Mackenzie Valley Environmental Impact Review Board

Box 938 , 5102-50th Avenue, Yellowknife, NT X1A 2N7
www.mveirb.nt.ca

From:	Sherry Sian	Fax:	867-766-7074
	EAO	Phone:	867-766-7063
Date:	December 3, 2003	Pages:	13 including this page
To:	Snowfield Development Corporation	Fax:	
		CC:	MVLWB
Subject:	Responses to Round 2 IRs from SDC (EA-03-006)		

NOTES:

Please see attachments.

117

MVEIRB
Dec 2/03

DFO Information Request #1 to Snowfield Development Corporation

Potential Stream Crossings

Ground access will be along existing tote trails during winter for the Mud Lake Kimberlite Work Area and the central Mud Lake Claim group. Existing tote trails have five potential stream crossings from topographic map 85I/4. Up to 2.5 km of new winter tote trail may be constructed of which none is predicted to cross potential streams. ATVs may be used during the summer to access the Mud Lake Kimberlite Work Area and the central Mud Lake claim group via existing tote trails.

Drilling in all other claims of the Ticho Project will be supported by helicopter and skidoo access during the winter or supported by helicopter and float plane access during the summer. No new tote trails will be constructed outside of the central Mud Lake claim group. The majority of the drilling will be conducted during the winter. No heavy equipment will be moved on the ground during the summer.

Attachment

Mud Lake Claim Group, including Mud Lake Kimberlite Work Area
Figure 3, pg 5, EBA Project No. 1740067.002, Response to MVEIRB's Information Requests (amended with potential stream crossings)

Estimate of potential stream crossings affecting potential fish habitat: five (5)

Pebble Beach Access Trail (existing trail)
No potential stream crossings

Cabin Island Access Trail (existing trail)
Potential stream crossing #1 at UTM 357200 East / 6889450 North

Interior North-South Access Trail (existing trail)
Potential stream crossing #2 at UTM 357000 East / 6889700 North

Interior Access Trail
Potential stream crossing #3 at UTM 356800 East / 6889950 North

Interior Access Trail
Potential stream crossing #4 at UTM 356800 East / 6890800 North

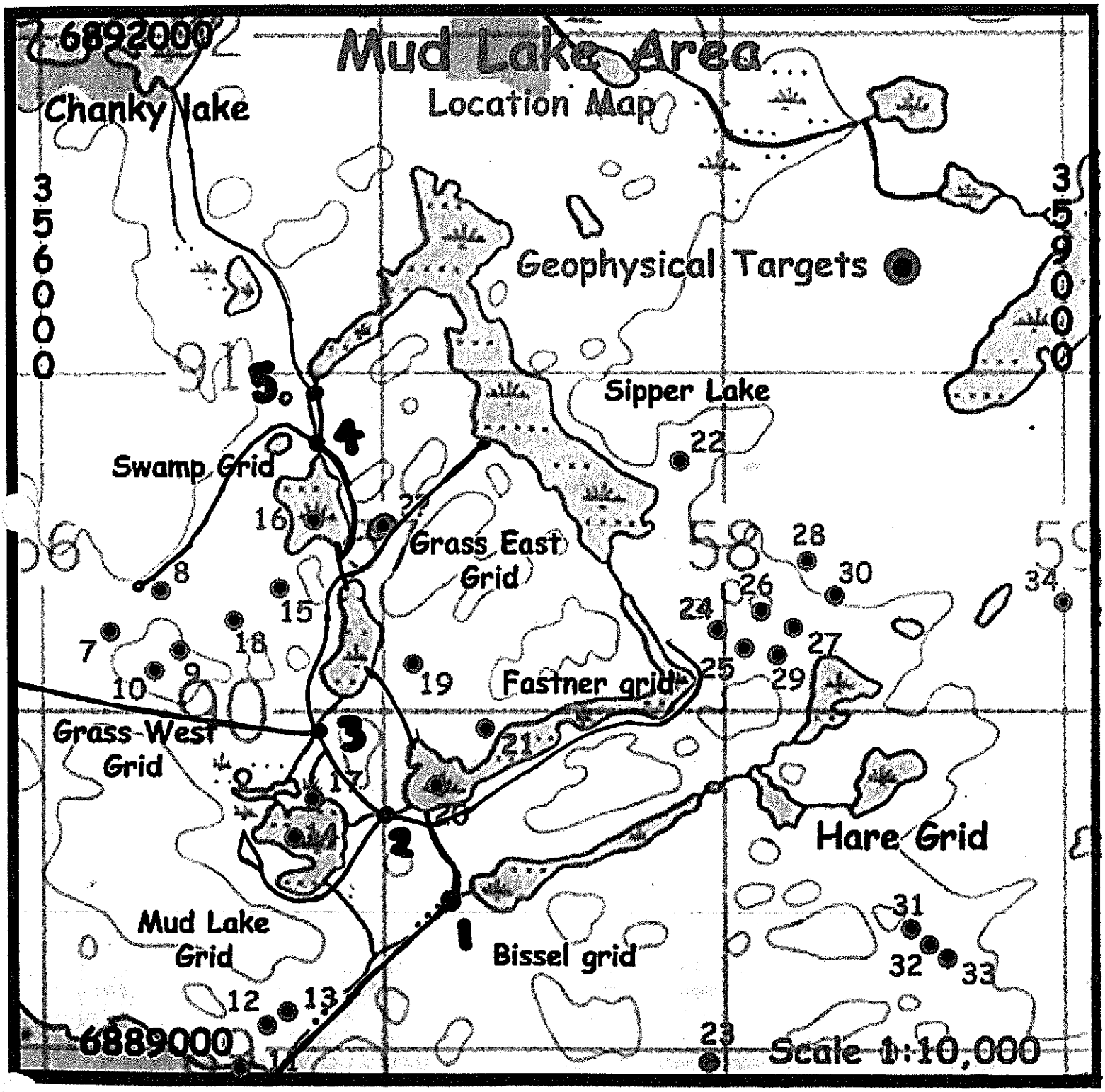
Interior Access Trail
Potential stream crossing #5 at UTM 356800 East / 6890950 North

On-site Observations

Please refer to the attached sketch. In the opinion of the project geologist,

1. The ephemeral streams shown on the central Mud Lake claim group map are seepage through swamp with no discernable drainage.
2. Fastner Lake drains north into Sipper Lake which in turn drains to a stream further north. The Sipper Lake outlet is not portrayed on the topographic map.

Potential Stream Crossings



Potential Stream Crossing Mitigation Measures

1. Pebble Beach Tote Trail with no potential stream crossings is the preferred choice for winter work access to the Mud Lake Kimberlite Work Area and the central Mud Lake claim group.
2. Equipment crossings of potential streams will be conducted in the winter when the ground is frozen and snow-covered. Potential stream crossings will be monitored.
3. Identifiable stream crossings will be bridged by plywood and logs with regards to ATV crossings during summer.
4. All other areas outside of the central Mud Lake claim group to be explored by diamond-drilling will be supported by helicopter and accessed by skidoo.
5. Skidoo crossings of potential streams will be conducted in the winter when the ground is frozen and snow-covered in all other areas. Potential stream crossings will be monitored.
6. Line-cutters will not fall trees into streams.

DFO Information Request #2 to Snowfield Development Corporation

Fish Habitat

The company looks forward to a working relationship with regulatory agencies and aboriginal groups with respect to the development of baseline environmental studies.

Exploration companies generally do not perform environmental studies. The forte of exploration companies is to gather anomalies, refine targets, drill their holes and disturb as little as possible in the ongoing, cyclic search for economic deposits.

The majority of the waters within the Ticho Project area may not be fish habitat. Fish habitat has never been determined in this area. For instance, the area of the Mud Lake – Hurcomb – Red claim groups consists of shallow ponds and small lakes, in granitic terrain, with little to no discernable drainage. Small water bodies with no discernable drainage are often subject to winter-kill due to lack of oxygen.

In the interests of baseline environmental studies, the company will collect data in the form of dissolved oxygen, water depth and temperature from each water source utilized for drilling on a hole-by-hole basis. Should the program be fully realized, the company could be drilling up to 80 sites in a region lacking baseline environmental information.

Attachment
Snowfield Development Corp provides the following preliminary data in an EXCEL spreadsheet:

Preliminary Ticho Project Fish Habitat Database

The lake depths given in the database were provided by Mr. David Smith from a lake sediment sample program performed during the winters of 1998 and 1999. Mr. Smith collected 129 lake bottom samples by hand at an average density of 1 sample per km^2 within a 100 km^2 area within his claim package and inland from Cabin Islands. Water depths and UTM coordinates of selected sites are given. A 32-element ICP-REE analysis was performed on all samples. The lake sediment sample data is proprietary, confidential and acquired at considerable expense.

Three readily identifiable fish habitats occur within the Ticho Project.

1. Only one stream of any size occurs on the Mud Lake claim group, the Red claim group and the Hurcomb mineral claim occurs in the center of the Hurcomb 1 mineral claim. This small steam is probable pike and stickleback fish habitat.
2. Target 3 in the GTEN-16 claim occurs in a lake along the drainage between Hearne Lake and Drybones Bay. Most species of fish may occur in this lake. The drainage is not navigable. The company has yet to check the water depth for fish bearing shoals at this site.
3. Three targets on the Fate mineral claim occur within Defeat Lake proper. All species of fish occur in Defeat Lake. Hopefully, bathymetric data is available for

Defeat Lake. If not, the company has yet to check the water depths for fish-bearing shoals at these sites.

In the interests of conservation, the company will treat all future drill sites on or near water as fish habitat and will dispose of water carrying finely ground rock per regulations, as previously stated.

Fish Habitat Mitigation Measures

Snowfield Development Corp will treat **all** water sources used for exploration diamond drilling and delineation diamond drilling as potential fish habitat. Snowfield will **not** be performing reverse circulation large-diameter borehole drilling.

The Preliminary Ticho Project Fish Habitat Database presents two levels of mitigation for future, sites-yet-to-be-determined, result-driven diamond-drilling activities.

Level 1 Mitigation

Drilling water fines to be slush-pumped ashore into a suitable natural depression.

Level 2 Mitigation

Recirculation settling tanks will be employed by the drilling subcontractor, should

a) the parameters of water source size, volume or draw-down fall below minimums listed in SDC's Response to MVEIRB's Informational Requests, pages 12-14.
b) kimberlite be drilled.

The fines collected in the settling tanks will be properly disposed of in a suitable natural depression onshore or, in the case of delineation drilling at Mud Lake, removed to town.

For proposed mitigative measures of delineation drilling on the Mud Lake Kimberlite Work Area, please refer to 3.1.c), pages 13-14 in Response to MVEIRB's Information Requests.

Summer Work

The majority of the work is anticipated to occur during winter due to the nature of diamond exploration. Targets that lie under lakes, ponds or swamps are those of the greatest interest. However, during the course of an anticipated five year program, some locales or targets may prove to be amenable to summer exploration. If drilling is anticipated during the summer, then the drilling will be helicopter-supported. Heavy equipment simply cannot utilize the tote trails in the Mud Lake area or elsewhere when the ground is not frozen and snow-covered.

No new winter tote trails are proposed except in the central Mud Lake claim group, where existing trails and lake-ice will be utilized as much as possible. Elsewhere in the Ticho Project claims, diamond drilling will be helicopter-supported.

Snowfield **Fish Habitat Database** **Ticho Project**

Claim Name	UTM East	UTM North	Target	Water Body	Size hectares	Volume 10x6 litres	Fish Habitat	Diss. O2 per cent	Temp deg C	Depth metres	Date of Test	Mitigation Level
Mud Lake Kimberlite Work Area												
Drybones 4	356800	6889600	kimberlite	Mud Lake	2	20	Not Known			3.05	lake sed	2
	356720	6889540	kimberlite	Mud Lake	2	20				2.44	lake sed	2
	356710	6889700	kimberlite	Mud Lake	2	20				0	lake sed	2
	356620	6889700	kimberlite	Mud Lake	2	20				2.44	lake sed	2
	356560	6889835	kimberlite	Mud Lake	2	20				1.52	lake sed	2
Central Mud Lake Geophysical Survey Area - Tote Trail Access												
Drybones 4	356890	6891175	9,10,18	Grass Lake	2	20	Not Known			1.52	lake sed	1
	356910	6891300	15,19	Grass Lake	2	20				1.52	lake sed	1
Drybones 4	356800	6891635	16	Swamp Lk	2	40	Not Known			3.05	lake sed	1
Drybones 4	357200	6891480		Sipper Lake	21	210	Not Known			3.05	lake sed	1
	357210	6891340		Sipper Lake	21	210				2.44	lake sed	1
	356810	6891085		Sipper Lake	21	210				1.52	lake sed	1
	357275	6891100		Sipper Lake	21	210				0.91	lake sed	1
	357410	6890925		Sipper Lake	21	210				3.05	lake sed	1
	357600	6890705	22	Sipper Lake	21	210				1.52	lake sed	1
	357620	6890520		Sipper Lake	21	210				7.62	lake sed	1
Drybones 4	357850	6890125	24,25,26	Fastner Lk	9	90	Not Known			0.61	lake sed	1
	357540	6890020		Fastner Lk	9	90				0	lake sed	1
	357140	6889840	20,21	Fastner Lk	9	90				1.52	lake sed	1
Drybones 4	357810	6889725		Bissel Lk	6	120	Not Known			1.22	lake sed	1
	357600	6889600		Bissel Lk	6	120				4.57	lake sed	1
	357280	6889530		Bissel Lk	6	120				6.1	lake sed	1
Drybones 4	355810	6892200		Chanky Lk	18	180	Not Known			2.13	lake sed	1
	356100	6892130		Chanky Lk	18	180				1.52	lake sed	1
	356340	6892100		Chanky Lk	18	180				1.52	lake sed	1
	356360	6891940		Chanky Lk	18	180				0.61	lake sed	1

Claim Name	UTM East	UTM North	Target	Water Body	Size hectares	Volume 10x6 litres	Fish Habitat	Diss. O2 per cent	Temp deg C	Depth metres	Date of Test	Mitigation Level
Helicopter Access												
Drybones 5	358100	6893700		Pond 1	6		Not Known					1
Drybones 5	358200	6894650		Pond 2	4		Not Known					1
Drybones 5	358800	6894600		Pond 3	5		Not Known					1
Drybones 5	359740	6894825		Tuba Lk	25		Not Known			0	lake sed	1
Faya	358550	6891850		Faya Lk	1	50	Not Known			6.1	lake sed	1
Faya	358715	6891600		Hiya Lk	1	40	Not Known			4.57	lake sed	1
Drybones 5	358980	6891235		Forya Lk	27	270	Not Known			3.05	lake sed	1
	359170	6891440		Forya Lk	27	270				0	lake sed	1
Drybones 5	359140	6890460		Fuleh Lk	24	240	Not Known			2.44	lake sed	1
	359330	6890805		Fuleh Lk	24	240				1.52	lake sed	1
	359485	6890940		Fuleh Lk	24	240				1.52	lake sed	1
	359650	6891200		Fuleh Lk	24	240				1.52	lake sed	1
Beck 6	358310	6890135		114 Pond	1	20	Not Known			2.14	lake sed	1
Beck 6	358460	6889810		Hare Lake	1	40	Not Known			4.57	lake sed	1
Beck 3	360500	6889005		Baste Lk	1	10	Not Known			1.52	lake sed	1
	360415	6889070		Baste Lk	1	10				1.52	lake sed	1
Beck 3	360465	6889455		Inchworm	1	10	Not Known			3.05	lake sed	1
	360345	6889390		Inchworm	1	10				3.05	lake sed	1
	360120	6889295		Inchworm	1	10				0	lake sed	1
Beck 3	361125	6889800		Two Lake	1	20	Not Known			3.05	lake sed	1
	361165	6890005		Two Lake	1	20				3.05	lake sed	1

Claim Name	UTM East	UTM North	Target	Water Body	Size hectares	Volume 10x6 litres	Fish Habitat	Diss. O2 per cent	Temp deg C	Depth metres	Date of Test	Mitigation Level
Helicopter Access												
Beck 3	361040	6890025		Won Lake	1	20	Not Known			3.05	lake sed	1
	360900	6890110		Won Lake	1	20				1.52	lake sed	1
Beck 3	361400	6890550		Four Lake	16	160	Not Known			1.23	lake sed	1
	361280	6890460		Four Lake	16	160				1.23	lake sed	1
	360840	6890190		Four Lake	16	160				1.52	lake sed	1
	360715	6890100		Four Lake	16	160				0	lake sed	1
	361110	6890130		Four Lake	16	160				0	lake sed	1
	361200	6890200		Four Lake	16	160				4.57	lake sed	1
	361120	6890690		Four Lake	16	160				1.52	lake sed	1
Beck 3	361250	68891200		Unnamed	1		Not Known					1
Beck 3	361150	68892000		Lantern Lk	1		Not Known					1
Beck 1	361100	6892980		Genie Lk	48	480	Not Known			0	lake sed	1
	361310	6892260		Genie Lk	48	480				1.52	lake sed	1
	361075	6892550		Genie Lk	48	480				1.52	lake sed	1
Beck 1	361900	6892775		Lac Gas Bar	8		Not Known			0	lake sed	2
	361100	6892980		Lac Gas Bar	8					0	lake sed	2
Beck 1	361200	6894500		Lake 1	25		Not Known					1
Beck 1	362100	6894500		Lake 2	40		Not Known					1
Beck 1	360200	6895900		Nestor Lk	10		Not Known					1
Beck 1	361500	6896150		Dolphin Lk	15		Not Known					1
Beck 1	361800	6897600		Yap Lake	30		Not Known					1

Snowfield **Fish Habitat Database** **Ticho Project**

Claim Name	UTM East	UTM North	Target	Water Body	Size hectares	Volume 10x6 litres	Fish Habitat	Diss. O2 per cent	Temp deg C	Depth metres	Date of Test	Mitigation Level
Helicopter Access												
Pica	364000	6894750		Pond 1	3		Not Known					1
Pica	364700	6895350		Pond 2	8		Not Known					1
Pica	364500	6894500		Exo Lake	35		Not Known					1
Wica	364030	6892450		Lac Renard	100	1000	Not Known			1.52	lake sed	1
	363785	6892980		Lac Renard	100	1000				1.52	lake sed	1
	363850	6893510		Lac Renard	100	1000				1.52	lake sed	1
	363530	6893365		Lac Renard	100	1000				1.52	lake sed	1
	363500	6892800		Lac Renard	100	1000				2.13	lake sed	1
	363350	6892485		Lac Renard	100	1000				1.52	lake sed	1
	362830	6892725		Lac Renard	100	1000				0	lake sed	1
Beck 4	364580	6891985		Turtle Lk	12	200	Not Known			4.57	lake sed	1
	364210	6892225		Turtle Lk	12	200				0	lake sed	1
Beck 4	363625	6890980		Bignose Lk	50	250	Not Known			0.61	lake sed	1
	363700	6891565		Bignose Lk	50	250				0.61	lake sed	1
	363875	6891825		Bignose Lk	50	250				0	lake sed	1
	364240	6891825		Bignose Lk	50	250				0.61	lake sed	1
Habanero	362650	6890775		Flee Lake	15		Not Known			0	lake sed	2
	362840	6890700		Flee Lake	15					0	lake sed	2
	362500	6890995		Flee Lake	15					1.52	lake sed	2
	362700	6891050		Flee Lake	15					0	lake sed	2
	362730	6891400		Flee Lake	15					0	lake sed	2
Habanero	362190	6890375		Habanero Lk	4	40	Not Known			1.52	lake sed	1
	362430	6890485		Habanero Lk	4	40				1.52	lake sed	1
Habanero	362465	6890175		Jalapeno Lk	1	20	Not Known			3.05	lake sed	1
	362470	6890050		Jalapeno Lk	1	20				2.44	lake sed	1

Snowfield **Fish Habitat Database** **Ticho Project**

Claim Name	UTM East	UTM North	Target	Water Body	Size hectares	Volume 10x6 litres	Fish Habitat	Diss. O2 per cent	Temp deg C	Depth metres	Date of Test	Mitigation Level
Helicopter Access												
Pyrope	362900	6889065		Dragon Lake	40	200	Not Known			0.91	lake sed	1
	362500	6889280		Dragon Lake	40	200				0.91	lake sed	1
	362170	6889620		Dragon Lake	40	200				1.22	lake sed	1
	361800	6889800		Dragon Lake	40	200				0.61	lake sed	1
	362215	6889930		Dragon Lake	40	200				0.61	lake sed	1
	361525	6889840		Dragon Lake	40	200				0.91	lake sed	1
Pyrope	361420	6889255		Lam Lake	1	10	Not Known			1.52	lake sed	1
	361425	6889390		Lam Lake	1	10				1.52	lake sed	1
Hurcomb 1	361600	6887200	7,8,9	Noodle Lake	25	125	Yes			1.52	lake sed	1
	361785	6887320		Noodle Lake	25	125	Yes			0.61	lake sed	1
	362060	6887460		Noodle Lake	25	125	Yes			0.61	lake sed	1
	362340	6887970	15,18,19	Noodle Lake	25	125	Yes			0.61	lake sed	1
	362625	6888200		Noodle Lake	25	125	Yes			0.91	lake sed	1
Hurcomb 1	360750	6887700	2,3,4,6	Pond 1	4		Yes					1
Hurcomb 1	363800	6888600		Pond 2	10		Not Known					1
Hurcomb 1	363500	6887200	27-33	Pond 2	15		Not Known					1
Gten 16	371150	6897000	Target 1	Pond	5		Not Known					2
Gten 16	372600	6897200	Target 2	Pond	75		Not Known					1
Gten 16	371600	6898100	Target 3	Lake	280		Yes					1
Fate 1	365218	6915714	Target 1	Defeat Lk	Large lake		All species					2
Fate 1	364747	6915373	Target 2	Defeat Lk	Large lake		All species					2
Fate 1	365313	6914553	Target 3	Defeat Lk	Large lake		All species					2

DFO Letters dated July 2 and July 4 (Project Review Requirements)

Snowfield has provided as much information as it can for its proposed multiphase exploration program. Please refer to a project summation listed on pages 1-10 in the Response to MVEIRB's Informational Requests, EBA Project No 1740067.002.

Snowfield Development Corp proposed exploration program has undergone refinement due to the Environmental Impact review process. The company has submitted the following documentation to MVEIRB:

1. Land Use Permit Application MV2003C0023
2. Developer's Agreement Report (DAR)
3. Amendment and Additions to SDC's DAR
   (includes drill-site to claim area Cumulative Effects)
4. Response to Regional Cumulative Effects Study for Drybones Bay and Wool Bay
5. Response to MVEIRB's Informational Requests

While this information and the Gartner-Lee Regional Cumulative Effects Study report are on the Public Registry of MVEIRB, the company will submit a CD of SDC's reports to DFO. If any information is missing, please contact us.

Project Review Information Requirements particulars as to Proponent, Project Location, Project Description, Construction, Navigation, Environment, Monitoring and Other are dealt with in the above. If DFO could advise us of further specific outstanding issues, we would be pleased to respond accordingly.

Furthermore:

Upon completion of a ground geophysical survey on the Mud Lake grid, the company will generate a list and map of winter season drill-sites. In the interim, we ask all agencies to use the boundaries of the proposed Mud Lake Kimberlite Work Area.

Upon evaluation of till sampling analysis and/or future ground geophysics on the targets on Central Mud Lake.Airborne Geophysical Survey area, the company will generate a list and map of winter season drill-sites and ground (or air) access.

Upon evaluation of till sampling analysis and/or future ground geophysics on the targets of the Hurcomb Airborne Geophysical Survey area, the company will generate a list and map of winter season drill-sites. Drilling would be helicopter-supported.

DFO Information Request #3 to Snowfield Development Corporation

Reverse Circulation Borehole Drilling

The company will **not** be using reverse circulation borehole drilling for mini-bulk sampling.

Please consider the cover letter of Response to MVEIRB's Informational Requests, EBA Project No. 1740067.002, as a withdrawal of Reverse Circulation Borehole Drilling from Land Use Permit Application MV2003C0023.