

## Nunavut Water Board

### NUNAVUT IMALIRIYIN KATIMAYINGI

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## WATER LICENCE APPLICATION FORM

Application For (check one)

☐ New

☒ Amendment

☐ Renewal

☐ Assignment

NWB2FER0507

Licence Number NWB  
(NWB use only)

### 1. Name and mailing address of applicant/licensee

Starfield Resources Inc.  
420 – 625 Howe Street  
Vancouver, BC  
V6C 2T6

Phone 604 608 0400

Fax 604 608 0344

E-mail [sfield@skycomip.com](mailto:sfield@skycomip.com)

[john\\_nicholson@telus.net](mailto:john_nicholson@telus.net)

### 2. Address of corporate office in Canada (if applicable)

Phone \_\_\_\_\_

Fax \_\_\_\_\_

E-mail \_\_\_\_\_

### 3. Location of undertaking *(describe and attach a topographic map indicating the main components of the undertaking)*

It is proposed to move the present camp site north of the previous mineral exploration areas of activity, ranging between 200 metres and 3 kilometres inland from the southwest shore of Ferguson Lake. The area of undertaking is located on Map Sheet NTS 065I15.

The proposed new camp site location is centered at approximately Latitude 62° 53' 33.66" North, Longitude 95° 54' 15.03" West.

### 4. Description of undertaking *(attach plans and drawings)*

Starfield Resources Inc. proposes to create a new base of operations for its Ferguson Lake area activities by moving the present camp site, located on an island in the lake. The new facilities will be more conveniently located relative to the primary areas of future mineral exploration and development envisioned by the company. The site chosen for the camp will permit expansion if required by future project activities.

The camp will be constructed using new or used portable buildings transported to the site by Cat train. Starfield-owned buildings and equipment currently located at the old island camp will also be transported to the new camp site. The company will incorporate modern wastewater and domestic water treatment facilities in the new camp. Starfield will continue to use the airstrip on Ferguson Island to access the site and store excess fuel, only monthly supplies of fuel will be stored at the camp site.

**5. Type of primary undertaking** *(A supplementary questionnaire must be submitted with the application for undertakings marked with an asterisk. See Schedule II of the Northwest Territories Waters Regulations for description of undertakings)*

|  |   |
|--|---|
| <input type="checkbox"/> Industrial *                          | <input type="checkbox"/> Agricultural   |
| <input type="checkbox"/> Mining and Milling *                  | <input type="checkbox"/> Conservation *   |
| <input type="checkbox"/> Municipal (includes camps / lodges) * | <input type="checkbox"/> Recreational   |
| <input type="checkbox"/> Power                                 | <input checked="" type="checkbox"/> Miscellaneous (includes exploration / drilling) * |
|  | (describe): Construction of a new camp site.  |

**6. Water use**

☒ To obtain water ☐ To divert a watercourse  
☐ To modify the bed or bank of a watercourse ☐ Flood control  
☐ To alter the flow of, or store, water ☐ Other (describe): \_\_\_\_\_  
☐ To cross a watercourse \_\_\_\_\_

**7. Quantity of water involved**

(cubic metres per day including both quantity to be used and quantity to be returned to source)

Water will be pumped from Ferguson Lake with an electric pump and used for domestic purposes after ultra violet treatment. The camp will accommodate up to 30 people and will use up to 7.7 cubic metres of water per day. All water will be discharged to a sump after treatment using a rotating biological contactor or similar system. These systems have excellent performance ratings and water should be suitable for direct discharge to the environment.

**8. Waste**

(for each type of waste describe: composition, quantity [cubic metres per day], methods of treatment and disposal, etc.)

☒ Sewage ☒ Waste oil  
☒ Solid waste ☒ Greywater  
☐ Hazardous ☒ Sludges  
☐ Bulky items / scrap metal ☐ Other (describe): \_\_\_\_\_

**Sewage and grey water** – all camp discharge water, estimated at less than 7.7 cubic metres per day of sewage, wash water, shower water and kitchen water, will be treated using a rotating biological contactor or similar system. Starfield will purchase or rent a

stand alone treatment system designed for arctic camp use and rated for throughput equal to or greater than immediate requirements. Effluent quality will be suitable for direct discharge to the environment. Effluent will be discharged via a heated pipe to a 12m x 12m sump. Sludge will be removed, air dried and incinerated on site at a frequency determined by the camp population.

**Waste oil** – Waste oil volumes from the camp and related activities will be approximately 0.1 cubic metres per week. Waste oil will be incinerated or used for heating purposes.

**Solid wastes** – Volumes of solid waste will vary with the daily population of the camp and project activities. All combustible solid waste will be burned daily in a CY 1020 FA “D” KEYTEK Incinerator. Ash from the waste station will be re-burned in the garbage incinerator.

**Hazardous Waste** – There will be no hazardous materials on the project site.

**Sludges** – The wastewater treatment system will have capacity for sludge storage. The volume of sludge produced will vary with the population of the camp. Before the sludge storage reaches capacity, the sludge will be removed, air dried and incinerated.

Starfield Resources Inc. will be moving everything owned by Starfield from the leased camp on the island to the new camp. Any materials not required at the new camp will be burned or hauled off site for disposal at an approved landfill.

**9. Persons or properties affected by this undertaking**  
(give name, mailing address and location; attach if necessary)

The land affected by the undertaking is administered by Kivalliq Inuit Association. It lies in RI-27. An application has been submitted to the Kivalliq Inuit Association to use the land for a camp. Starfield Resources Inc. owns or has applied for all the mineral tenures underlying the sites.

**Land Use Permit**

DIAND Yes \_\_\_ No **X** If no, date expected \_\_\_\_\_  
Regional Inuit Association Yes \_\_\_ No **X** If no, date expected 01/01/06\_\_\_  
Commissioner Yes \_\_\_ No **X** If no, date expected 01/01/06\_\_\_

**10. Predicted environmental impacts of undertakings and proposed mitigation measures**

(direct, indirect, cumulative impacts, etc.)

NIRB Screening Yes \_\_\_ No **X** If no, date expected 01/01/06\_\_\_\_\_

Little environmental impact is anticipated from the construction of the camp. The proposed camp area is located on exposed bedrock and has very little to no vegetation. The camp layout will minimize the area of surface disturbance. Food will be stored inside closed buildings and garbage will be incinerated daily to avoid attracting animals.

When the camp is no longer required all imported materials will be burned or removed from the site. Any pits or earthworks will be backfill and recontoured.

Fuel will be stored in 205 liter steel drums in approved containment according to regulations, and will be located 100m from the high water mark. Storage areas will be monitored regularly to detect and manage any leaks. Empty drums will be removed from the site. Spill kits will be maintained in all fuel storage and transfer areas and all staff will be trained regarding the spill contingency plan.

Camp domestic water will be drawn from Ferguson Lake in volumes that will not affect lake habitats. All waste water will be treated and will be returned to the Ferguson Lake drainage area.

The transportation component of hauling the camp buildings to site will take place in the winter, and should have no effect on birds or most wildlife. The presence of wildlife will be monitored and activities adjusted to avoid unnecessary disturbance.

#### **11. Inuit water rights**

Will the project or activity substantially affect the quality, quantity, or flow of water through Inuit Owned Lands and the rights of Inuit under Article 20 of the *Nunavut Land Claims Agreement*?

Yes \_\_\_\_ No **X**

If yes, has the applicant entered into an agreement with the Designated Inuit Organization to pay compensation for any loss or damage that may be caused by the alteration?

Yes \_\_\_\_ No \_\_\_\_

If no compensation agreement has been made, how will compensation be determined?

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The construction and operation of the proposed camp and airstrip will not affect the quality, quantity or flow of water flowing through Inuit Owned Land.

Water from Ferguson Lake has been used for drilling and human consumption in the Project area since the 1950s with no detectable adverse impacts.

#### **12. Contractors and sub-contractors** (name, address and functions)

##### **Rescan Environmental Services** (Environmental contractors)

Sixth Floor, 111 West Hastings Street

Vancouver, B.C. Canada V6E 2J3

(604)689-9460 ph

(604)687-4277 fx

Attn: Latisha Heilman

##### **Major Drilling** - Flin Flon, Manitoba (Drill Contractors)

Flin Flon, Manitoba  
(204)687-3483 ph  
(204)687-5739 fx  
Attn: Wally Tetlock

**Northern Air Support** (Air Support-Helicopter)  
Kelowna, BC  
6285 Kelowna Airport  
Kelowna, BC V1V-1S1  
(250)765-0100 ph  
(250)765-0077 fx  
Attn: Roger Reid

**Ken Borek Air** (Air Support-fixed wing)  
Calgary, Alta  
(403)291-3300  
Rankin Inlet  
(867)645-2535 ph  
Attn: Jimi Onalik

**Crone Geophysics** (Geophysical Contractors)  
3607 Wolfedale Road  
Mississauga, Ontario  
(905)270-0096 ph  
(905)270-3472 fx  
Brad Malpage

**Nicholson & Associates** (Geological Contractors)  
302-675 West Hasting St  
Vancouver BC  
V6B-1N2  
(604)682-1845 ph  
(604)682-1816 fx  
Attn: George Nicholson

**1984 Inc** (Cooks-First Aid)  
Vancouver, BC  
(604)736-8142 ph  
(604)736-8119 fx  
Attn: Lise Thompson

**13. Studies undertaken to date** (list and attach copies of studies, reports, research, etc.)

Available studies include:

EBA Engineering, 2002. *2001 Wildlife Baseline Studies, Ferguson Lake, Nunavut, 2001*. Prepared by EBA Engineering Consultants LTD., Yellowknife NT April 2002

EBA Engineering, 2004. *2002 Wildlife Baseline Studies, Ferguson Lake, Nunavut, 2002*. Prepared by EBA Engineering Consultants LTD., Yellowknife NT March 2004

Points West, 2005. *Summary of 2005 Archaeological Investigations at the Ferguson Lake Study Area*. Prepared by Points West Heritage Consulting Ltd. for Rescan Environmental Services Ltd. Vancouver, BC July 2005

Rescan, 2003. *Preliminary Baseline Study, Ferguson Lake Project Area, 1999*. Prepared by Rescan Environmental Services Ltd. for Starfield Resources Inc., Vancouver, BC January 2003

Rescan, 2005. *Water Baseline Sampling Program 2005*. Prepared by Rescan Environmental Services Ltd. for Starfield Resources Inc., Vancouver, BC 2005

Points West, 2005. *Summary of 2005 Archaeological Investigations at the Ferguson Lake Study Area*. Prepared by Points West Heritage Consulting Ltd. for Rescan Environmental Services Ltd. Vancouver, BC July 2005

**14. The following documents must be included with the application for the regulatory process to begin**

Supplementary Questionnaire Yes ☒ No ☐ If no, date expected \_\_\_\_\_  
(where applicable; see Section 5)

Inuktitut/English project summary Yes ☒ No ☐ If no, date expected \_\_\_\_\_

Application fee \$30.00 Yes ☒ No ☐ If no, date expected \_\_\_\_\_  
(payee Receiver General for Canada)

Water use fee Yes ☐ No ☒ If no, date expected \_\_\_\_\_ When requested \_\_\_\_\_  
(see section 9 of the *NWT Waters Regulations*; payee Receiver General for Canada)

**15. Proposed time schedule**

Annual ☐ (or) Multi-year ☒ Start date 13/12/2005 Completion date \_\_\_\_\_  
continuous

**Nunavut Water Board Use Only**

Application fee Amount \$ \_\_\_\_\_ Pay ID No: \_\_\_\_\_

Water use deposit Amount \$ \_\_\_\_\_ Pay ID No: \_\_\_\_\_

\_\_\_\_\_

Name (print)

Title (print)

Signature

Date