



## Mackenzie Valley Environmental Impact Review Board

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Re: DEVELOPER'S ASSESSMENT REPORT - SNOWFIELD DEVELOPMENT CORPORATION

### NOTES:

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*Sherry*

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**To:** Sherry Sian  
**Cc:** Bob Paterson  
**Subject:** Snowfield's DAR

Sherry,

This completes all the "Developer's" filings. PLease acknowledge receipt to both me and Bob Paterson.

Thank You

Laurie Stephenson

FAX #1

Please fax to:

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**Developer's Assessment Report**

**Snowfield Development Corp.**

Preliminary Exploration Program

**MV2003C0023 Land Use Permit Application**

Prepared by

Snowfield Development Corp.

Suite 100 - 10094 Expo Boulevard  
Vancouver, British Columbia, V6Z 2V9

August 2003

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## INTRODUCTION

On June 12, 2003, Snowfield Development Corp. ("Snowfield") applied to the Mackenzie Valley Land and Water Board ("MVLWB") for a Type "A" Land Use Permit to undertake an early stage diamond exploration program intended to undertake a preliminary evaluation of the diamond potential on land areas inland to the east, north and southeast of Drybones Bay, Great Slave Lake, N.W.T. under MVLWB Application File No. MV2003C0023 (the "Application"). The MVLWB initiated a Preliminary Screening pursuant to Section 124 of the *Mackenzie Valley Resource Management Act (MVRMA)* and Schedule 1, Part 1 of the *MVRMA Preliminary Screening Requirements Regulations*.

On June 30, 2003 the MVLWB referred the Application to the Mackenzie Valley Environmental Impact Review Board ("MVEIRB") for an Environmental Assessment ("EA") as per Section 125 of the MVRMA. The reason cited for the referral was public concern about the potential for cumulative effects given the cultural, spiritual and environmental importance of the Drybones Bay Area. The MVEIRB initiated the EA at that time.

On July 18, 2003 the MVEIRB provided Snowfield with formal notice of the draft Terms of Reference of the EA.

In response to the MVEIRB Terms of Reference and the comments made during the comment period by various affected communities and regulatory bodies, Snowfield has prepared this Developer's Assessment Report ("DAR") to comply with the said Terms of Reference and to address all of the issues out lined as Items A through L of the Development Terms of Reference.

The following report describes the 'Development' as a preliminary mineral exploration project, similar to other preliminary exploration activities previously approved and conducted both on lands in the Drybones Bay area and throughout the N.W.T.

### **A-1 Non-technical Executive Summary**

Snowfield is proposing to undertake various basic exploration programs (geochemical surveys, geophysical surveys, diamond drilling and sampling) over those mineral claims referenced in the Application which lie inland to the east, north and southeast of Drybones Bay, Great Slave Lake, N.W.T. Snowfield has named its proposed exploration programs the "Ticho Project". The Ticho Project does not include any exploration in the immediate Drybones Bay area or in the waters of Great Slave Lake.

As detailed in the Application, the proposed exploration programs will be conducted over three identified claim areas (Mud Lake, Hurcomb Claim and the Red claims) inland and to the east and southeast of the Drybones Bay Area of Great Slave Lake, N.W.T and on two other mineral claims (the Fate Claim and the GTEN 16 Claim), respectively, about 15 kilometres north east and about 20 kilometres east north east of the Drybones Bay area. It is anticipated that the exploration programs will continue over an estimated five year period with continuation of the programs in each of the designated claim areas being contingent upon the success of the preceding program on that claim area.

To minimize environmental effects, exploration programs utilizing equipment such as diamond drills will mainly be conducted during the winter months of October through April. Various non-

invasive exploration programs such as line-cutting of grids, geochemical till sampling and ground geophysical surveys will be undertaken during certain summer months.

The activities being proposed are small-scale exploration over several mineral claim blocks that will have negligible, if any, effects on the land, water bodies, flora, fauna and communities in the area. Only minimal environmental effects are anticipated to the land surface, water, flora or fauna from geochemical till sampling, ground geophysics or diamond drilling. Any environmental effects incurred from the proposed operations will be very localized and of a short-term, reversible nature.

Snowfield is proposing to primarily conduct its exploration programs from a camp and equipment storage/staging area, the "Pebble Beach Camp", to be established approximately 75 meters back from the shoreline of Great Slave Lake at approximately N62° 07' 02" (lat) - W113° 45' 50" (long) (UTM Co-ordinates 355308 East / 6890125 North). Transportation to/from Yellowknife to the Pebble Beach Camp will be by boat, aircraft, or vehicles over a winter ice road. Access from the Pebble Beach Camp to the Mud Lake, Hurcomb and Red Claim areas for exploration crews will be by foot, ski-doo or light, all terrain vehicles. Access to the Fate and GTEN 16 Claim areas will be mainly by either fixed-wing aircraft or helicopter.

Exploration sites and the camp and environs will be kept in a clean and orderly condition during and following operations so as to minimize possible attraction of wildlife and to restore the land to its original state. Wildlife will not be disturbed by exploration crews in any way; both wildlife and local land-users will have first right-of-way during Snowfield exploration activities.

In the event of any accidental spillage of hazardous materials, mainly fuel products, whether minor or of a reportable nature, on any site or location on the land area covered by the Ticho Project, Snowfield will immediately contain, recover and remediate the affected areas in accordance with Snowfield's Spill Contingency Plan Procedures Manual.

During its exploration activities, Snowfield is committed to hiring locally to the greatest extent possible; opportunities can be expected to increase as exploration progresses beyond a few technical personnel. As a condition of contract, any contractors such as drillers etc. will be required, wherever possible, to hire locally. Longer-term regional benefits that could result from these exploration activities are entirely dependent upon the future success of Snowfield's exploration results.

The exploration activity at each site will generally be of short duration and will be conducted, in accordance with Snowfield's "Environmental Operating Procedures Manual", in a manner that will ensure that there will be no significant or lasting effects on the environment of the area. This expected result will be consistent with the limited short term environmental effects of Snowfield's previously demonstrated exploration and drilling activities in the area during the winter/spring of 2003.

It is submitted that the basic exploration programs that Snowfield proposes to undertake over the ensuing five-year period on the areas covered under Snowfield's Ticho Project, will have little, if any, demonstrable personal or economic effect on any other direct users of those land areas. As stated in the original Application, under the Development "Wildlife will not be disturbed by exploration crews in any way and both wildlife and local land-users will have first right-of-way during Snowfield exploration activities". Furthermore, it is also submitted that definite economic benefit will accrue to the local communities of Yellowknife and Dettah as a result of Snowfield's exploration programs. In this regard, as stated in the original Application, under the Development: "During its exploration activities, Snowfield is committed to hiring locally

to the greatest extent possible; opportunities can be expected to increase as exploration progresses beyond a few technical personnel". Snowfield is currently (July thru September 2003) employing three local aboriginal workers from the Yellowknives Dene First Nation community at Dettah. Additionally, it is expected that, based on Snowfield's earlier experience in the area in 2003, Dettah will have environmental observers located in the immediate area of the Snowfield's exploration sites.

As stated in the Application "Snowfield consulted with Ms. D. Lampi, GSI Officer, of the Prince of Wales Northern Heritage Centre, Yellowknife, NT, who advises in a written report that there are three (3) archaeological sites within the Drybones Bay, Great Slave Lake area. Data provided in the Prince of Wales Northern Heritage Centre report indicate that those three archaeological sites are not located on any of the specific mineral claims or land areas covered by this land use permit application". Even though Snowfield is not currently aware of any archaeological, cultural or historical sites located on the land area covered by the Ticho Project, it will be very alert to possible existence to such sites and should any such sites be located, be very careful to avoid any disturbance of such sites. Additionally, Snowfield welcomes information from any local source advising of the nature and location of any specific archaeological, cultural or historical sites that may be located on the land area covered by the Ticho Project.

It is submitted that since the exploration work on each specific area of the proposed Land Use Permit is of such short duration that the magnitude and direction of this program's impact will be nil. The duration of the preliminary drilling and sampling work on each site will be measured in days. There is will be no recurring environmental or regional social impact, the probability of harmful effects will be zero and thus the reversibility is 100%..

## A-2 Conformity Table

**Table 1**  
Conformity Table

Terms of Reference	Developer's Assessment Report	Comment
A 1-2	Sections A-1 and 2	
B 1-4	Section B	
C 1, C 2, C 3	Section C	
C 4, C 5, C 6, C 7	Section C	
D 1, D 2	Section D	
E 1, E 2, E 3	Section E	
F 1	Section F Table 2	
G 1	Section G-1 Table 3	
G 2	Section G-2 Table 4	
G 3	Appendix I	
H 1, H 2	Section H	
I 1, I 2	Section I	
J 1; J 2; J 3	Section J	
K 1, K 2	Section K	
L	Section L	

## **B Developer (Mineral Exploration Company)**

### **B-1 Corporate History**

Snowfield Development Corp. has operated as a junior resource exploration company in Canada since its incorporation by its current President in 1987. Snowfield obtained a Certificate of Registration as an Extra-Territorial Corporation in the Northwest Territories on November 28, 2002. Since 1987, Snowfield has operated exploration projects in the Province of British Columbia and the Northwest Territories. Its Officers and Directors have been active in financing and undertaking mineral exploration for over 20 years and its consultants for in excess of 35 years. Snowfield is a public company listed for trading on the TSX Venture Exchange under the trading symbol "SNO". Detailed corporate information, as filed with the British Columbia Securities Commission, including Snowfield's Annual Information Form ("A.I.F.") dated January 6, 2003; Audited Financial Statements for the years ended April 30, 2002 and 2001 (Audited Financial Statements for the year ended April 30, 2003 to be filed on, or before September 14, 2003); Interim Financial Statements for the three month period ended January 31, 2003; and all Press Releases are available for viewing under Snowfield's name on the **SEDAR** website at [www.sedar.com](http://www.sedar.com). Additional corporate information; exploration programs and maps are available for viewing on Snowfield's website at [www.snowfield.com](http://www.snowfield.com).

Snowfield's Officers and Directors are :

- Robert T. Paterson, President, Director, Chief Executive Officer of Snowfield since 1987. Mr. Paterson was President and a Director, from June 30, 1990 through April 10, 2000, of Falcon Ventures International Corp. a company previously involved in both gold and diamond exploration in Canada in Alberta, British Columbia, Saskatchewan and the Northwest Territories
- John J. Nagy, C.G.A. Chief Financial Officer, Secretary-Treasurer, Director of Snowfield. Mr. Nagy is a principal of Reid, Hurst, Nagy, Certified General Accountants, of Richmond, B.C., and has practised as Certified General Accountant since 1981.
- Marvin A. Mitchell, P.Eng, Director of Snowfield. Mr. Mitchell has worked as a professional geologist since 1968 and has conducted numerous exploration and advanced exploration programs worldwide.
- W. Gennen McDowall, B.Sc., Director of Snowfield. Mr. McDowall is a professional geophysicist and consultant who has specialized in diamond exploration on a worldwide basis since 1974.

Snowfield does not currently have any direct partners in the Ticho Project. As detailed under Section B-2 herein, upon earning its various option interests in the Drybones Bay area claims, minority Joint Venture agreements with respective optionor's will arise in the future from those option agreements.

Snowfield maintains its corporate head offices in Vancouver, British Columbia and has established a Ticho Project exploration office in Yellowknife, N.W.T. Mr. Mike Beauregard of Yellowknife, N.W.T. is the Project Manager of the Ticho Project. Mr. Beauregard, a resident of Yellowknife, is a Geological Engineer with extensive experience as a geologist in mineral and diamond exploration in the Northwest Territories. Snowfield will be employing reputable northern contractors and employees who have had extensive experience in the N.W.T. and are based in Yellowknife. None have been identified as yet.

## **B-2 Proposed Development Ownership**

The Mud Lake Claim Group (Drybones #4 & 5, Beck 1, 3, 4 & 6, Habanero, Faya and Pyrope claims) were staked and developed by Mr. David Smith, a well known Yellowknife prospector. Snowfield executed an Option Agreement for the Mud Lake group of claims during August 2002 with respect to Snowfield earning an 80% interest in the Mud Lake Claim Group. Mr. Smith was the discoverer of the Drybones Bay kimberlite pipe in 1994 and has been conducting claim staking and exploration in the area continuously since then. Upon earning its option interest in the Mud Lake Claim Group, Snowfield will hold an 80% joint venture interest and Mr. Smith will hold a 20% joint venture interest.

The Hurcomb Claim was staked by Ms. Fran Hurcomb of Yellowknife, N.W.T. in 1998 and was optioned to Snowfield during November, 2002 with respect to Snowfield earning an 80% interest in the Hurcomb Claim. Upon earning its option interest in the Hurcomb Claim, Snowfield will hold an 80% joint venture interest and Ms. Hurcomb will hold a 20% joint venture interest.

The Fate Claim at Defeat Lake was staked on behalf of New Shoshoni Ventures Ltd. of Vancouver, B.C. during early 2002 and Snowfield entered into an option agreement with New Shoshoni on August 12, 2002 with respect to earning a 50% interest in the Fate Claim. Upon earning its option interest in the Fate Claim, Snowfield will hold an 50% joint venture interest and New Shoshoni will hold a 50% joint venture interest.

The GTEN 16 claim was staked on March 8, 2002 on behalf of 644981 B.C. Ltd., a British Columbia company based in Vancouver, B.C., and Snowfield entered into an option agreement with 644981 B.C. with respect to earning a 100% interest in the GTEN 16 claim. Upon earning its option interest in the GTEN 16 Claim, Snowfield will hold a 100% interest in the GTEN 16 Claim.

The Red Claim Group, (Red #1 thru #7 claims) were staked by Mr. David Smith of Yellowknife on behalf of Snowfield during October 2002. By agreement with Mr. Smith, Snowfield holds a 100% interest in the Red Claim Group.

## **B-3 Organizational Structure**

Snowfield's President and C.E.O., Robert Paterson, is responsible for project financing; overseeing operations; exploration contractors; land-use permitting; governmental relations and communications and corporate administration. Mr. Paterson can be contacted at:

Robert T. Paterson , President  
Snowfield Development Corp.  
100 - 1009 Expo Boulevard,  
Vancouver, British Columbia, V6Z 2V9  
Telephone (604) 681-5720  
Facsimile (604) 681-6937  
e-mail: [paterson@snowfield.com](mailto:paterson@snowfield.com)

During January 2003, Snowfield appointed Mr. Mike Beauregard of Yellowknife, N.W.T. as Project Manager of the Ticho Project. Mr. Beauregard, a resident of Yellowknife, is a Geological Engineer with extensive experience as a geologist in mineral and diamond exploration in the Northwest Territories. Mr. Beauregard's responsibilities include all aspects of day-to-day Project management; on-site exploration activities; exploration contractor management; camp management; environmental regulatory compliance in accordance with Snowfield's

Environmental Operating Procedures; emergency response to any environmental contamination accidents in accordance with Snowfield's Spill Contingency Plan Manual; D.I.A.N.D. exploration and Workers' Compensation regulatory compliance; on site inspections and relations with First Nation project observers; and project employee hiring with an emphasis on employing local aboriginal workers. Mr. Beauregard is Snowfield's principal Ticho Project operational contact in Yellowknife and may be contacted at:

Mike Beauregard, Ticho Project Manager  
Snowfield Development Corp.  
5202 Lundquist Road,  
Yellowknife, N.W.T. X1A 3G2  
Telephone (867) 669-0302  
Facsimile (867) 873-4870  
Cell Phone (867) 444-4505  
Satellite Phone (403) 997-8140  
e-mail: : [mbeau@internorth.com](mailto:mbeau@internorth.com)

During March 2003, Snowfield retained the services of Aurora Geosciences Ltd. of Yellowknife N.W.T. to provide consulting geological services and to provide an independent project overview for the Ticho Project. Mr. Gary Vivian, P.Geol. of Aurora Geosciences Ltd. was nominated as the "qualified person" for the Ticho Project in accordance with the requirements of National Instrument 43-101.

#### **B-4 Environmental Performance Record**

Neither Snowfield or its directors, nor its Project Manager, have ever had a problem in conducting its exploration programs in an environmentally responsible manner and in accordance with prevailing regulatory requirements. During the period August 2002 through May 2003, Snowfield undertook two significant exploration programs in the greater Drybones Bay area with exploration expenditures in excess of \$700,000. The first program, completed on February 28, 2003, included a regional helicopter airborne geophysical survey and an eight hole diamond drilling program on the Mud Lake Claims under a prior Land Use Permit issued to Mr. David Smith of Yellowknife, N.W.T. The second program undertaken on the GTEN 1, 2, 3 & 5 mineral claims under a joint venture with Diamonds North Resources Ltd. included a helicopter transported 10 hole diamond drilling program completed in May, 2003. These two exploration programs were completed in accordance with Snowfield's Environmental Operating Procedures Manual. On completion of the latter exploration program, the on-site Yellowknife Dene First Nation observer stated "Your job went well. The drillpads were small and clean". On completion of his site inspection, DIAND Resource Management Officer Mr. Ken Dahl wrote that the program was operated in a clean and responsible manner. Snowfield has not received, nor is it aware of, any complaints or negative comments from any stakeholders having an interest in the Drybones Bay area reflecting a "public concern about the potential for cumulative effects given the cultural, spiritual and environmental importance of the Drybones Bay Area" or from any party reporting any environmental damage or other effect arising from those two exploration programs which would be attributable to Snowfield's exploration work.

## **C Development (Exploration Program) Description**

Under the proposed Ticho Project exploration programs, Snowfield proposes to undertake ongoing airborne geophysical surveys, ground geophysical surveys, ground geochemical till sampling, the drilling of up to an estimated 100 diamond drill core holes on all of its claim areas and bulk sampling of kimberlite by either trenching or drilling during the course of its five (5) year Land Use Permit sought under the Application.

The initial sites are detailed below in Section C-3 but due to the ongoing preliminary exploration nature of the project, modification of these site locales with more detailed exploration is expected.

### **C-1 Timing**

The nature and timing of each Stage of the exploration work to be undertaken on the various claim groups making up the Ticho Project will be adapted and determined from exploration data currently available to Snowfield or from data derived from the ongoing exploration programs. The Development exploration program is expected to be ongoing over the whole period of the land use permit and depending on the unforeseen outcome on each stage of exploration of each of the claim groups, will evolve in a manner that is not totally predictable at this time. Consequently, this presentation is mainly refers to the proposed Stage I of the programs of exploration on each of the claim groups as which is detailed below and intended to be carried out from the present date through April of 2004.

#### Mud Lake Claim Group:

-Certain phases of the Stage I programs of exploration are currently (July thru September 2003) being undertaken by Snowfield on the Mud Lake Claim. This phase of exploration consists mainly of grid establishment, ground geophysics and sampling which, for the most part, can be carried out under existing mineral exploration regulations since it involves minimal disruption of the environment and falls under the threshold for Land Use Permit requirements.

-The secondary phase of the Stage I program of exploration on the Mud Lake Claim group will consist primarily of diamond drilling of 10 to 20 holes to delineate the parameters of the kimberlite body discovered by Snowfield during February 2003 on the Mud Lake Claim Group. It is anticipated that drilling on the Mud Lake Claim Group will continue for 60 - 100 days during the period October 2003 through April 2004.

-The tertiary phase of the Stage I program of exploration on the Mud Lake Claim group will, based on drilling results, consist of the limited bulk sampling by trenching of the kimberlite body discovered by Snowfield during February 2003 on the Mud Lake Claim Group. It is anticipated that the sampling program would take approximately 10 - 15 days during January or February 2004.

#### Hurcomb Claim:

-Certain phases of a Stage I program of exploration are currently (July thru September 2003) being undertaken by Snowfield on the Hurcomb Claim. This phase of exploration consists mainly of grid establishment, ground geophysics and sampling which, for the most part, can be carried out under existing mineral exploration regulations since it involves minimal disruption of the environment and falls under the threshold for Land Use Permit requirements.

-The secondary phase of the Stage I program of exploration on the Hurcomb Claim will consist primarily of the diamond drilling of 5 to 7 holes on targets to be specifically located from the results of the first phase of the Stage I Hurcomb Claim exploration program. Subject to results, it is anticipated that drilling on the Hurcomb Claim will continue for 20 - 30 days during the period January through April 2004.

Red Claim Group:

-Prior to December 2003, Snowfield intends to undertake a Stage I program of exploration on the Red Claim Group which will consist mainly of grid establishment, ground geophysics and sampling which for the most part can be carried out under existing mineral exploration regulations since it involves minimal disruption of the environment and falls under the threshold for Land Use Permit requirements. It is estimated that the Stage 1 Red Claim exploration program will continue for 40 - 80 days during the period October through December 2003.

Fate Claim:

-Prior to April 30, 2004 (revised date), Snowfield intends to undertake a Stage I program of exploration on the Fate Claim which will consist mainly of one diamond drill core rig drilling up to 3 drill holes from one site into a known geophysical target on Defeat Lake. Depth of each hole is anticipated to be 100 to 200 m with completion of each hole expected to take two to five days. Mobilization of drill equipment and personnel to the area will be by helicopter or fixed-wing aircraft from Snowfield's Pebble Beach Camp. It is estimated that the Stage 1 Fate Claim drilling program will continue for 10 - 15 days during the period January through April 2004.

GTEN 16 Claim:

-Prior to April 30, 2004 (revised date), Snowfield intends to undertake a Stage I program of exploration on the GTEN 16 Claim Group. This will initially consist of grid establishment, ground geophysics and sampling, which for the most part can be carried out under existing mineral exploration regulations since it involves minimal disruption of the environment and falls under the threshold for Land Use Permit requirements. It is estimated that the initial phase of the Stage 1 GTEN 16 Claim exploration program will continue for 10 - 15 days during October 2003. Thereafter, one diamond drill core rig will drill up to 3 to 5 drill holes into known geophysical targets. Depth of each hole is anticipated to be 100 to 200 m with completion of each hole expected to take two to five days. Mobilization of drill equipment and personnel to the area will be by helicopter or fixed-wing aircraft from Snowfield's Pebble Beach Camp. It is estimated that the Stage 1 GTEN 16 Claim drilling program will continue for 10 - 15 days during the period January through April 2004.

The actual drill sites and program will be shaped by the preliminary work results but sufficient information is currently available to pre-select target areas as is detailed below for the initial few drill holes. Most of this drilling is planned to be completed in the winter of 2003/04 for the first four areas (Mud Lake, Hurcomb, Red Claims and Fate) with completion of drilling and on the last area (GTEN 16) during the summer and fall of 2004.

## C-2 Access Roads, Camps and Drill Sites

During the winter months, surface access to the Ticho Project will be over a temporary ice road between Yellowknife and the Pebble Bay Camp on Great Slave Lake. During the winter of 2002/03 an ice road was constructed from Yellowknife to the Drybones Bay area to support ongoing exploration at that time. A similar road will be constructed over the lake ice to the Drybones Bay area during the winter of 2003/04 and 2004/05 to support the current program. Access to the Mud Lake Claim Group, the Red Claim Group and the Hurcomb Claim from the shoreline of Great Slave Lake at the Pebble Beach Camp will generally be over existing access roads and trails that were established for exploration programs under the earlier Land Use Permit (Permit # N199C0104) held by David Smith. Additional limited overland access roads and trails to specific exploration and drill sites will be constructed as a typical temporary drill access road with minimal disruption due to the time of construction (winter) and the standard reclamation plans to restore the area. The temporary winter access roads and drill sites are depicted on Maps 2, 2A and 2B. All temporary access routes will be constructed in accordance with existing NWT guidelines for the construction, maintenance and closure of winter roads.

Access to the Fate and the GTEN 16 Claim areas from either Yellowknife or the Pebble Beach Camp will be mainly by either fixed-wing aircraft or helicopter. Temporary emergency shelter field camps may be required at remote exploration sites, Defeat Lake and the GTEN 16 Claim, in the event of inclement weather that prevents air transportation of employees back to the main Pebble Beach Camp. During this phase the number of flights (fixed wing or helicopter) from either Yellowknife or the Pebble Beach Camp will probably be two (2) per day. During drill moves a helicopter will probably be used for 1-3 hours in local flight. Since the air services utilized will be from Yellowknife, they will be knowledgeable in all aspects of flying in the N.W.T.

Snowfield is proposing to establish a semi-permanent camp and equipment storage/staging area named the "Pebble Beach Camp" to be located approximately 75 meters back from the shoreline of Great Slave Lake at approximately N62° 07' 02" (lat) - W113° 45' 50" (long) (UTM Co-ordinates 355308 East / 6890125 North). At various times during the period June 1, 2003 through October 31, 2008, the proposed camp will accommodate up to 20 persons., or have the capacity to expand to that size, and be comprised of 5 - 6 sleep tents, kitchen/dining tent, office/first-aid tent and wash/shower tent. Each tent will have a wooden frame and 3/4 inch plywood floor mounted on 2 x 6 beams. Additional structures will be established as required, either tents or modular structures, for latrines, supplies storage, core storage tent and helicopter supplies/equipment. There will be a designated burn area with burn barrel, a helipad, camp fuel cache, diesel powered electrical generator, electric powered pump to provide potable water and personal hygiene lake water.

Potable water, pumped from the lake through an insulated, heated as required, poly-line, will be stored in a dry in a holding tank. Greywater will be dispersed through an insulated, heated as required, poly-line to an outfall at a sump of suitable capacity.

It is anticipated that a discrete fuel storage area will be established, at a location apart from the camp and sited the required distance from any watercourse, to store up to ten drums (205 Litres) of diesel fuel, four drums (205 Litres) of jet fuel, two drums (205 Litres) of gasoline and four containers (100 pounds) of propane. Oils required for the electrical generator and water pump will be stored in the generator shed. Two containers (100 pounds) of propane will be stored in the area of the kitchen area for cooking and domestic hot water. Spill kits and absorbent pads/material will be present at fuel storage/transfer sites. Drip pans will be utilized at all fuel transfer locations.

Drill sites will be kept as small as possible to minimize areal disturbance. The approximate location of the drill sites is noted on Map 2A. Final drill site selection will be completed in accordance with the manner in which Snowfield and Diamonds North conducted themselves earlier this year in conjunction with local First Nations' groups during their completed exploration program.

Snowfield consulted with Ms. D. Lampi, GSI Officer, of the Prince of Wales Northern Heritage Centre, Yellowknife, NT, who advises in a written report that there are three (3) archaeological sites within the Drybones Bay, Great Slave Lake area. Data provided in the Prince of Wales Northern Heritage Centre report indicate that those three archaeological sites are not located on any of the specific mineral claims or land areas covered under this Land Use Permit Application.

### **C- 3 Operations**

It is anticipated that Snowfield's exploration activities will occur during the two primary seasons, winter and summer, for each year covered by the Land Use Permit. To diminish environmental effects, exploration programs utilizing equipment such as diamond drills will mainly be conducted during the winter months of October through April. Various non-invasive exploration programs such as line cutting of grids, geochemical till sampling and ground geophysical surveys will be undertaken during the summer months. Depending on annual weather conditions, it is anticipated that the summer exploration period July thru October will primarily entail geochemical soil/till sampling surveys, airborne or ground geophysical and ground penetrating radar surveys, prospecting and, where ground surface conditions permit, helicopter supported drill programs. It is further anticipated that the winter exploration period November thru April will primarily include ground and helicopter supported drill programs, ground geophysical and ground penetrating radar surveys and some trenching for sampling of kimberlite. Primary site restoration activities will occur immediately upon completion of work at each site with any final restoration being undertaken during summer months and immediately prior to all required company and regulatory environmental/land use inspections.

During the summer phase the number of flights (fixed wing or helicopter) from Yellowknife to the Pebble Beach Camp will probably be two to four (2- 4) per week. During drill moves a helicopter will probably be used for 1-3 hours in local flight. Since the air services utilized will be from Yellowknife, they will be knowledgeable in all aspects of flying in the N.W.T.

Snowfield expects that exploration staffing, while programs are being operated, will vary from a minimum of 3 people to a maximum of 20 people in the field at any given time. A breakdown of potential staffing follows:

- Snowfield exploration staff: 1 - 3

- Snowfield exploration - line cutters & support staff to be hired locally: 1 - 6

- Snowfield camp attendant, cook & support staff to be hired locally : 1 - 4

- Aurora Geophysics - geologists, geophysicists & technicians: 1 - 6

- Drilling Contractor 5 - 8; (either of Titan Drilling, Connors Drilling or Major-Midwest Drilling)

- Technical Consultants - 2

Snowfield expects that the following equipment will be used from time to time in undertaking its exploration programs on the Ticho Project:

**Table 2 – Equipment to be Utilised in Project**

Type & Number	Size	Proposed Use
1 to 3 Wire-line core drills	Boyles 25A and/or Longyear 24 (small standard) and/or Longyear 38	Set casing, drill and extract core
Skidder (as available)	21,000 lbs	Moving drills or equipment
Nodwell	10,000 lbs	Moving drills or equipment
TD-20 Caterpillar	50,000 lbs	Clearing access trails/drill pads (winter)
1 Excavator (as available)	20 - 40,000	Trenching for bulk sampling
1-3 Snow machines	as available	Personnel transportation
1-3 All terrain vehicles	as available	Personnel transportation
Electrical generators	2 to 5 Kwh	Camp & drill pad electrical power
Water pumps	n/a	Camp & drill equipment water supply
1 -2 trucks (Winter use only)	3/4 to 2 tons as req'd	Transportation of equipment, supplies & personnel
Camp tents, frames & floors	various	Personnel accommodation, office, storage & kitchen facility
Hughes 500 D helicopter	n/a	Personnel, drill & equipment transportation
Cessna 185/DHC2 Beavert	n/a	Air transportation as required

Snowfield expects that the following fuels and hazardous materials will be used from time to time in undertaking its exploration programs on the Ticho Project:

**Table 3 – Fuels to be Utilised in Project**

Fuels & Materials	Number of Containers	Capacity of Containers	Location
Diesel	10 (as necessary)	205L (45 gal.)	2 @ camp site 8 @ drill site
Gasoline	2 (as necessary)	205L (45 gal.)	1 @ campsite 1 @ drill site
Aviation fuel	10 jet turbine fuel 2 aviation gasoline (as necessary when operating aircraft)	205L (45 gal.) 205L (45 gal.)	6 @ campsite 4 @ drill site
Propane	10	45kg (100lb)	4 @ campsite 6 @ drill site
Other: Acetylene & Oxygen	1 <sup>X</sup> 1	45kg (100lb)	1 @ drill site (If welding req'd)

Consistent with Snowfield's Environmental Operating Procedures, Snowfield will strive to eliminate spillage and to reduce drips and leaks wherever possible. Spill kits and ancillary equipment and supplies will be provided at all sites wherever fuel is transferred or drips and leaks could possibly occur and in the immediate area where mechanical equipment (drills,

skidder caterpillar etc.) is to be operated. Initial and ongoing training will be required and provided for all company and contracted on site workers and staff. In the event spillage or drippage occurs while fuel is being transferred, drips develop or pressure hoses burst, immediate remedial actions will be undertaken with the spillage/drippage being stopped and contained; contaminated snow or ice will be scraped, bagged and disposed of and/or contaminated soil, sand or vegetation will be either bagged and disposed of or aerated on tarps.

Only minor environmental effects are anticipated to the land surface, water, flora or fauna from geochemical till sampling, ground geophysics, diamond drilling, trenching or bulk sampling. Any residual environmental effects incurred as a result of the proposed operations will be very site specific and be short-term in nature.

When clearing is unavoidable, it will be carried out in a manner that does not promote erosion. Wherever possible, areas that are naturally free of vegetation will be selected for logistical support sites (e.g. campsite, helipad). Operations requiring vehicle access will be conducted during the winter-spring period in order to take advantage of ice-covered waterways and frozen snow-covered ground to prevent disturbance of the soil and ground cover vegetation.

Any bush and trees cut for survey lines, drill pad sites or camp locales will be reduced to manageable sizes and neatly piled. Where appropriate, cleared vegetation will be spread over exposed soil to prevent erosion and to enable seed stock to regenerate.

Earth moving will be limited to the construction of small pits and sumps for the collection and disposal of benign waste (e.g. ashes/coins from burnt garbage, drill fluids, grey water and sewage). Topsoil or surface material useful for regeneration or re-vegetation, will be removed and stockpiled separately from subsoil. Topsoil will be returned as soon as possible, preferably within six months, to maintain seed viability, nutrient quality and microbial activity.

Geochemical till/soil sampling will be undertaken in a manner that will not cause any appreciable environmental damage; till/soil sample sites will be reclaimed by filling the sample pit and by replacing organic covering material immediately upon completion of the sample collection.

Foot accessible grid lines for geophysics, geochemistry and geology will be minimal widths. No large trees will be felled with tree branches being cut to allow foot access and line of sight. The blazing of trees will be avoided unless required by government regulations.

The main drill site areas proposed are on the claim groups outlined as follows:

NTS map sheets 85 I 4 & 85 I 3, NAD 27 is the grid at UTM co-ordinates:

Drill Site Area of the Mud Lake Claims are all located in the lake west of Drybones Bay (Map2B).

#### **Drill Site Area 1**

Drilling on the Mud Lake Kimberlite Zone (Drybones 4 & 5 Claims)

Approximate 1 kilometre square Grid centre 357000 E 6892000N;drilling from 15 sites to be identified a total of 20 drill holes to a depth 100 –200 metres;

#### **Drill Site Area 2**

Drilling on the Hurcomb claim

Approximate 1 kilometre square Grid centre 363000E 6986900N; drilling from 7 sites to be identified a total of 10 drill holes to a drilling depth of 100 – 200 metres;

#### **Drill Site Area 3**

Drilling on the rest of the Mud Lake Claims and the Red claims (Beck 1,3,4 & 6; Faya; Habanero; Pyrope; and Red 1- 7)

Centre of Area 359100E 6989200N ; drilling from 20 – 30 sites yet to be identified, a total of 1-2 drill holes per site to a drilling depth of 100 – 200 metres

#### **Drill Site Area 4**

Drilling on the Fate claim

centre 365300E 6915200N; drilling from 1-2 sites to be confirmed a total of 3 drill holes to a drilling depth of 100 – 200 metres;

#### **Drill Site Area 5**

Drilling on the GTEN 16 Claim

Centre 372100E 6987200N; drilling from 3 sites to be confirmed, a total of 5 drill holes to a drilling depth of 100 – 200 metres

Due to the preliminary nature of the exploration data acquired to date, the locations can not be defined to the actual site. However, as the company did with its previous 2003 winter drilling program and its 2002 drilling program, it will consult with the local First Nations on-site observer prior to selecting the actual drill sites.

The general drilling procedure is for all drill holes will be as follows:

1. The drill will be set up in a self contained completely enclosed module with an opening for the drill rods to be put through to contact the ground.
2. A drill bit will be fitted to the ground contact end of the drill rods.
3. The drill bit is turned at a very fast speed with pressure on it and it cuts through the overburden until it reaches solid rock. In most cases, casing (a larger diameter drill rod) is put down between the drill set up and the solid rock.
4. Drilling proceeds with the hollow drill bit cutting through the rock to capture a solid core of rock that is brought to surface by a wire line attached to the core barrel (a smaller diameter drill rod that fits in-side the main drill rods), where it is analyzed by a geologist.
5. The drill bit cuts a hole that is between 2 to 5 inches in diameter depending on the type of drilling being undertaken and the rock conditions.
6. Core samples will be initially inspected on site and then transported to a facility in Yellowknife (yet to be secured) for additional analysis.

All drill sites are land based. Drill sites will be kept as small as possible with consideration of safety in order to minimize the footprint of disturbance. Drill cuttings are the only potential residual output of diamond drilling, and, where produced, this fine material will be transferred to

a land-based sump by pumping. Drill water will be re-circulated to the extent possible. Drill additives will be seldom used, and when required, only from a list of environmentally benign products. A spill kit will be located at each drill site during drilling, drip pans/pails will be used to contain any equipment drips/leaks and extra absorbent materials will be kept on hand where fuels and oils are being used/transferred. Spill kits will also be located at each fuel cache and at the base camp.

#### **C-4 Waste Management**

All non combustible waste will be disposed in Yellowknife. The types of waste anticipated are used fuel containers plus human occupation waste. Combustible camp garbage and kitchen waste will be burned in the field in a converted fuel drum incinerator with ashes buried in a pit (during forest fire danger periods combustible garbage will be transported to Yellowknife for disposal). Non-combustible garbage will be transported to Yellowknife for re-cycling or landfill disposal.

Sanitary sewage will be contained in outhouse pits, limed daily, and capped upon discontinuance of daily use or camp closure. Camp and personal hygiene greywater will be piped to a designated sump, covered in winter to keep out snow. Biodegradable, low-phosphate soaps will be used for kitchen dish/camp cleaning. No kitchen waste will be allowed to report to greywater settling sump.

Any bush and trees cut for survey lines, drill pad sites or camp locales will be reduced to manageable sizes and neatly piled. Where appropriate, cleared vegetation will be spread over exposed soil to prevent erosion and to enable seed stock to regenerate.

Overburden (Organic soils, waste material, etc.): Earthmoving will be limited to the construction of small pits and sumps for the collection and disposal of benign waste (e.g. ashes/coins from burnt garbage, drill fluids, grey water and sewage) and trenching for sampling. Topsoil or surface material useful for regeneration or re-vegetation will be removed and stockpiled separately from subsoil. Topsoil will be returned as soon as possible, preferably within six months, to maintain seed viability, nutrient quality and microbial activity.

Drill cuttings and fluids will be collected in tanks/sumps or topographic low areas thereby preventing any migration into natural waters. The amount of drill cuttings is not expected to exceed 0.25 – 0.50 cubic metres of material for each drill site.

#### **C-5 Water Use**

At the Pebble Beach Camp an electric powered pump will be installed to provide potable water and personal hygiene lake water from Great Slave Lake. Potable water, pumped from the lake through an insulated, heated as required, poly-line, will be stored in a dry in a holding tank. Greywater will be dispersed through an insulated, heated as required, poly-line to an outfall at an approved sump of suitable capacity.

It is not anticipated that much, if any water, will be used from the lake for construction of the ice road. For drilling, water will be obtained from small lakes and ponds in the area of each drill site.

Water will be re-circulated reducing the quantity required to about 25,000 litres per drill hole. "Used" water with drill cuttings will be disposed of in approved land site sumps.

## **C-6 Future Development**

Preliminary exploration programs, as implied, represent one of the earliest stages of a typical mining project development cycle. As a result, the possible outcome of the drilling program is highly speculative and the interpretation completely unknown at this time. Therefore no future development plans are associated with this exploration program and if success were encountered a number of additional years of confirmatory exploration drilling and bulk sampling would be required in order to determine if a commercially viable mining development could be established.

The scope of the exploration program as proposed is preliminary in nature, short in duration, non-intrusive and non-permanent. Because of the preliminary nature of this program and because the outcome is highly speculative and the interpretation completely unknown, no future development plans are associated with this exploration program. Regardless of what has occurred elsewhere, what our desired result would be and what our ultimate goal is, until this program is completed and assessed, it is impossible to speculate on future plans.

## **D Effects of the Environment on the Development**

### **D-1 Timing**

The specific timing of the program could be affected by lake ice conditions and the weather. Road closures and other weather-related delays can also extend the time frame required to complete the drilling program. Since the program is planned to cover two field seasons to meet the obligations of its contractual agreements and accessible by ice road, skidoo and other ground transportation during the winter and helicopter and boat during the summer, due to its proximity to Yellowknife, weather, break up and any other environmental effect will be temporary and minor or not relevant to the timing.

### **D-2 Operations**

The specific operations of the program could be affected by lake ice conditions and the weather. Road closures and other weather-related delays can also affect the completion of the drilling program. Since the program is planned to cover two field seasons to meet the obligations of its contractual agreements and accessible by ice road, skidoo and other ground transportation during the winter and helicopter and boat during the summer, due to its proximity to Yellowknife, weather, break up and any other environmental effect will be temporary and minor or not relevant to the operations.

## **E Alternatives**

### **E-1 Camps**

Alternate options for camps are having a floating camp during the summer and transporting to from Yellowknife by vehicle and aircraft during the winter and break up. These alternatives, due to the two field season duration, become less desirable from a safety stand point and a practical stand point. Since the area is used by residents of Yellowknife and Dettah as a temporary camping area, the temporary nature of the Pebble Beach Camp would be consistent with current land use in the area and during the operational period could represent a safe shelter for area travelers.

### **E-2 Waste Management**

The current exploration program plans to remove and transport all drilling and associated wastes to approved disposal areas. Similarly, all operational wastes, with the exception of the drill cuttings (which will be placed into approved depressions well removed from waterbodies) will be incinerated and either buried in approved sites or removed and transported back to Yellowknife for approved disposal. This is considered to be the most desirable option for handling these wastes. Another, less acceptable option, which Snowfield does not intend to pursue, is to leave or not burn these wastes on site.

## **F Regulatory Regime**

### **F-1 Licenses, Permits and Authorizations**

**Table 4**  
Regulatory Regime

Regulatory Authorization Required	Authorizing Authority
Land Use Permit	Mackenzie Valley Land & Water Board
Drill Permit	Worker's Compensation Board NWT & Nunavut

## G Public Consultation

### G-1 Consultation

**Table 5**  
**Consultation**

Date	Who	Outcome
August – December 2002	MVLWB and all First Nations communities	Snowfield/Diamonds North sent letters and phoned to advise of submitting Land Use application for Drilling in Drybones Bay Area – No Response
January – March 2003	MVLWB and First Nations Communities	Companies maintained attempts at dialogue, EBA engaged to assist; no response from the First Nations communities; MVLWB advises First Nations that they will issue Land Use permit on March 20 <sup>th</sup> , 2003
March 2003 Telephone	Luis Azzolimi, consultant for YKDN	Informed of Public Meeting April 2 <sup>nd</sup> ; that First Nations wanted to do business
March 2003	Yellowknife Dene	Observers emplaced for exploration program; First Nations persons employed to work on program.
March – April 2003	Yellowknife Dene	Observers happy with work completed
April 2, 2003 Public meeting	All Local concerned First Nations	4 hour meeting, which addressed no specific concerns except to join with them in securing their treaty rights. Past events in the whole NWT were raised even though there was no direct relation to proposed program.
April 3, 2003 meeting	Nunavut & NWT Chamber of Mines	Advised of positive benefits First Nations receiving from Operating diamond mines
June 2003 Letter	All First Nation communities as advised by MVLWB	Discussions of how to proceed.
June 20, 2003	<b>All First Nation communities as advised by MVLWB</b>	Snowfield letter Announcing Intention to Apply for a Class "A" Land Use Permit – Drybones Bay Area, Great Slave Lake, Northwest Territories
July 2003 Letter, Telephone, Meeting	Environment Canada	Conformed Exploration Program to desires of Environment Canada
July 2003 Letter,	Dept. Of Oceans & Fisheries	Spelled out procedure to ensure no effect on fish habitat

No further consultation has been held except with the MVEIRB and other operators in the preparation of this DAR.

## G-2 Issues Resolution Table

On April 2, 2003, Snowfield and several other resource companies traveled to the community of Dettah to participate in a land use consultation meeting with the Yellowknives Dene First Nation ("YKDFN") with respect to the Drybones Bay and Wool Bay areas. As a result of that meeting, Snowfield became apprised of the cultural, spiritual and historical significance of the Drybones Bay and Wool Bay areas to local First Nations members. It is Snowfield's intention to continue communicating with the YKDFN prior to the commencement of any exploration activities, and, thereafter, on an ongoing basis with respect to its exploration activities in the area. In addition to this application, a separate letter will be going out to regional First Nation communities advising of this application and relating our desire to consult on planned exploration activities inland to the north and east from the Cabin Islands on Great Slave Lake.

Snowfield, under an option agreement with Diamonds North Resources Ltd., recently completed a thirty day diamond drilling exploration program undertaken on the GTEN 1, 2, 3 and 4 mineral claims near Drybones Bay under Land Use Permit MV2002C0044. During this exploration program, thirty days of temporary employment was provided to local aboriginal workers and the Yellowknives Dene First Nation community at Dettah provided two environmental observers who were located in the immediate area of the project. Snowfield was led to understand that those observers were fully satisfied with the exploration methods and environmental clean-up undertaken by Snowfield.

**Table 6**  
**Issues Resolution**

Issue	Resolution
Culturally vital: many residents grew up and spent summers in the area and continue to actively use area.	Issue as stated indicates predominantly a summer concern and usage; Snowfield's consultant (see below) indicates only 3 areas of significance in vicinity of claims but not on them. Company will continue using First Nation advisors to ensure no areas disturbed
Spiritually Significant	No archaeological sites were identified by Prince of Wales North Heritage Centre; local community sources have not provided any information as yet but should information be provided we will ensure that all sites will be respected. Company will continue using First Nation advisors to ensure no areas disturbed
Numerous grave sites at the bay and along shoreline	Company will ensure access to work area would ensure that all sites will be respected.
Actively used for hunting	Company will continue using First Nation advisors to ensure no interference.
Actively used for fishing	Company will continue using First Nation advisors to ensure no interference
Actively used for trapping	Company will continue using First Nation advisors to ensure no interference.
Actively used for berry picking	Company will continue using First Nation advisors to ensure no interference

Site of Bald eagles (raptors)	During the summer component of the exploration program Snowfield will monitor and minimize any noise or conflict, during nesting period.
Actively used for camping and campground areas	Issue as stated indicates predominantly a summer concern and usage; Company will continue using First Nation advisors to ensure no interference
Actively used for goose hunting	Company will continue using First Nation advisors to ensure no interference
Actively used for duck hunting	Company will continue using First Nation advisors to ensure no interference No remnant impact that would affect summer duck hunting.
Ecologically unique because they are the largest bays on the shoreline and provide a unique microclimate and unique ecosystem.	Program not in Bay areas proper; Company will continue using First Nation advisors to ensure no interference
Unique habitat makes it excellent for wildlife	Program not in Bay areas proper; Company will continue using First Nation advisors to ensure no interference
Sheltered bays are regularly used during lake travel (impact current use and activity patterns)	Program not in Bay areas proper; Company will continue using First Nation advisors to ensure no interference
Good places for picking medicinal plants	No land would be disturbed so could not disturb any medicinal plant growth. Company will continue using First Nation advisors to ensure no interference
Main boat moorage on Windy days	Program not in Bay areas proper;
Significant impact on Treaty rights and alienation of current access to the land	Not an environmental impact issue.
Forest Resource impact-all trees getting knocked down	Travel and work area would be conducted in a workman like way so to minimize the cutting of trees,
Sound effects of wildlife	During the exploration program Snowfield will minimize any noise or conflict on wildlife.

### G-3 Records

Appendix I is attached which details the correspondence and consultation over the past year.

## **H Assessment Boundaries**

### **H-1 Spatial**

The proposed preliminary exploration drilling program is located in the Drybones Bay area along the northeast shoreline of the North Arm of Great Slave Lake. However, because of the highly localized nature of the preliminary exploration program as described, most environmental effects would be expected to be limited to the immediate area of the drill program sites, comprising approximately 100 square metres per drill site. With the nature of the program as described, the spatial effects boundaries are limited to the immediate area of the program at most a 100 square metres per drill site.

### **H-2 Temporal**

The proposed preliminary exploration drilling program will be of a short term (2 field season duration). All drilling equipment and wastes (with the exception of drill cuttings) generated by the drilling program will be removed off site and returned to Yellowknife for reuse, recycling or for approved disposal. As a result, the temporal boundary of activities will be limited to the two field season period (December 2003-June 2005).

## **I Subsistence and Traditional Land Use**

### **I-1 Compatibility**

At Dettah during the April 2, 2003 public meeting, a large map was displayed on the wall of the meeting room that identified all areas of First Nations reported traditional use, including archaeological sites and other areas of importance to First Nations. During the public meeting, no traditional land use or any subsistence use was noted on the map or raised during the meeting with respect to Snowfield's proposed drilling program areas.

Snowfield consulted with Ms. D. Lampi, GSI Officer, of the Prince of Wales Northern Heritage Centre, Yellowknife, NT, who advises in a written report that there are three (3) archaeological sites within the Drybones Bay, Great Slave Lake area. Data provided in the Prince of Wales Northern Heritage Centre report indicate that those three archaeological sites are not located on any of the specific mineral claims or land areas covered under this land use permit application.

### **I-2 Timing**

The duration of the exploration program will span the two field seasons (summer and winter) commencing in November 2003 through June 2005 depending on results. Based on past experience, no conflicts or other problems with visitors on snowmobiles or in boats would be expected to occur. However, Snowfield would welcome visits to the drill site(s) by interested parties.

## J Fish and Wildlife Resources

### J-1 Local Resources

#### General

The Drybones Bay area is located within the ecoregion known as the Tazin Lake Upland. This is a smaller unit of the Taiga Shield Ecozone, a large generalized unit at the top of the ecological hierarchy as defined by the Canada Committee on Ecological Land Classification. This ecoregion stretches north from Lake Athabasca to beyond the east arm of Great Slave Lake. It is marked by cool summers and very cold winters, and has a subhumid, high boreal ecoclimate. The mean annual temperature is approximately -5°C. The mean summer temperature is 11°C and the mean winter temperature is -21.5°C. The mean annual precipitation ranges from 200 to 375 mm.

#### Vegetation

The boreal forest of the Tazin Lake Upland is influenced by the Canadian Shield, typified by upland rock and classified as rock-lichen woodland. At the landscape scale, habitat is characterized by a large number of lakes, rocky outcroppings interwoven with spruce forests, and bogs. Dominant terrestrial vegetation in the Drybones Bay area consists of white and black spruce, balsam poplar, trembling aspen and white birch, containing undergrowth of smaller trees and shrubs such as willows and alders. Poorly drained fens and bogs are covered with low, open stands of tamarack and black spruce and have localized permafrost. Lakes within this zone are characterized by poor shoreline development and generally lack areas of shallow water.

#### Fish

Fish species likely to be found in waterbodies in the Drybones Bay area, including Great Slave Lake, are listed in Table 1.

**Table 7 Fish Found in the Drybones Bay Area**

Common Name	Latin Name
Arctic grayling	<i>Thymallus arcticus</i>
Burbot	<i>Lota lota</i>
Emerald shiner	<i>Notropis atherinoides</i>
Goodeye	<i>Hiodon alosoides</i>
Lake chub	<i>Couesius plumbeus</i>
Lake cisco	<i>Coregonus artedii</i>
Lake trout	<i>Salvelinus namaycush</i>
Lake whitefish	<i>Coregonus clupeaformis</i>
Least cisco	<i>Coregonus sardinella</i>
Longnose sucker	<i>Catostomus catostomus</i>

Inconnu	<i>Stenodus leucichthys</i>
Ninespine stickleback	<i>Pungitius pungitius</i>
Northern pike	<i>Esox lucius</i>
Round whitefish	<i>Prosopium cylindraceum</i>
Slimy sculpin	<i>Cottus cognatus</i>
Spoonhead sculpin	<i>Cottus ricei</i>
Spottail shiner	<i>Notropis hudsonius</i>
Trout-perch	<i>Percopsis omiscomaycus</i>
Walleye	<i>Stizostedion vitreum</i>
White sucker	<i>Catostomus commersoni</i>
Yellow perch	<i>Perca fluviatilis</i>

### Terrestrial Wildlife

The Drybones Bay area lies within the boreal forest of the Taiga Shield Ecozone, however, both boreal and tundra animal species frequent the area. Approximately twenty-five species of mammals are expected to occur in this region (Table 2). Tundra species, such as the barrenground caribou (*Rangifer tarandus groenlandicus*) is typically found within this ecoregion during the winter months, spending the summers on the tundra proper. Other species, such as the gray wolf (*Canis lupus*) and the wolverine (*Gulo gulo*) are residents of both tundra and boreal forest, and are expected in the transitional ecoregion to the north, throughout the year. Finally, boreal species such as the mink (*Mustela vison*) and the beaver (*Castor canadensis*) are reaching their northern limit, at this longitude. These species are seldom found beyond the tree line.

**Table 8 Mammals Found in the Drybones Bay Area**

Common Name	Latin Name
Arctic fox	<i>Alopex lagopus</i>
Arctic ground squirrel	<i>Citellus parryi</i>
Arctic hare	<i>Lepus arcticus</i>
Arctic shrew	<i>Sorex arcticus</i>
Barren ground caribou	<i>Rangifer tarandus groenlandicus</i>
Beaver	<i>Castor canadensis</i>
Black bear	<i>Ursus americanus</i>
Brown lemming	<i>Lemmus trimucronatus</i>
Deer mouse	<i>Peromyscus maniculatis</i>
Ermine	<i>Mustela erminea</i>
Gray wolf	<i>Canis lupus</i>
Grizzly bear	<i>Ursus arctos</i>
Least weasel	<i>Mustela rixosa</i>
Lynx	<i>Lynx canadensis</i>
Marten	<i>Martes americana</i>
Masked shrew	<i>Sorex cinereus</i>
Meadow vole	<i>Microtus pennsylvanicus</i>
Mink	<i>Mustela vison</i>

Moose	<i>Alces alces</i>
Mountain phenacomys	<i>Phenacomys intermedius</i>
Muskrat	<i>Ondatra zibethica</i>
Northern bog lemming	<i>Synaptomys borealis</i>
Northern Flying squirrel	<i>Glaucomys sabrinus</i>
Northern water shrew	<i>Sorex palustris</i>
Porcupine	<i>Erethizon dorsatum</i>
Pygmy shrew	<i>Microsorex hoyi</i>
Red fox	<i>Vulpes vulpes</i>
Red squirrel	<i>Tamiasciurus hudsonicus</i>
River otter	<i>Lutra canadensis</i>
Shorttail weasel	<i>Mustela erminea</i>
Snowshoe hare	<i>Lepus americanus</i>
Tundra red-backed vole	<i>Clethrionomys rutilus</i>
Wolverine	<i>Gulo gulo</i>
Yellow-cheeked vole	<i>Microtus xanthognathus</i>

## Birds

The Taiga Shield Ecozone is also home to approximately 125 species of birds, the majority of which are seasonal migrants (Table 3). Any of these species could be expected to occur in the Drybones Bay area from time to time. The lakes and wetlands of the north provide habitat for a remarkable number of waterfowl and shorebirds. A number of raptors utilize this region, either as residents or migrants. They include the bald eagle (*Haliaeetus leucocephalus*) northern harrier (*Circus cyaneus*), peregrine falcon (*Falco peregrinus*) and rough-legged hawk (*Buteo lagopus*). Only a few bird species, such as rock and willow ptarmigans (*Lagopus lagopus* and *L. mutus*) and common raven (*Corvus corax*) overwinter within this ecozone.

**Table 9 Birds Frequenting the Drybones Bay Area**

Common Name	Latin Name	Common Name	Latin Name
American bittern	<i>Botaurus lentiginosus</i>	Least flycatcher	<i>Empidonax minimus</i>
American kestrel	<i>Falco sparverius</i>	Least sandpiper	<i>Calidris minutilla</i>
American pipit	<i>Anthus rubescens</i>	Lesser golden plover	<i>Pluvialis dominica</i>
American redstart	<i>Setophaga ruticilla</i>	Lesser scaup	<i>Aythya affinis</i>
American robin	<i>Turdus migratorius</i>	Lesser yellowlegs	<i>Tringa flavipes</i>
American tree sparrow	<i>Spizella arborea</i>	Lincoln's sparrow	<i>Melospiza lincolni</i>
American widgeon	<i>Anas americana</i>	Long tailed jaeger	<i>Stercorarius longicaudus</i>
Arctic loon	<i>Gavia arctica</i>	Magnolia warbler	<i>Dendroica magnolia</i>
Arctic tern	<i>Sterna paradisaea</i>	Mallard	<i>Anas platyrhynchos</i>
Bald eagle	<i>Haliaeetus leucocephalus</i>	Merlin	<i>Falco columbarius</i>
Bank swallow	<i>Riparia riparia</i>	Northern flicker	<i>Colaptes auratus</i>
Barn swallow	<i>Hirundo rustica</i>	Northern harrier	<i>Circus cyaneus</i>

Belted kingfisher	<i>Ceryle alcyon</i>	Northern pintail	<i>Anas acuta</i>
Black and white warbler	<i>Mniotilta varia</i>	Northern shoveler	<i>Anas clypeata</i>
Blackpoll warbler	<i>Dendroica striata</i>	Northern shrike	<i>Lanius excubitor</i>
Black tern	<i>Chlidonias nigra</i>	Oldsquaw	<i>Clangula hyemalis</i>
Blue-winged teal	<i>Anas discors</i>	Orange-crowned warbler	<i>Vermivora celata</i>
Bohemian waxwing	<i>Bombocilla garrulus</i>	Osprey	<i>Pandion haliaetus</i>
Bonaparte's Gull	<i>Larus philadelphi</i>	Palm warbler	<i>Dendroica palmarum</i>
Boreal chickadee	<i>Parus hudsonicus</i>	Parasitic jaegers	<i>Stercorarius parasiticus</i>
Boreal owl	<i>Aegolius funereus</i>	Peregrine falcon	<i>Falco peregrinus tundrius</i>
Bufflehead	<i>Bucephala albeola</i>	Pine grosbeak	<i>Pinicola enucleator</i>
Canada goose	<i>Branta canadensis</i>	Red-breasted merganser	<i>Mergus serrator</i>
Canvasback	<i>Aythya valisineria</i>	Red-necked grebe	<i>Podiceps grisegena</i>
Caspian tern	<i>Sterna caspia</i>	Red-necked phalarope	<i>Phalaropus lobatus</i>
Chipping sparrow	<i>Spizella passerina</i>	Red-tailed hawk	<i>Buteo jamaicensis</i>
Cliff swallow	<i>Hirundo pyrrhonota</i>	Red-throated loon	<i>Gavia stellata</i>
Common goldeneye	<i>Bucephala clangula</i>	Red-winged blackbird	<i>Agelaius phoeniceus</i>
Common loon	<i>Gavia immer</i>	Rock ptarmigan	<i>Lagopus mutus</i>
Common nighthawk	<i>Chordeiles minor</i>	Ruffed grouse	<i>Bonasa umbellus</i>
Common raven	<i>Corvus corax</i>	Rusty blackbird	<i>Euphagus carolinus</i>
Common redpoll	<i>Carduelis flammea</i>	Sandhill crane	<i>Grus canadensis</i>
Common snipe	<i>Capella gallinago</i>	Savannah sparrow	<i>Passerculus sandwichensis</i>
Common Tern	<i>Sterna hirundo</i>	Semipalmated plover	<i>Charadrius semipalmatus</i>
Dark-eyed Junco	<i>Junco hyemalis</i>	Sharp-shinned hawk	<i>Accipiter striatus</i>
Downy woodpecker	<i>Picoides pubescens</i>	Sharp-tailed grouse	<i>Tympanuchus phasianellus</i>
Eastern kingbird	<i>Tyrannus tyrannus</i>	Short-billed dowitcher	<i>Limnodromus griseus</i>
Eastern phoebe	<i>Sayornis phoebe</i>	Short-eared owl	<i>Asio flammeus</i>
Eskimo curlew	<i>Numenius borealis</i>	Snowy owl	<i>Nyctea scandiaca</i>
Fox sparrow	<i>Passerella iliaca</i>	Solitary sandpiper	<i>Tringa solitaria</i>
Goshawk	<i>Accipiter gentilis</i>	Sora	<i>Porzana carolina</i>
Gray jay	<i>Perisoreus canadensis</i>	Spotted sandpiper	<i>Actitis macularia</i>
Gray-cheeked thrush	<i>Catharus minimus</i>	Spruce grouse	<i>Canachites canadensis</i>
Great horned owl	<i>Bubo virginianus</i>	Surf scoter	<i>Melanitta perspicillata</i>
Greater scaup	<i>Aythya marila</i>	Swainson's thrush	<i>Catharus ustulatus</i>
Greater white-fronted goose	<i>Anser albifrons</i>	Swamp sparrow	<i>Melospiza georgiana</i>
Greater yellowlegs	<i>Tringa melanoleuca</i>	Tennessee warbler	<i>Vermivora peregrina</i>

Green-winged teal	<i>Anas crecca</i>	Three-toed woodpecker	<i>Picoides tridactylus</i>
Gyr Falcon	<i>Falco rusticolus</i>	Tree swallow	<i>Tachycineta bicolor</i>
Hairy woodpecker	<i>Picoides villosus</i>	White-crowned sparrow	<i>Zonotrichia leucophrys</i>
Harris' sparrow	<i>Zonotrichia querula</i>	White-throated sparrow	<i>Zonotrichia albicollis</i>
Hermit thrush	<i>Catharus guttatus</i>	White-winged crossbill	<i>Loxia leucoptera</i>
Herring gull	<i>Larus argentatus</i>	White-winged scoter	<i>Melanitta fusca</i>
Horned grebe	<i>Podiceps auritus</i>	Willow ptarmigan	<i>Lagopus lagopus</i>
Horned lark	<i>Eremophila alpestris</i>	Wilson's warbler	<i>Wilsonia pusilla</i>
Ivory gull	<i>Pagophila eburnea</i>	Yellow warbler	<i>Dendroica petechia</i>
Killdeer	<i>Charadrius vociferus</i>	Yellow-rumped warbler	<i>Dendroica coronata</i>
Lapland longspur	<i>Calcarius lapponicus</i>		

Cold-blooded terrestrial species are uncommon in the Taiga Shield Ecozone. The only species potentially present at or near the Drybones Bay area is the wood frog (*Rana sylvatica*), although distribution records for amphibians in the NWT are poorly known.

Three species of bird (Eskimo Curlew, Ivory Gull and Short-eared Owl) and two species of mammal (wolverine and grizzly) that may frequent the area on occasion are ranked by COSEWIC (2002) as having special conservation status.

Exploration sites and the camp and environs will be kept in a clean and orderly condition during and following operations to minimize the attraction of wildlife and to restore the land to its original state. Wildlife will not be disturbed by exploration crews in any way; both wildlife and local land-users will have first right-of-way during Snowfield exploration activities.

## J-2 Habitat Use

Table 4 provides a general list of fish, bird and mammal species with an indication of their importance to traditional harvesting, their conservation status and comments on the likely effect of the proposed exploration drilling program on these resources.

**Table 10 Some of the More Important Fish and Wildlife Species found in the Drybones Bay Area**

	Species	Importance to Supporting Traditional Harvesting	Species at Risk	Comments re: exploration Program
Fish	Arctic Grayling	x		Short duration no effect
	Burbot	x		Short duration, localized, no effect

	Cisco	x		Short duration, localized no effect
	Inconnu	x		Short duration, localized no effect
	Lake Trout	x		Short duration, localized no effect See comments below
	Pike	x		Short duration, localized no effect
	Walleye	x		Short duration, localized no effect
	Whitefish	x		Short duration, localized no effect
	Yellow perch	x		Short duration, localized no effect
Birds	Raptors- Hawks, eagles, etc.			Migratory not present during winter
	Geese	x		Migratory not present during winter
	Ptarmigan	x		Occasional encounter possible, no effect
	Ducks	x		Migratory not present during winter
Mammals	Moose	x		Occasional encounter possible, no effect
	Caribou	x		Occasional encounter possible, no effect
	Black Bear	x		In Hibernation
	Wolves	x		Occasional encounter possible, no effect
	Lynx	x		Occasional encounter possible, no effect
	Martin	x		Occasional encounter possible, no effect
	Red Fox	x		Occasional encounter possible, no effect
	Beaver	x		encounters unlikely, no effect

### J-3 Direct and Indirect Impacts

The exploration drilling project is being undertaken during two field season period. Wildlife mammal species that are active and may be present during the drilling program period include barren-ground caribou, wolves, bears, wolverines, foxes, lynx, martin, weasels and hares.

The temporary disturbance footprint associated with each of the drill site will be limited to approximately 10 m<sup>2</sup>. All unused consumables (fuel, drill rods, etc.) and wastes ((garbage, etc.)

will be removed off site and returned to Yellowknife for recycling or disposal in an approved manner.

Because of the short term, highly localized, relatively innocuous and reversible nature of this exploration drilling program, no significant environmental effects are expected to occur.

During its exploration activities, Snowfield is committed to hiring locally to the greatest extent possible; opportunities can be expected to increase as exploration progresses beyond a few technical personnel. As a condition of contract, any contractors such as drillers etc. will be required, wherever possible, to hire locally. Longer term regional benefits that could result from these exploration activities are entirely dependent upon the future success of Snowfield's exploration results.

Visiting wildlife will be allowed to pass unimpeded.

The only possible effect on fish could result from fuel spillage into fish-bearing waters. This condition is most unlikely to arise as the exploration activities are land-based and adhere to existing set-back distances from water bodies. However, any fuel spill that may occur will be contained and cleaned up in accordance with the procedures outlined in Snowfield's Spill Contingency Procedure Plan that is on file and approved by DFO and Environment Canada. One of the key strategies included in the plan is to prevent spills from occurring by making all contractors aware of the risks.

## **K Cultural and Heritage Resources**

### **K-1 Local Resources**

Snowfield consulted with Ms. D. Lampi, GSI Officer, of the Prince of Wales Northern Heritage Centre, Yellowknife, NT, who advises in a written report that there are three (3) archaeological sites within the Drybones Bay, Great Slave Lake area. Data provided in the Prince of Wales Northern Heritage Centre report indicate that those three archaeological sites are not located on any of the specific mineral claims or land areas covered under this land use permit application.

### **K-2 Direct and Indirect Impacts**

Based on our understanding of the locations of known cultural and heritage sites in the Drybones Bay area, no direct or indirect effects on cultural or heritage sites are expected to occur as a result of the implementation of the proposed Snowfield exploration drilling program.

## **L Cumulative Effects**

In lieu of conducting its own cumulative effects assessment, the developer is expected to participate in the cumulative effects assessment of the Drybones Bay area. Specifically, the developer will be asked to participate in an interview. This cumulative effects assessment will:

- identify Valued Components that will be affected by this development in combination with other past, present and reasonably foreseeable future developments, and provide the rationale for the choice of Valued Components;
- identify other human activities that can affect those same Valued Components;
- describe the potential combined impact of the proposed undertaking in conjunction with previous, present and reasonably foreseeable human activities; and
- describe ways to avoid, mitigate and manage those impacts.

The results will be made available in the form of a report that will be provided to the developer and all other parties to the EA on August 20<sup>th</sup> following receipt of the DAR. A public hearing will be held to focus on cumulative effects. At this time, Snowfield will have the opportunity to give a presentation on its exploration program's potential contribution to cumulative effects on traditional and subsistence land use, fish and wildlife resources as well as cultural and heritage resources. Snowfield will also be expected to describe any proposed mitigation to ameliorate any potential effects, including evidence to indicate the likely effectiveness of the mitigation.

Snowfield looks forward to participating in this study and providing input and finding solutions to mitigate any potential conflicts.

## **M CONCLUSION**

As has been indicated to the MVLWB and demonstrated by Diamonds North the "general public concerns" about the Drybones Bay area were readily "mitigate-able." Furthermore none of the proposed areas for exploration of Snowfield's Land Use permit were near or potentially compromising, any of the First Nation's own data with respects to cultural or other effects.

Therefore, although the MVLWB has referred to the MVEIRB that the "proposed operation might be a cause for public concern," it is clearly not supported in the evidence provided. To wit:

1. The project is clearly preliminary and temporary in nature and will not affect the cultural, spiritual and environmental importance of the Drybones Bay area.
2. The public concerns raised are definitively political in nature and inconsistent with the practise of equal negotiations.
3. The area has been explored in the proposed manner without significant impacts for over 100 years.

Snowfield Development Corp., respectfully requests that the MVEIRB consider the evidence and refer the matter back to the MVLWB for issuance of the Land Use Permit.

## MAPS







