakakveom kanoginiganik hivoani, havaktilogin inikmatalo
- naetomik okaohik ihoakhaotinik agiyoniklunen hanayotinik imiktakvikni atagukviknilo, ukoalo tamaeta iglukpaen atoktun, kanogitoniklo havaanik nahogiyamiknik atoktukhani ukeomi
- naetomik okaohik kituniklikaa naonaeyaotinik unipkaanilunen tukhiktaenik katimayin, naetomiklo okaohik hivonikhami ilitokhaotinik opalogaeyaotinun atoktaoyomayoniklunen
- hunaniklikaa ahenik okateagutinik imaknik atoknigagun atagukveoyoniklo tukhiktaenik katimayin

ᑐᓴᕐᑲᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ
2BE-HOP1222 ᐊᕐᕌᒍᑕᒫᑦ ᑐᓴᕐᑲᑦ

ᐅᑯᐊ TMAC Resources Inc.−ᑯᑦ ᑎᑎᕋᖅᓯᒪᔪᑦ ᐊᕐᕌᒍᓕᒫᖅᓯᐅᑎᓂᒃ ᐊᐅᓚᓯᔪᑎᒥᓂᕐᓂᒃ ᐅᕙᓂ 2013−ᒥ ᐃᒥᓕᕆᔾᔪᑎᑦ ᐅᑯᐊ No. 2BE-HOP1222 ᑐᓂᔪᖕᒋᓐᓂᒃ ᓄᓇᕗᑦ ᐃᒥᓕᕆᔩᑦ ᑲᑎᒪᔨᖕᒋᑦᑕ. ᐅᑯᓇᓃᑦᑐᑦ ᐃᓚᖓ B ᐱᔾᔪᑦ 2 ᓚᐃᓴᕐᑲᕈᑎᓂᒃ, ᑐᓴᕐᑲᑦ ᐃᓚᓖᑦ ᑐᓴᕐᑲᓂᒃ ᐱᔾᔪᑎᓕᖕᓂᒃ ᐃᒫᒃ:

- ᑐᓴᕐᑲᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ ᐱᔾᔪᑎᓖᑦ ᐃᒥᕐᒥᒃ ᖃᓄᖅ ᐊᑐᖅᑕᐅᕐᑲᑦᑕᕐᓂᖕᒐᓂᒃ ᐊᒻᒪᓗ ᐊᒃᑕᖅᑕᐅᕐᑲᑦᑕᕐᓂᖕᒐᓂᒃ ᐊᐅᓚᑦᓯᒍᑎᑦ
- ᓇᐃᓈᖅᓯᒪᔪᑦ ᐱᔾᔪᑎᓖᑦ ᐃᓘᓐᓇᑎᒃ ᑐᓴᕐᑲᑦ ᑐᒃᓯᕌᖑᓯᒪᔪᑦ ᐊᒻᒪᓗ ᖃᓄᖅ ᓴᕿᖅᑐᒥᓂᕐᓂᒃ ᖃᐅᔨᓴᕈᑎᑦ ᐊᑐᖅᑕᐅᑎᓪᓗᒋᑦ
- ᑎᑎᕋᖅᓯᒪᔭᑦ ᐋᑐᑕᐅᔪᒥᓃᑦ ᐱᔪᓐᓇᕈᑎᕐᑲᕋᑎᓂᒃ ᑲᒪᒋᔭᐅᓐᓂᖕᒋᑦ ᒪᐅᖓᑐᐃᓐᓈᖅᑐᒥᓃᑦ ᐊᒻᒪᓗ ᑐᓴᕐᑲᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ ᖃᓄᖅ ᐋᑕᐅᔪᒥᓃᑦ ᕿᖑᕐᖓᒍᑦ
- ᓇᐃᑦᑐᖅ ᐅᓂᒃᑳᖅ ᖃᓄᖅ ᐋᑕᐅᔪᒥᓂᕐᓂᒃ ᐱᔾᔪᑎᓕᒃ ᐃᓱᒫᓗᒋᔭᓂᒃ ᖃᐅᔨᓴᖅᑕᐅᓚᐅᖅᑎᓪᓗᒋᑦ ᐊᒻᒪᓗ ᐱᕐᑯᔭᑦ ᒪᓕᒃᑕᐅᒋᐊᓖᑦ ᑐᓴᕐᑲᑦ ᐋᕐᑭᓱᖅᓯᒪᔭᖕᒋᑦ ᖃᐅᔨᓴᖅᑎᐅᑉ
- ᐋᑐᑕᐅᕐᑯᔭᑦ ᑯᕕᔪᕐᑲᑳᓪᓚᓂᖅᐸᑦ ᐋᑐᑕᐅᒍᒫᕐᓂᐊᖅᑐᑦ, ᐋᑐᑕᐅᒋᐊᕐᑲᑉᐸᑕ, ᖃᐅᔾᔭᒪᔭᐅᒋᐊᓖᑦ ᒪᑯᐊ ᐃᓚᒋᔭᐅᓪᓗᑎᒃ ᑕᑕᑎᕆᐊᓕᒃ ᐃᓚᒋᓕᐅᑎᓯᒪᔪᑦ
- ᐅᓂᒃᑳᑦ ᐃᓗᓐᓇᖕᒐᓅᖕᒐᔪᑦ ᐱᕙᓪᓕᐊᓂᖕᒋᑦ ᐅᕝᕙᓗᑭᐊᖅ ᑭᖑᓪᓕᖅᐸᑦ ᓴᓗᒻᒪᖅᓴᐃᒍᑎᑲᑦ ᐋᑐᑕᐅᔪᑦ, ᐃᓚᕐᑲᖅᓱᑎᒃ ᐊᔾᔨᖑᐊᑦ ᓄᐊᑕᐅᓯᒪᔪᑦ ᓄᓇ ᖃᓄᐃᑦᑑᖕᒪᖕᒫᖅ ᓱᕗᖕᒐᒍᑦ ᐊᒻᒪᓗ ᐋᑐᑕᐅᑎᓪᓗᒋᑦ ᕿᖑᕐᖓᒍᓪᓗ ᐱᔭᕇᖅᑕᐅᓯᒪᓕᖅᑎᓪᓗᒋᑦ ᐊᐅᓚᑦᓯᔾᔪᑎᑦ
- ᓇᐃᓈᖅᓯᒪᔪᑦ ᐋᕐᑭᒋᐊᕈᑎᕕᓃᑦ ᐅᕙᓗᑭᐊᖅ ᐊᖕᒋᔩᑎᑦ ᓴᓇᔭᐅᑎᓪᓗᒋᑦ ᐃᒥᓘᖓᔪᑦ ᐊᒻᒪᓗ ᐊᒃᑕᑯᕐᑲᐅᒧᑦ, ᐃᓚᒋᔭᐅᓪᓗᑎᒃ ᓴᓇᔭᐅᓯᒪᔪᑦ, ᖃᓄᕐᓗ ᐊᓯᖕᒋᑦ ᓂᕆᐅᒋᔭᑦ ᐊᕈᒎᖅᑐᖅ ᐱᓕᕆᐊᖑᓕᖅᐸᑕ
- ᓇᐃᓈᖅᓯᒪᔪᑦ ᖃᓄᑐᐃᓐᓇᖅ ᐃᓕᓐᓂᐊᕈᑎᒃᓴᑦ ᐅᕙᓗᑭᐊᖅ ᑐᓴᕐᑲᑦ ᑐᒃᓯᕋᖅᓯᒪᔭᖕᒋᑦ ᑲᑎᒪᔩᑦ, ᓇᐃᓈᖅᓯᒪᔪᑦ ᐅᓂᒃᑳᑦ ᖃᐅᔾᔨᒪᔭᐅᕐᑲᑦᑕᕆᐊᕐᑲᓖᖅᑐᑦ ᓯᕗᓂᒃᓴᒧᑦ ᐸᕐᓇᐃᒍᑎᑦ ᐅᕙᓗᑭᐊᖅ ᑐᒃᓯᕌᑎᒍᑦ ᐱᓕᕆᐊᒃᓴᓈᖓᔪᓂ
- ᖃᓄᐃᑦᑐᐃᓐᓇᐃᑦ ᐊᓯᖕᒋᑦ ᐅᓂᒃᑳᑦ ᐃᒥᖅ ᖃᓄᖅ ᐊᑐᖅᑕᐅᓂᖕᒐᓂᒃ ᐅᕙᓗᑭᐊᖅ ᐊᒃᑕᑯᑦ ᑐᒃᓯᕚᖕᒋᑦ ᑲᑎᒪᔩᑦ

Résumé opérationnel
2BE-HOP1222 Rapport annuel

TMAC Resources Inc. (« TMAC ») a déposé son rapport annuel sur ses activités au cours de l'année 2013 en conformité avec le Permis no 2BE-HOP1222 émis par l'Office des eaux du Nunavut (Nunavut Water Board), tel qu'énoncé dans la partie B, point 2, du permis. Le rapport comprend des renseignements sur les sujets suivants :

- un aperçu de l'utilisation et du traitement de l'eau et de l'évacuation des rejets
- un résumé des résultats du programme de surveillance des requêtes au sujet du programme
- une liste des déversements non autorisés et un résumé des mesures de suivi prises à la suite de ces incidents
- une brève description des mesures de suivi prises pour régler les problèmes décrits dans les rapports d'inspection et de conformité établies par l'inspecteur
- si nécessaire, une mise à jour du plan d'urgence en cas de déversement « Spill Contingency Plan », comprenant une liste de contacts et leurs coordonnées pour le signalement des déversements fournie sous forme d'addenda
- une description de tous les travaux de remise progressive et terminés qui ont été entrepris, y compris les documents photographiques des conditions du site avant, pendant et après l'achèvement des travaux de remise
- un résumé des travaux d'entretien mineurs ou des travaux majeurs effectués sur les réserves d'eau potable et les installations d'élimination des résidus miniers et de toutes leurs composantes s'y rattachant, ainsi qu'un aperçu des travaux prévus l'année suivante
- un résumé des rapports ou études scientifiques exigés par l'Office et une brève description des éventuelles recherches ou celles prévues par l'Office
- tout autre détail en lien avec l'utilisation et du traitement de l'eau et de l'évacuation des rejets, tel que demandé par l'Office

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1. A summary report of water use and waste disposal activities [see Part B Item 2 (a)]

General details on water use and waste disposal activities under licence 2BE-HOP1222 can be found at Item A of the annual report form. Further details on water use in 2013 are presented in part B of Appendix A.

Waste disposal activities under licence 2BE-HOP1222 were focused on removing material from the old Windy Camp and the closed Patch Lake facility. All waste removed was taken to the waste management facility at Doris North for sorting and eventual backhaul by plane or sealift. Windy Camp was not operational in 2013 so no domestic waste was produced and the incinerator was not put into service.

From Windy Camp, there was clean-up and removal of general debris, including tent dismantling and removal. A description of activities is provided at Item 6 below.

2. A summary of all information requested and results of the Monitoring Program [see Part B Item 2 (b) and Part J Item 21]

This information is set out in Appendix A to this document.

3. A list of unauthorized discharges and a summary of follow-up actions taken [see Part B Item 2 (c)]

Date of Spill: N/A
Spill No: 13-357
Date of Notification to an Inspector: October 24, 2013
Product Spilled: Brine from Drill Cuttings
Details of Spill: During 2013, changes were noted downslope of the Patch Drill Cuttings Consolidation Sump that appeared to indicate migration of brine-related compounds down-gradient towards Imniagut Lake. A Salinity Monitoring Program was undertaken in 2013 to determine the extent and type of impact. Mitigation measures for implementation in 2014 are under development.

4. A brief description of follow-up action taken to address concerns detailed in inspection and compliance reports prepared by the Inspector [see Part B Item 2 (d)]

Inspection under the Hope Bay Regional Exploration Licence was conducted by AANDC July 8 and 9, 2013. General comments were positive with respect to Windy Camp reclamation progress, effective water, cuttings and fuel management at drill sites, and immediate reclamation of exploration drill sites.

Items requiring action, and their responses are as follows:

Adjusting the water metering system at the drills to a dual system by July 31, 2013.

- Effective tracking of all water extracted (including volumes immediately circulated back to the source unused) was implemented by the end of July and reporting of these amounts included in the monthly monitoring reports.

Recommendations for mitigation measures to reduce impacts to water from Patch Lake cuttings deposition area by September 30, 2013, with implementation measures before freeze-up if possible.

- ABR was contracted in August 2013 to conduct a salinity monitoring program at Patch Lake which included soil, and surface sampling. A technical memorandum was produced in November and TMAC will be using the results of this preliminary investigation to develop mitigation measures for implementation in 2014.

5. An update to the Spill Contingency Plan, if required, including contact information in the form of an addendum [see Part B Item 2 (e)]

The Hope Bay Project Spill Contingency Plan has been revised to appropriately reflect the Care and Maintenance phase of the project under the new Project ownership and to update all contact information. The revised Plan was submitted to the NWB on February 5, 2014.

6. A description of all progressive and or final reclamation work undertaken, including photographic records of site conditions before, during and after completion or operations [see Part B Item 2 (f)]

During May, several kilometers at the end of the Doris-Windy All Weather Road near the old Windy Camp were surfaced to facilitate access for reclamation work. Additional coconut matting was applied in areas of run-off downslope of the historical fuel berm location at Windy Camp and beside the lake access road to reduce soil erosion. Removal of tents and other infrastructure from Windy camp commenced in June and continued to the end of August. Approximately 17 tents were removed, as we were two helipads, three storage sheds, and a couple of seacans. All material removed was taken to the waste management facility at Doris North. The tents were dismantled and made available to northern residents who were interested in having one.

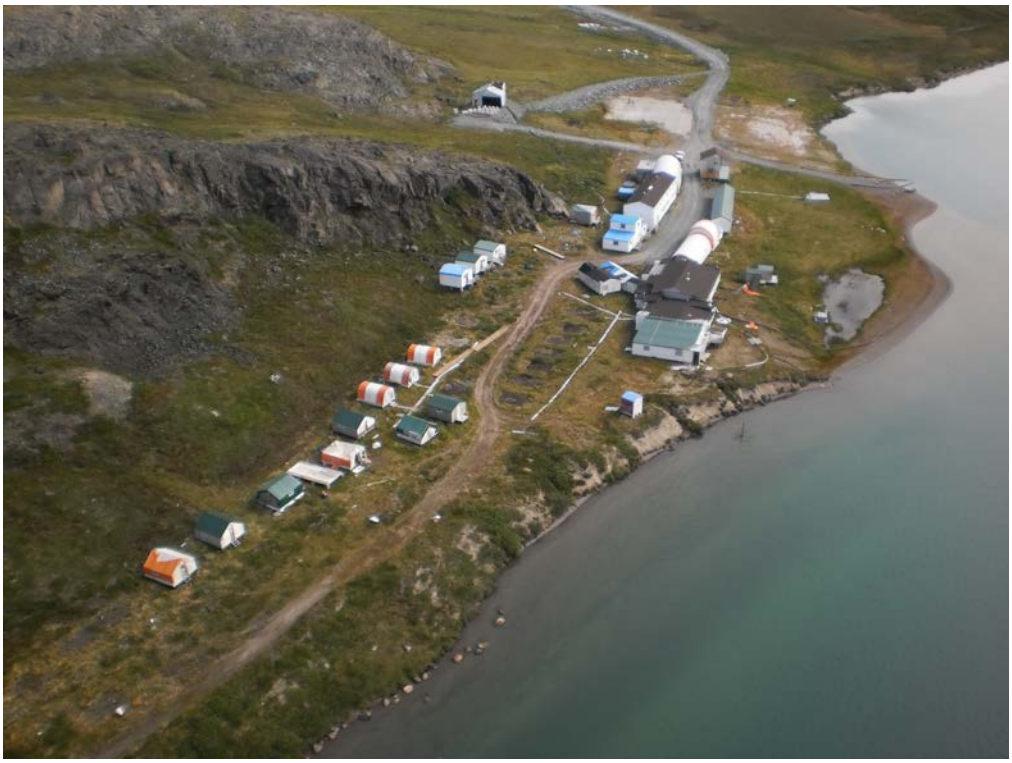

Figure 1 - Tent Removal and Clean-up at Windy Camp

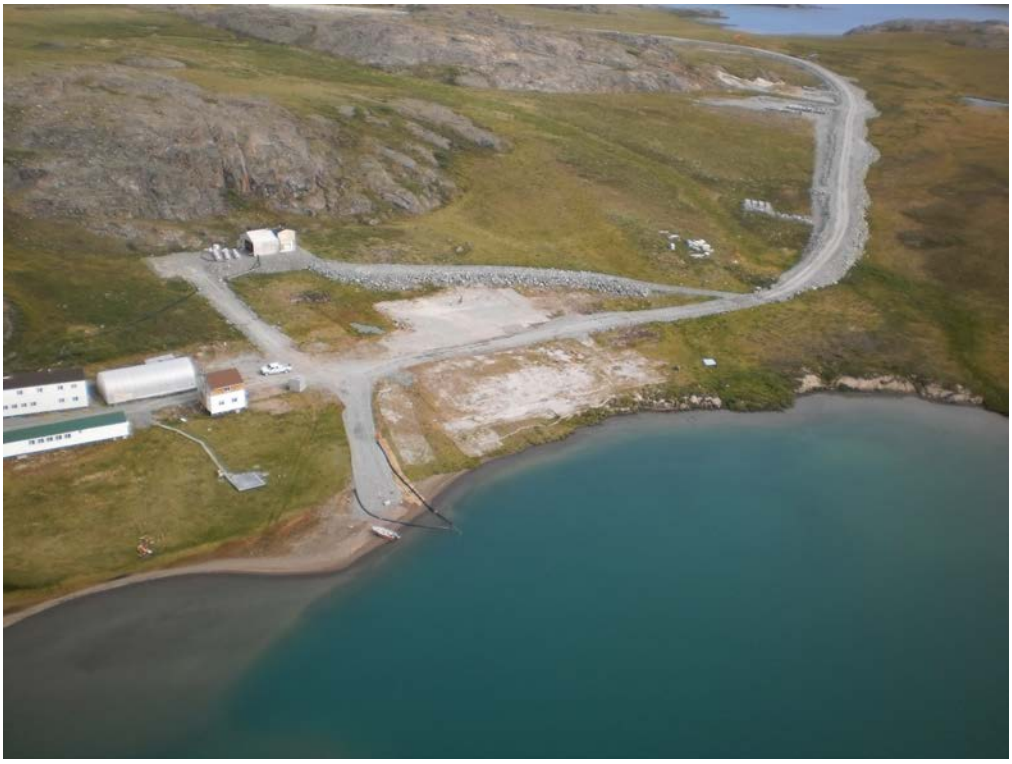

Figure 2 - Heli Pad, shed and seacan removal and ground stabilization at the Old Windy Fuel Berm location

The reclamation of historic drill sites also commenced in June and continued opportunistically over the course of the summer. Approximately 50 sites were visited. At each, the collar was cut down and capped and debris was removed. For each collar, a note was made on how much material was needed, if any, to backfill depressions around the collars.

The excavation of contaminated soils (as identified in the Patch closure plan) at the Patch laydown was initiated with concurrent confirmatory testing. Contaminated soil was placed in mega-bags for removal in the winter when the site was accessible by winter road.

7. A summary of modification and/or major maintenance work carried out on the Water Supply and the Waste Disposal Facilities, including all associated structures, and an outline of any work anticipated for the next year [see Part B Item 2 (g)]

Windy Camp was closed on October 23, 2008. In 2010, the Waste Water Treatment Facility for management of domestic sewage at Old Windy Camp was removed to the Boston Camp. No modification and/or maintenance work was carried out on the Water Supply and the Waste Disposal Facilities in 2013. To obtain water for domestic use at Doris Camp (ST-7a), during the open water season a temporary pump with screened intake was submerged in Windy Lake off the lakeshore access road. This pump has an on-shore connection for access by the water truck. A sunken heat-traced line was installed in 2013 to allow domestic water to be obtained during periods the lake is frozen.

8. A summary of any specific studies or reports requested by the Board, and a brief description of any future studies planned or proposed [see Part B Item 2 (h)]

No specific studies or reports were requested by the Board in 2013 and no studies are planned or proposed for 2014.

9. Any other details on water use or waste disposal requested by the Board by November 1 of the year being reported [see Part B Item 2 (i)]

No other details on water use or waste disposal were requested by the Board in 2013.

10. Report of any artesian flow occurrences [see Part F Item 3]

No artesian flow occurrences were encountered in 2013.

11. Where drilling activity has penetrated below the permafrost layer, the NWB requests that the proponent record the depth of permafrost and location of the drill hole to be included within the Annual Report [see Part F Item 4]

For areas where exploration is carried out, depth of permafrost is calculated using thermistor strings that measure ground temperature, installed in geotechnical drill holes (thermistor strings are not installed in all drill holes). The thermistor stings are used because it is not possible to visually assess when a drill hole has passed through the permafrost layer. Results obtained from the thermistor strings are used to extrapolate the lower depth of permafrost using thermal gradient. There are several such thermistor strings throughout the Hope Bay Belt and measurements are taken on an on-going basis. The depth of permafrost extrapolated from data collected at thermistor string SRK-50 (200 m in length) is 570 m. The depth of permafrost extrapolated from data collected at thermistor string 08TDD632 (350 m in length) is 435 m. Results collected from all thermistor strings are presented in the 2AM-DOH1323 2013 Annual Geotechnical Inspection Report filed with the 2013 Annual Report for 2AM-DOH1323.

Appendix A

Annual Monitoring Report – 2BE-HOP1222

a) Summary of Monitoring Information

The following tables summarize the results of sampling undertaken as part of the monitoring program detailed in Part J of 2BE-HOP1222.

The camp water treatment and wastewater treatment facility (WWTF) permitted under this licence were not operational in 2013, therefore no sampling was conducted at monitoring stations HOP-1 (freshwater intake), HOP-2 (WWTF discharge), or HOP-3 (point of entry of WWTF discharge to Windy Lake). Water was utilized from Windy Lake for domestic consumption at Doris Camp and the monitoring station ST-7a (HOP-1) was sampled for the monitoring station ST-7 criteria under the Doris North Water Licence 2AM-DOH1323. For the ST-7a results see the 2AM-DOH1323 annual report. The Landfarm at Windy Camp (HOP-4) was dismantled in 2008, so no sampling was conducted at this monitoring station.

The bulk fuel storage tanks at Windy Camp were moved to Doris Camp in winter 2009 for use there, and the bulk fuel storage berm (HOP-5) was dismantled in 2012. The bulk fuel storage berm at Patch Lake laydown (HOP-6) was also dismantled in 2012. No sampling was conducted at either of these monitoring stations.

No sampling occurred at monitoring stations HOP-7A HOP-7B, or HOP-7D (located in Quarries A, B, and D, respectively) during 2013 because there was no ponded water to sample.

No on-ice exploration drilling occurred in 2013, therefore samples were not taken through lake ice (as required by Part F Item 7 and Part J Item 7) to establish water quality prior to and upon completion of drilling program.

b) Quantities of water utilized for camp, drilling and other purposes

During 2013, water was used from Windy Lake for domestic purposes at Doris Camp. This included consumption for drinking water, all camp domestic water supply, some ancillary domestic use for provisioning of portable wash cars, and filling site mobile fire suppression units. No water was used domestically at Windy Camp. Water was also used seasonally for dust suppression, and exploration drill water usage occurred between June and October. Water utilization is provided in Table 1.

Table 1 - Volume of Water Utilized for Camp, Drilling and Other Purposes, 2013, in cubic metres (m^3)

Date	Domestic Consumption at Doris Camp from Windy Lake (m^3)	Dust Suppression (m^3)	Drill Water Usage (m^3)*	Drill Water : Recirculated + Consumed (m^3)**
Mar-27	42	0	0	-
Apr-01	14	0	0	-
Apr-02	0	0	0	-
Apr-11	14	0	0	-
Apr-12	28	0	0	-
Apr-24	28	0	0	-
May-02	28	0	0	-
May-10	28	0	0	-
May-16	14	0	0	-
May-17	14	0	0	-
May-23	28	0	0	-
May-30	14	0	0	-
Jun-10	14	0	0	-
Jun-11	0	0	9	-
Jun-12	1	0	6.2	-
Jun-13	21	13	6.5	-
Jun-14	14	21	8.3	-
Jun-15	0	0	13.4	-
Jun-16	0	70	10.6	-
Jun-17	0	0	6.5	-
Jun-18	0	0	8.3	-
Jun-19	28	28	9.8	-
Jun-20	0	0	5.8	-
Jun-21	0	0	4.4	-
Jun-22	0	0	8.7	-
Jun-23	14	42	6.9	-
Jun-24	0	0	12.1	-
Jun-25	0	0	5.3	-
Jun-26	0	0	2.7	-
Jun-27	28	42	11.6	-
Jun-28	0	0	6.2	-
Jun-29	0	0	4.9	-
Jun-30	28	38	10	-
Jul-01	14	14	23.4	-

Date	Domestic Consumption at Doris Camp from Windy Lake (m^3)	Dust Suppression (m^3)	Drill Water Usage (m^3)*	Drill Water : Recirculated + Consumed (m^3)**
Jul-02	0	0	14.7	-
Jul-03	0	0	8.7	-
Jul-04	28	28	12.6	-
Jul-05	0	0	11.2	-
Jul-06	0	0	16.9	-
Jul-07	0	0	7.2	-
Jul-08	28	28	9.4	-
Jul-09	0	0	12.3	-
Jul-10	1	0	17.1	-
Jul-11	26	10	41.8	-
Jul-12	6	0	12.4	-
Jul-13	0	0	33.1	-
Jul-14	24	28	21.7	-
Jul-15	0	0	24.9	-
Jul-16	0	0	23.8	-
Jul-17	20	12	25.7	-
Jul-18	0	0	18.5	-
Jul-19	15	8	24.1	-
Jul-20	0	0	16.5	-
Jul-21	14	3	23.1	-
Jul-22	0	0	32.2	-
Jul-23	18	0	40.8	-
Jul-24	0	0	39.4	21
Jul-25	0	0	35.3	114.9
Jul-26	28	0	45.4	115.5
Jul-27	0	0	37.8	114.1
Jul-28	0	0	29.2	122.6
Jul-29	14	0	21.6	64.9
Jul-30	0	0	17.5	125.6
Jul-31	29	14	15.9	71.4
Aug-01	0	0	15.5	143.4
Aug-02	0	0	12.3	154.2
Aug-03	26	28	14.4	164
Aug-04	0	0	14	132.9
Aug-05	0	0	13.5	163
Aug-06	24	28	10.2	127.5
Aug-07	0	0	7.9	133.7
Aug-08	0	0	9.6	123.9
Aug-09	24	14	9.21	124.9
Aug-10	0	0	11.09	150.7
Aug-11	0	0	7	137.4
Aug-12	0	0	11.1	118
Aug-13	29	14	28.1	97.4
Aug-14	0	0	17.3	160.6
Aug-15	0	0	11.3	140.3
Aug-16	28	14	17.5	144.9
Aug-17	0	0	16.8	176.7
Aug-18	0	0	22.5	180
Aug-19	14	14	11.1	192.7

Date	Domestic Consumption at Doris Camp from Windy Lake (m^3)	Dust Suppression (m^3)	Drill Water Usage (m^3)*	Drill Water : Recirculated + Consumed (m^3)**
Aug-20	0	0	7.6	191.4
Aug-21	14	14	21.6	184.4
Aug-22	0	0	35.6	160.2
Aug-23	28	0	20.5	171.6
Aug-24	0	0	25.9	175.6
Aug-25	0	0	5.9	166.5
Aug-26	14	0	3	140.2
Aug-27	0	0	44.3	95
Aug-28	0	0	35.3	110.4
Aug-29	28	0	35	107.3
Aug-30	14	0	15	84.5
Aug-31	0	0	12.5	118.3
Sep-01	0	0	11.6	109.9
Sep-02	25	14	12.8	160.8
Sep-03	0	0	11.2	166.1
Sep-04	0	0	14.4	115.5
Sep-05	0	0	20.4	103.6
Sep-06	28	14	14.2	133.4
Sep-07	0	0	21.3	237.1
Sep-08	0	0	14.2	189.6
Sep-09	30	22	32.7	194.7
Sep-10	0	0	20.9	214
Sep-11	0	0	12	229.9
Sep-12	0	0	14.6	203.8
Sep-13	34	0	7.5	227.8
Sep-14	0	0	8.1	215.2
Sep-15	26	14	9.7	205.1
Sep-16	20	14	9.9	200.7
Sep-17	0	0	16.3	238.9
Sep-18	0	0	5	207.7
Sep-19	0	0	25	177.6
Sep-20	0	0	15.2	210
Sep-21	0	0	6.9	196.1
Sep-22	0	0	2.4	130.4
Sep-23	29	13	9.4	188.6
Sep-24	0	0	4.7	311
Sep-25	0	0	4	155.7
Sep-26	15	14	12	132.5
Sep-27	0	0	6	130.9
Sep-28	21	14	13.7	148.9
Sep-29	0	0	22.7	104.1
Sep-30	0	0	17.1	166.3
Oct-01	22	14	12.8	156.8
Oct-02	0	0	19.7	192.8
Oct-03	28	14	12.4	120.9
Oct-04	0	0	7.2	152.5
Oct-05	0	0	7.3	113.9
Oct-06	0	0	10.4	132.9
Oct-07	0	0	7.1	131

Date	Domestic Consumption at Doris Camp from Windy Lake (m^3)	Dust Suppression (m^3)	Drill Water Usage (m^3)*	Drill Water : Recirculated + Consumed (m^3)**
Oct-08	27	13	3.9	60.8
Oct-09	0	0	15.4	98.3
Oct-10	0	0	13.9	160.6
Oct-11	25	0	11.9	178.4
Oct-12	0	0	9.3	178.8
Oct-13	0	0	11.6	166.8
Oct-14	0	0	7.4	184.9
Oct-15	28	14	10.7	208
Oct-16	0	0	12.5	182
Oct-17	0	0	8.6	161.4
Oct-18	14	14	20.3	163
Oct-19	0	0	32.9	212.3
Oct-20	28	0	27.7	205.7
Oct-21	0	0	11.6	222
Oct-22	1	0	22.5	200.5
Oct-23	14	14	31.2	200.5
Oct-24	14	4	18.3	232.8
Oct-25	0	0	15.8	232.4
Oct-26	0	0	24.1	223.2
Oct-27	28	0	44.8	209.3
Oct-28	0	0	45.1	194.1
Oct-29	0	0	27.9	116.6
Oct-30	0	0	19.8	52
Oct-31	24	0	5.2	11.2
Nov-04	0	0	0	0
Nov-05	0	0	0	0
Nov-06	0	0	0	0
Nov-07	34	0	0	0
Nov-10	0	0	0	0
Nov-11	28	0	0	0
Nov-12	14	0	0	0
Nov-13	0	0	0	0
Nov-14	0	0	0	0
Nov-15	28	0	0	0
Nov-17	0	0	0	0
Nov-18	0	0	0	0
Nov-19	0	0	0	0
Nov-20	14	0	0	0
Nov-21	0	0	0	0
Nov-23	0	0	0	0
Nov-24	0	0	0	0
Nov-25	0	0	0	0
Nov-26	24	0	0	0
Nov-27	0	0	0	0
Nov-28	0	0	0	0
Dec-01	0	0	0	0
Dec-03	0	0	0	0
Dec-04	24	0	0	0
Dec-05	24	0	0	0

Date	Domestic Consumption at Doris Camp from Windy Lake (m^3)	Dust Suppression (m^3)	Drill Water Usage (m^3)*	Drill Water : Recirculated + Consumed (m^3)**
Dec-06	0	0	0	0
Dec-07	0	0	0	0
Dec-08	0	0	0	0
Dec-09	0	0	0	0
Dec-10	0	0	0	0
Dec-12	0	0	0	0
Dec-13	0	0	0	0
Dec-14	0	0	0	0
Dec-15	0	0	0	0
Dec-16	0	0	0	0
Dec-17	0	0	0	0
Dec-18	0	0	0	0
Dec-19	24	0	0	0
Dec-20	0	0	0	0
Dec-27	0	0	0	0
Dec-28	0	0	0	0
Dec-31	24	0	0	0

*Drill Water Usage represents water utilized "down hole" in the drilling process

**Drill Water Recirculated plus Consumed is the total volume including "down hole" and water recirculated back to the water source. Data is available from July 24 in response to Inspector request to implement a dual metering system by July 31, 2013.

c) Quantity of effluent discharged

Windy Camp was closed throughout 2013 therefore no discharges occurred related to the waste water treatment facility (WWTF) at monitoring station HOP-2.

No discharges occurred at the Windy Camp bulk fuel storage facility (HOP-5) in 2013 as this facility was decommissioned in 2012 and the containment berm removed.

No discharges occurred at the Patch Lake bulk fuel storage facility (HOP-6) in 2013 as this facility was decommissioned and the berm removed in 2012.

d) Volume of sludge removed from sewage disposal facility

No sludge was removed from the Windy Camp WWTF in 2013 because this facility was not operational and the camp was closed.

e) Results of Toxicity Testing

TMAC did not perform toxicity testing to demonstrate the non-acute toxicity of the effluent discharged from the WWTF at HOP-3 (at a point of entry to Windy Lake), as the camp is closed and this facility has been removed. The testing is normally conducted in accordance with the following test procedures:

i. Acute lethality to Rainbow Trout, Oncorhynchus mykiss (as per Environment Canada's Environmental Protection Series Biological Test Method EPS/1/RM/13); and

ii. Acute lethality to the crustacean, Daphnia magna (as per Environment Canada's Environmental Protection Series Biological Test Method EPS/1/RM/14).