

STARFIELD RESOURCES INC.  
FERGUSON LAKE PROPERTY  
2007 ANNUAL REPORT

Licence Numbers: KVCL305H27, KVL399C150, 2BE-FER0712

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## **INTRODUCTION**

Starfield Resources Inc. is an advanced exploration and emerging early stage, development company focused on its 100% owned Ferguson Lake Nickel-Copper-Cobalt-Platinum-Palladium-Rhodium property in the Kivalliq Region of Nunavut Territory, Canada. Starfield is a well-financed, public company trading on the Toronto Stock Exchange under the symbol SRU.

Between the years 1949 and 1957 the area was explored by INCO (International Nickel Company). Since acquiring the property in 1999, Starfield has continued the exploration activities that were started by INCO. A number of different exploration methods have been used to study the mineralization in the area. These exploration methods have included aerial surveys, geological and geophysical studies, surface studies and drilling programs.

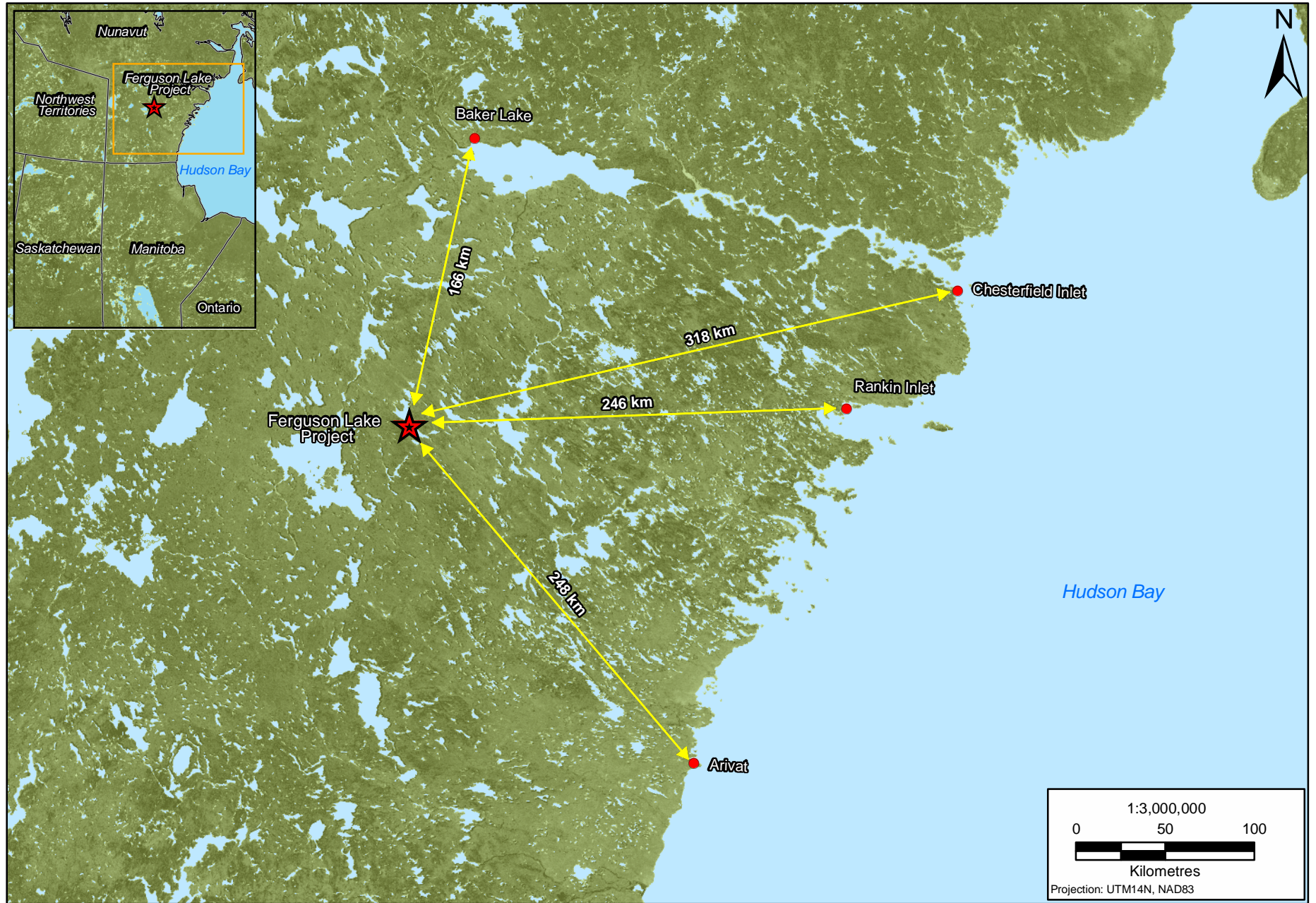
## **DESCRIPTION AND LOCATION OF PROJECT AREA**

The Ferguson Lake property consists of 442 mineral claims comprising an area of 439,778.08 hectares (1,086,715.3 acres) some 240 kilometres (km) west of Rankin Inlet and 160 kilometres south-southwest of Baker Lake, see Figure 1. The mineral claims extend east, west, south and northwest of Ferguson Lake between latitudes 62 30' and 63 15' North and longitudes 96 00' and 98 15' West in NTS map-areas 65I/9-11, 13-15, 65O/1 and 65P/3 and 4 (UTM coordinates 6933000 – 7017600N, 525000 – 650000E – Zone 14).

Ferguson Lake, central to the large property area, is midway between Yathkyed and Kaminuriak Lakes. The property currently measures 125 kilometres in an east direction and approximately 80 kilometres north-south. A map of the property showing the claims is provided in Figure 2.

The infrastructure at the New Camp site include buildings for accommodation, offices and areas for fuel storage, core storage, equipment maintenance, core cutting, warehousing, etc. Freshwater will continue to be drawn by pump from Ferguson Lake to the camp.

Starfield will continue to use the airstrip on Ferguson Island to access the site and deliver goods and personnel until construction is completed on the new airstrip at New Camp. Construction of the new airstrip is scheduled to begin in 2008 after engineering and site selection evaluation studies are completed this season.





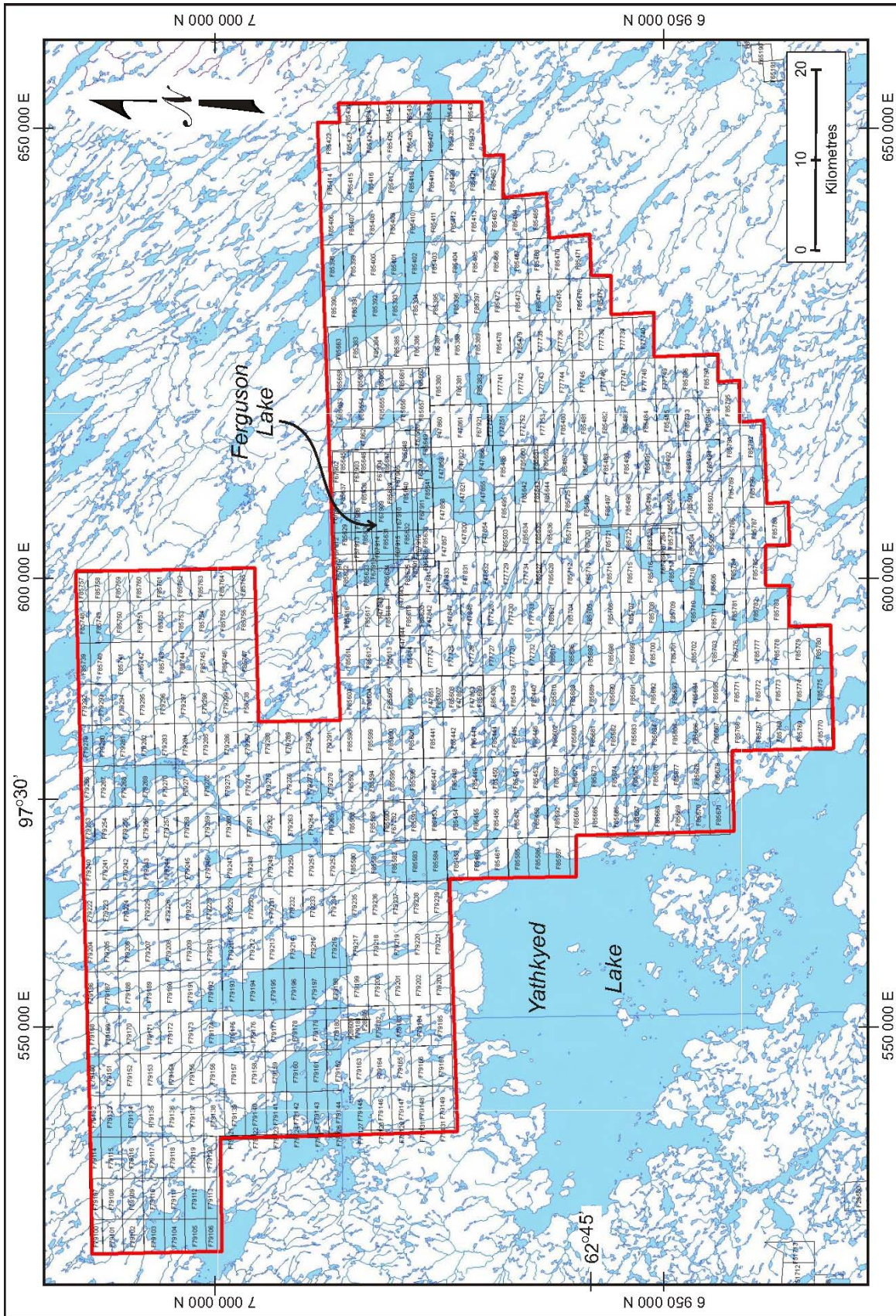


Figure 2 - Ferguson Lake Property - Mineral Claims

## **SUMMARY OF EXPLORATION ACTIVITIES IN 2007**

### **Drilling**

There were nineteen (19) drill holes drilled in 2007 (Figure 3). Drill rod and casing was removed from all of the drill holes and the anchor rod was cut down to at least ground level and capped.

## **REMEDATION EFFORTS 2007**

In the summer of 2007 work began on the remediation of the old drill sites and the historical Canico (Inco site). Drill site remediation was completed by Rescan Ltd. Environmental Technicians under the supervision of Starfield Resources Inc. Work began on August 12, 2007 and drill site remediation was completed on October 15, 2007. The Rescan Technicians involved with the project were Richmond Green, Najuk Kusugak, Graham Kusugak, and Jerome Misheralak. Camp maintenance personnel were also involved in the project sporadically. Canico (Inco) site remediation was headed by Jim Fidell (Starfield Contracted Employee) with the help of camp maintenance, and occasionally Rescan Environment Technicians. The camp maintenance crew consisted of Makpa Kaludjak,

The purpose of remediating the area was to create a habitat that closely resembled the area before exploration began. This was not only for esthetic purposes, but it would help create a safer environment for animals and people alike.

### **History**

The Ferguson Lake area has been an area of interest for mineral exploration dating back to the late 40's when the Inco mining company under their exploration subsidiary Canico explored the area. Inco's activity lasted until 1957 (\*) When Inco pulled out of the area they left buildings, various drill collars, and extensive amounts of garbage. In 1999 Starfield Resources started early exploration of the area and drilling continued to delineate the mineral resource. (\*). Drill collars were left in place by Starfield to maintain survey control in the area. However under recommendations by KIA (Kivalliq Inuit Association), Starfield's new management made it a priority to remediate both Canico and Starfield's drill sites.

### **Remediation**

Remediation of the area included the removal all the drill collars left by Inco and Starfield from 1950-1957 from 1999-2006, along with any garbage left in the area, old buildings, and equipment not in use anymore. After both Inco and Starfield's drill collars had been recorded and documented by a survey crew remediation began on August 12, 2007.

Remediation of the drill sights was divided up into 10 Phases. Pictures of each collar were taken before the removal of drill collars and debris. The remediation crew used a grinder and supporting generator to cutoff drill steel. The crew was supported by helicopter and/or quad and trailer to assist in the removal of garbage.

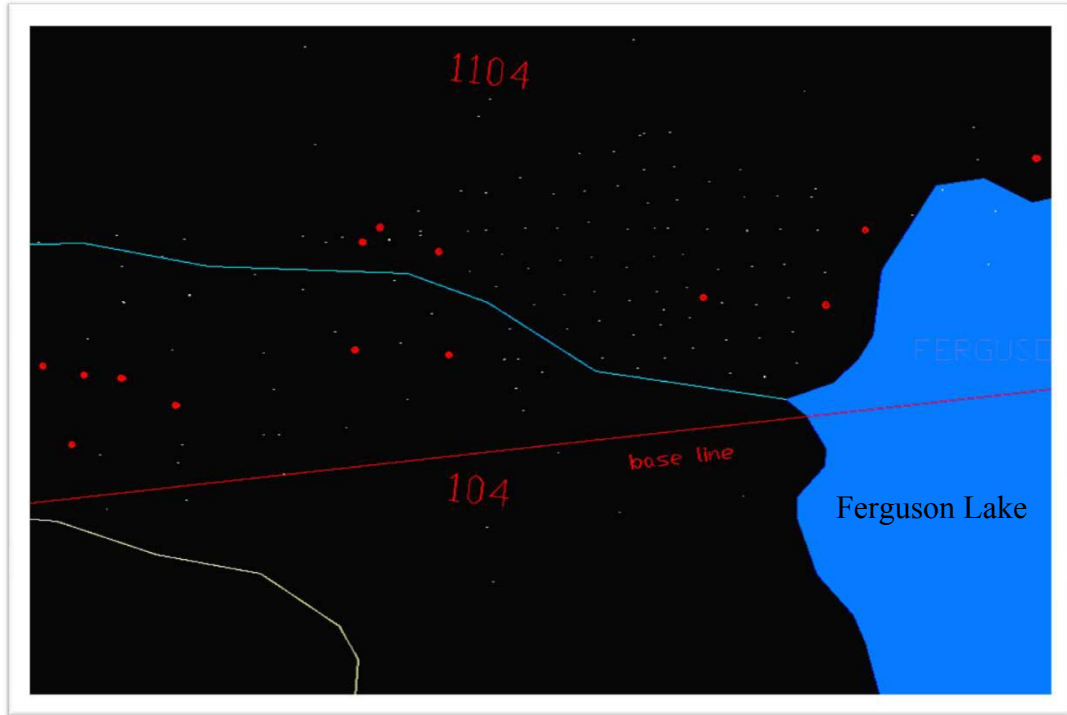


Figure 3: 2007 Drill Target Locations.

Hole ID	Easting UTM	Northing UTM	Date
FL07-360	6972936	605637.5	20.Sept.
FL07-361			24.Sept
FL07-362	6972932.3	605707.5	28.Sept
FL07-363			30.Sept
FL07-364	6973008.8	605699.8	08.Oct
FL07-365			13.Oct
FL07-366			20.Oct
FL07-367	6973015.9	605643.22	24.Oct
FL07-368			29.Oct
FL07-369	6973026.8	605656.1502	17.Nov
FL07-370	6972917.3	605436.1445	21.Nov
FL07-371	6972923.937	605405.58	04.Nov
FL07-372			08.Nov
FL07-373	6972917.3	605436.1445	29.Nov
FL07-374	6972932.3	605707.5	15.Nov
FL07-375			11.Nov
FL07-378	6972894.7	605504.4	19.Nov
FL07-379			23.Nov
FL07-380	6973069.7	605947.63	29.Nov

Removal of the collars involved digging down around it approximately 2 feet with enough room along the side to fit the grinder used to cut it for extraction. After the collar was removed the hole was filled back up with earth. A tag was left to identify where the area the drill collar was. Pictures were taken following completion of clean up to compare with the before pictures and to verify adequate remediation.

Once the collars were picked up a thorough inspection of the area was done to ensure that no debris was left behind. Sites were also checked to make sure no collars were missed during the initial survey. If any drill collars were over looked they were documented and recorded by GPS.

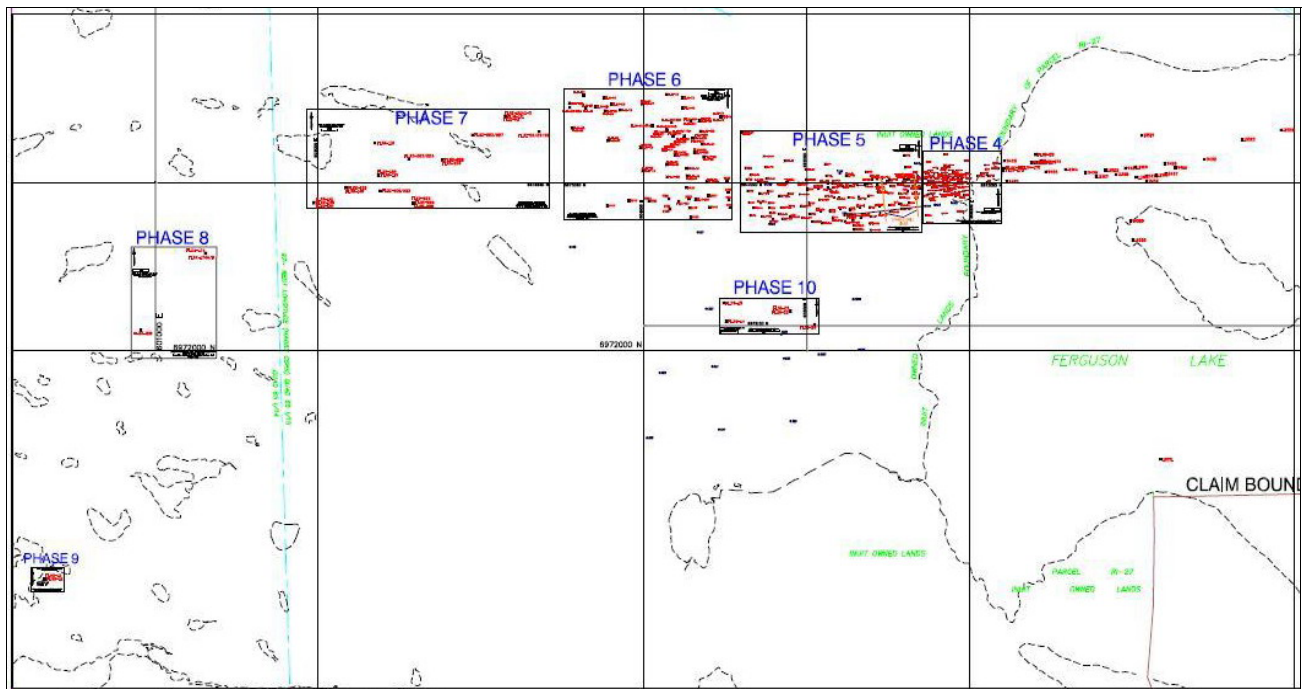
In all there were a total of 433 sites remediated, see Figure 4 and 5. In some instances there was more than one drill collar found, in others the drill collar had already removed.

Work began on the remediation of Phase 4 in late July.

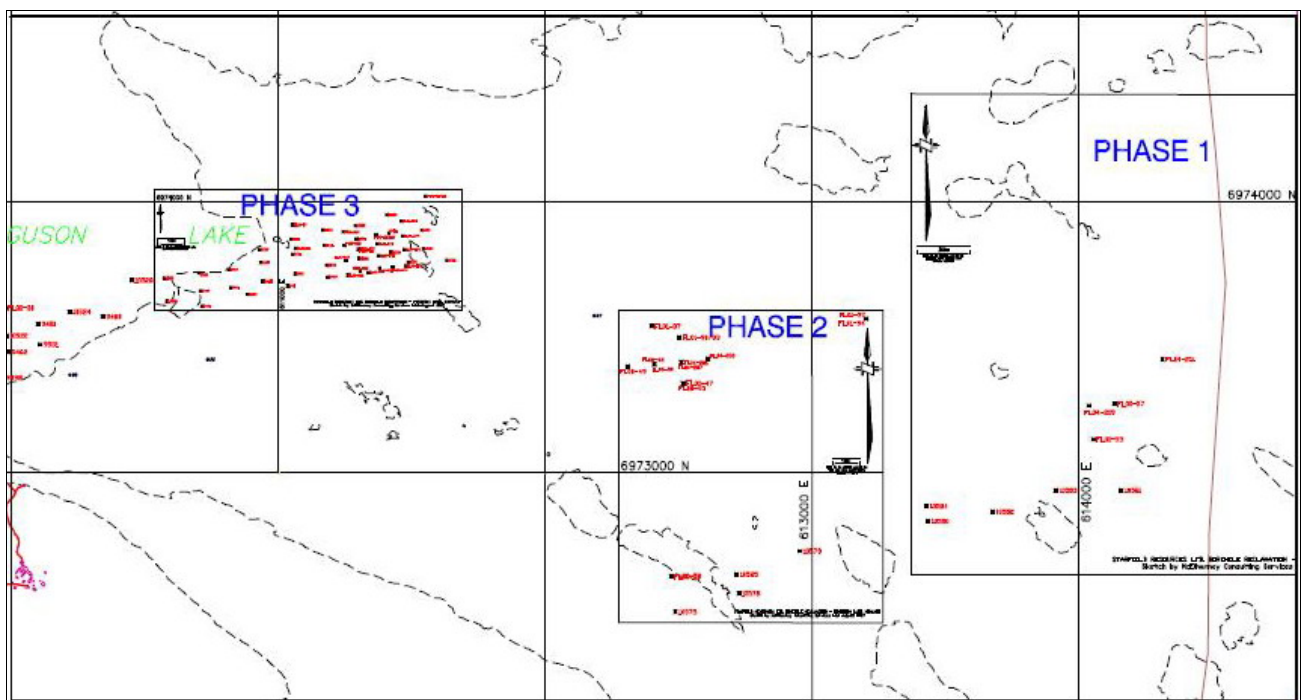
<b>Phase Number</b>	<b>Date Started</b>	<b>Date Completed</b>	<b>Number of Sites</b>
Phase 4	August 12, 2007	August 20, 2007	95
Phase 5	August 21, 2007	September 14, 2007	149
Phase 6	September 18, 2007	October 4, 2007	85
Phase 7	October 5, 2007	October 6, 2007	17
Phase 8	October 6, 2007	October 6, 2007	3
Phase 9	October 6, 2007	October 6, 2007	1
Phase 10	October 9, 2007	October 9, 2007	5
Phase 1	October 10, 2007	October 10, 2007	11
Phase 2	October 11, 2007	October 11, 2007	19
Phase 3	October 12, 2007	October 15, 2007	48

In future a progressive reclamation approach will be undertaken for all activities conducted at site.





**Figure 4:** *Drill site remediation west zone.*



**Figure 5:** Drill site remediation east zone. In red are the (\*) areas drill collars were extracted.

## **CONSTRUCTION IN 2007**

### **NEW CAMP**

In 2007 Old Camp was decommissioned. Significant work was done in 2007 to construct the New Camp (see photos). Some of the structures owned by Starfield were moved from Old Camp and reconstructed at New Camp. Starfield has made every effort to reuse as many of these structures as possible; for example, two Seacans were used in the construction of one of the shops (see photos). This shop is also fully lined.

### **FUEL STORAGE AREA**

In the fall of 2007, Starfield constructed a lined-bermed, secondary containment fuel storage area. The fuel storage area is 34 metres X 34 metres. The liner was welded and covered with geotextile fabric, see photos. Part of the fuel storage area was covered with small screened gravel, however due to availability of material and weather this was not completed. This will be completed in 2008.



Lined-bermed secondary containment storage area for fuel.



Welding the liner of the secondary containment storage area.





Workshop constructed using two seacans.



Floor of the workshop is lined.



## **SUMMARY OF ACTIVITIES IN 2007**

### **May Activities**

- Kivalliq Inuit Association Wildlife Monitors arrived at site
- New Camp Construction

### **June Activities**

- Kivalliq Inuit Association Wildlife Monitors at site
- Starfield Environmental Technicians arrive at site to begin work
- Environmental Baseline Studies begin
- New Camp Construction continues
- INAC Water Resource Officer conducts inspection

### **July Activities**

- Kivalliq Inuit Association Wildlife Monitoring (July 1 – 18)
- Wildlife monitoring and surveys (Rescan)
- Hydro station flow baseline monitoring (Rescan)
- Site visits from FSC engineers
  - Fuel containment report
  - Water system report
- New Camp Construction
  - New kitchen
  - Plumbing
  - Installation of secondary containment near generator, helipad, and gas refueling station
  - Engine Maintenance
- General clean up of Old camp
- Removal of 5 Weather Haven tents from old camp (moved to new camp)

### **August Activities**

- Drill Site Remediation of Historical and Starfield drill holes
  - Initiated August 12<sup>th</sup> and completed mid October
  - Removal of cuttings and garbage
  - Cut off of drill steel and casing
- Hydrocarbon Contamination Survey (Rescan)
- Archaeological Surveys and Assessment (Rescan)
- Water quality surveys and baseline monitoring (Rescan)
- Aquatics survey and baseline monitoring (Rescan)
- Wild life monitoring and surveys (Rescan)
- Hydro station flow baseline monitoring (Rescan)
- New Camp Construction

- New kitchen completion
- Construction of tool shop
- Construction of heavy equipment shop
- Site selection and excavation of secondary containment facility
- Excavation of new sump recommended by FSC engineers
- General clean up of Old camp
  - Removal of big shop
  - Removal of old open burn barrel
    - An incinerator is used for burning non oil/plastics garbage
    - Absolutely no open burning was taking place during this time period
- Exploration Activities
  - Mapping
  - Surface sampling

### **September Activities**

- Removal of historical Inco site (Not a Starfield liability but we cleaned it up anyways)
  - All garbage, drums, and buildings removed (approx 10000lbs of junk)
  - One building was left standing as it contained Ammonia Nitrate and the mines inspector will be consulted so as to safely remove this material
- One Drill in Operation
  - Total of ~750 meters drilled
  - Movement of Pump Shack from creek near drill to Ferguson Lake on Inspector David Ningeongan's Request
  - Total industrial Water use 352.72 m<sup>3</sup> (based on high estimate flow rate of 17 liters/min)
- Water quality surveys and baseline monitoring (Rescan)
- Aquatics survey and baseline monitoring (Rescan)
- Wild life monitoring (Rescan)
- Hydro station flow baseline monitoring (Rescan)
- Tour of Analysts (1 day)
- Tour of Rankin Inlet business persons (1 day)
- David Ningeongan water inspection (1 day)
- New Camp Construction
  - Fine tuning of secondary containment facility for mid October installation
  - Transport of HDPE fuel liner and geotextile to site
  - Completion of heavy equipment shop
  - Installation of boiler heat system
  - Installation of potable water system

### **October Activities**

- Continued camp construction
- Continued drilling operation of one drill
- Continued pumping camp water use for domestic purposes

### November Activities

- Continued camp construction
- Continued drilling operation
- Lined containment area 90 % complete
- Shop floor welded and lined
- Drilling suspended on November 29

### December Activities

- Activities focused on demobilizing the drill crews, shipping final core samples
- Camp was winterized
- On December 18<sup>th</sup> the camp went on care and maintenance schedule with 3-4 people on site during the winter months

Table of Camp Statistics

<b>POPULATION</b>	Total Man Days (including visitors)	Local Hire Man Days	Percent Local Hire in Camp	Average # in Camp per day
July	592	335	57%	19
August	780	337	43%	25
September	915	374	41%	30
October	982	372	38%	32
November	998	348	35%	33
December	291	100	34%	9

<b>CAMP WATER USAGE</b>				
	Camp	Fire Stations	Drilling	Total
July	54.33 m3	6.78 m3	0	61.11 m3
August	71.6 m3	2m3	0	73.60 m3
September	68.01 m3	0	352.72 m3	420.73 m3
October	119.09 m3	0	905.76 m3	1,024.85 m3
November	98.80 m3	0	1,370.88 m3	1,459.68 m3
December	30 m3	0	0	30 m3

## **SUMMARY OF WORK PROPOSED FOR 2008**

### **A) EXPLORATION**

The Exploration program for 2008 is twofold. A 20,000 meter diamond drill program has been identified for the main ore zone. The program is planned for April through August, with September and October being available for extended programs or catch up time, in case drill time has been delayed during the regular season. This will utilize up to three drill rigs that are already on the property and have been used previously. Local support for this program will be done by helicopter, snowmobile and ATV. In addition to the drill program, an evaluation program will be conducted on claims outside the main zone to identify potential drill targets and ore resource additions. This program, although not fully defined, may include soil sampling, channel samples, mag surveys and shallow drill holes.

### **B) NEW CAMP CONSTRUCTION**

In 2008, there will be no significant new camp construction. The camp inhabitants will peak near 55 people when drilling, airstrip construction and environmental programs are all in full operation during June through August. During this time temporary space will be made available using tents (Weatherhavens) at the site. Work will be done to improve the water supply lines to the camp, upgrade the gray water lines and improve the camp fire warning system.

### **C) HEAVY CIVIL ENGINEERING**

Civil construction for 2008 includes building Phase I of an all weather airstrip, finishing the construction of the fuel storage area and centralizing the locations of the camp generators.

The airstrip will be approx 700 1000 meters long and 25 meter wide. It is anticipated that the majority of the material can be reclaimed from eskers and drilling and blasting activities will be minimized. Heavy construction equipment will be delivered to site via the winter road and fixed wing aircraft and the construction will start in late April. The airstrip will be designed so it may be extended and widened as future needs become identified.

Construction for the fuel storage area was initiated in 2007 and the area has a compacted base with a fully welded HDPE liner installed. Three 30,000 gallon fuel bladders have been purchased and will be installed in the first half of 2008. All fuel stored on site will be placed on impervious liners and containment berms, permanent or temporary will be provided.



## **WILDLIFE SIGHTINGS**

In 2007, Starfield hired four local Environmental Technicians to assist with the collection of data for the Environmental Baseline Studies and to work with personnel at site to ensure good environmental stewardship.

Wildlife sightings were recorded by all personnel working at site. Sheets were provided for personnel at camp and field crews for recording.

The Kivalliq Inuit Association (KIA) had Caribou Monitors staying at the New Camp from May 15, 2007 until July 17, 2007. These Monitors worked closely with the Starfield Environmental Technicians. On one occasion the camp was put on “quiet” mode with no air traffic or operation of any motorized equipment. Starfield is working with the KIA to develop a procedure for shutdowns and reporting.

A full report of wildlife observations will be provided in the Wildlife Monitoring Report which will be finalized in the near future and submitted to the KIA, NIRB, INAC and the GN DoE.

## **ARCHAEOLOGICAL SIGHTINGS AND INVESTIGATIONS**

In August 2007, archaeological investigations were conducted at Ferguson Lake by Points West Heritage Consulting Ltd. and various Nunavut residents including Ricky Green, Graham Kusugak, Najuk Kusugak, Jerome Misheralak and Dominic Irsuk. The archaeological investigations were conducted under Class 2 Nunavut Territory Archaeologist Permit 07-002A. This was the third consecutive year that archaeological field work was conducted at Ferguson Lake. The major objective was to determine if archaeological sites were present within proposed development and exploration areas. A secondary objective involved the revisit of recorded sites to assess their status. In addition, members of the Ferguson Lake Natives Group were invited to the study area to view traditional camping areas they had used in the past and to visit archaeological sites.

Within the Ferguson Lake project area, seven new archaeological sites were discovered near proposed exploration areas; several of these sites will be assessed through subsurface testing or more detailed examination in 2008 and may be mitigated through systematic data recovery. One previously recorded site, KfLc-3, located near the new camp, was assessed as part of the 2007 investigations. It is proposed that in 2008 either the location containing this site will be protected by the installation of permanent fencing or systematic data recovery involving excavation and surface collection will be conducted. As part of the site assessment, subsurface testing was undertaken to determine the depth and content of this archaeological site. Although the buried archaeological material was generally less than 15 cm deep, large quantities of flakes were encountered in portions of KfLc-3 indicating that additional work is required if protection is not feasible.

As a result of the two tours conducted in 2007, four traditional camp locations were examined. One of these four locations also contains evidence of prehistoric use. These sites are not threatened by activities associated with the Ferguson Lake Project because they are located many kilometers from current development and exploration areas.

## **ENVIRONMENTAL BASELINE STUDIES**

Rescan Environmental Services, on behalf of Starfield, conducted extensive baseline monitoring studies in 2007. These studies will continue and be expanded upon in 2008.

- Ferguson Lake Archaeological Investigations
- Wildlife Baseline and Monitoring Programs
- Aquatic Resources Baseline and Monitoring Programs, streams and lakes
- Fisheries Baseline
- Hydrology Baseline and Monitoring Programs
- Ferguson Lake Soils and Vegetation Baseline
- Meteorology Summary Report 2005
- Atmospheric
- Permafrost Investigations

### **Wildlife**

Wildlife baseline information has been collected over the last few years. This information has been collected to document the pre-development status of wildlife communities in the area. The collection of baseline data also contributes to the identification of any species at risk. The evaluation of the information collected will allow for the development of management strategies to identify the best mitigation measures to help minimize and/or eliminate potential detrimental effects on wildlife. This data will also provide a reference point for future reclamation and management planning efforts.

The Ferguson Lake Project is situated within the caribou migration corridor. The project is in close proximity to the caribou calving grounds and some identified, designated caribou crossings. As well, muskox often sighted near the project area. Air traffic and low level flying are of increasing concern to community members and authorizing agencies. Starfield has begun documenting flights for both fixed-wing aircraft and helicopter.

Starfield has been working closely with the Kivalliq Inuit Association (KIA) and the Government of Nunavut Wildlife Biologists in Arviat and Baker Lake. This program includes monitoring: caribou migration, local caribou monitoring, muskox, carnivore dens, Species at Risk, and raptors. For more information, refer to the Wildlife Monitoring Plan which was submitted in 2007. The 2008 Wildlife Monitoring Program will be submitted in draft format for comment and input late March 2008 to the Government of Nunavut Wildlife Biologists, the KIA and the HTO's. As well, Starfield has agreed to come north to discuss the 2008 Wildlife Monitoring Program and the 2008

Socio-Economic Program in Whale Cove, Arviat, Chesterfield Inlet, Baker Lake and Rankin Inlet in the early spring.

In 2007 Starfield hired four local Environmental Technicians to assist in the data collection of the baseline studies and to participate in environmental monitoring of the camp and exploration activities. These positions will continue in 2008.

In 2007, a caribou survey program and an incidental wildlife program were conducted to collect wildlife baseline information for the Project. During 2007, wildlife studies were concentrated within the Local Study Area (LSA): an area with a 10 km radius of Ferguson Lake camp. A Regional Study Area (RSA: 10 – 35 km radius) has been developed and will be used in addition to the LSA for wildlife studies in 2008; however, incidental wildlife observations that were recorded within the RSA in 2007 were reported in the 2007 baseline report.

The objective of local caribou monitoring was to determine when large groups of caribou were migrating through the area so work could be modified and stopped as needed to avoid disturbance to caribou. The objectives of the incidental wildlife monitoring program were to: monitor muskox presence and activity relative to the Project area; locate carnivore dens (grizzly bear, wolf, wolverine and fox) for future monitoring of den occupancy and productivity; locate raptor nests for future monitoring of nest occupancy and productivity; identify potential species at risk occurring in the Project area; and to document all wildlife observations (*e.g.*, small mammals, waterfowl).

A total of 11,339 caribou were observed. The vast majority of caribou (11,266) were observed in July after the calving period. Most caribou were of unknown age class and gender (11,116). However, the number of bulls, antlered cows, antlered bulls/cows, juveniles and calves observed were 28, 59, 64, 23 and 49 respectively. The incidental camp observation program was successful in recording 21 wildlife species including 4 carnivores, 2 ungulates, 1 small mammal and 14 species of birds. The four carnivores were the Arctic fox (*Alopex lagopus*), grizzly bear (*Ursus arctos*), least weasel (*Mustela nivalis*) and wolf (*Canis lupus*). The ungulates and small mammal were moose (*Alces alces*), muskox (*Ovibos moschatus*) and Arctic hare (*Lepus arcticus*). The bird species were bald eagle (*Haliaeetus leucocephalus*), Canada goose (*Branta canadensis*), gyrfalcon (*Falco rusticolus*), horned lark (*Eremophila alpestris*), least sandpiper (*Calidris minutilla*), long-tailed duck (*Clangula hyemalis*), mallard (*Anas platyrhynchos*), parasitic jaeger (*Stercorarius parasiticus*), peregrine falcon (*Falco peregrinus*), rough-legged hawk (*Buteo lagopus*), sandhill crane (*Grus canadensis*), snow bunting (*Plectrophenax nivalis*), snowy owl (*Bubo scandiacus*) and willow ptarmigan (*Lagopus lagopus*). No carnivore dens were identified. However, five Arctic fox pups were observed within 10 km of camp indicating that an Arctic fox den may be located within this area. Three raptor nests were observed: a gyrfalcon nest, a peregrine falcon nest and an unidentified raptor nest. Two species at risk were observed: grizzly bear and peregrine falcon. These species are designated as Special Concern by the *Committee on the Status of Endangered Wildlife in Canada*.

### Aquatic Resources and Water Quality

In 2007, aquatic environment baseline studies were conducted for a fifth year in the Ferguson Lake Project area (Figure 1). This work will provide baseline information critical to the development of the upcoming environmental impact assessment for this project. Similar to previous years, streams, lake outflows and lakes of the mine area receiving environment were sampled for physical limnology and water quality. For the first time sediment quality as well as aquatic biology including primary and secondary producers was assessed at a select number of streams and lake stations. Stream stations sampled were intended to characterize the potential impact of the new camp on water draining the area, stream water quality before development and naturally-occurring ARD at the two ore zones. In addition, lake outflows were sampled to establish a long-term baseline data collection for significant geographical locations, such as the outflow of Ferguson Lake. Lake stations were predominately situated at key areas of Ferguson Lake and were intended to provide information on the spatial extent of any future changes in water quality.

Aquatic study components were organized into two separate groups: streams and lakes. A total of 17 stream/lake outflow stations were sampled on a monthly basis for water quality beginning at freshet in June through to September. Water samples were analyzed for general physical variables, anions, nutrients, total organic carbon (TOC), total Kjeldahl nitrogen and total and dissolved metals at the lowest feasible detection limit. Hydrocarbons also were assessed at three stream sites. Travel blanks, field blanks and 10% duplication were included as part of the field quality assurance and quality control (QA/QC) program. In addition to water quality, four stream sites were sampled for sediment quality and aquatic biology (periphyton and benthic macroinvertebrates) in July. All sediment samples were analyzed for moisture, particle size, nutrients, TOC, total cyanide and total metals. Periphyton and benthic macroinvertebrates were assessed for density and taxonomy. Lake water quality and physical limnology (including Secchi depth, dissolved oxygen profiles, and temperature profiles) were assessed once in August. At each of the 15 lake sampling stations a single lake water sample was collected each from the surface and mid-depth to determine water quality. During the August sampling 7 lake stations were assessed for sediment quality and aquatic biology (phytoplankton, zooplankton and benthic macroinvertebrates). Analytical variables, detection limits and QA/QC procedures were identical to those used in stream water and stream sediment sampling. Periphyton, zooplankton and benthic macroinvertebrates were assessed for density and taxonomy.

### Fish Community and Habitat

Ferguson Lake and streams, ponds, and lakes in two known ore zone areas on its eastern and western sides were sampled in late August and early September, 2007, to provide baseline fish and fish habitat information (Figure 1). Fish sampling occurred using a combination of gillnets (seven sites), minnow traps (11 sites), and electrofishing (10 sites). As well, detailed fish habitat surveys were conducted at seven of the electrofishing sites. This information collected consisted of water characteristics, stream depths and widths, substrate composition, habitat types, and cover.



Lake trout (*Salvelinus namaycush*) and whitefish (lake whitefish *Coregonus clupeoformis* and round whitefish *Prosopium cylindraceum*) were captured exclusively using gillnets within Ferguson Lake. These two species comprised 93% of the fish species caught within Ferguson Lake. The other five fish species captured exclusively using minnow traps included Arctic grayling (*Thymallus arcticus*), burbot (*Lota lota*), longnose sucker (*Catostomus catostomus*), ninespine stickleback (*Pungitius pungitius*), and slimy sculpin (*Cottus cognatus*).

The most common fish captured in streams, ponds, and small lakes associated with Ferguson Lake were ninespine sticklebacks. This species occurred throughout the Project area. The other four fish species captured using minnow traps and electrofishing in these small drainages included slimy sculpins, Arctic grayling, longnose suckers, and burbot. No fish were captured in streams located within the ore zones on the eastern and western sides of Ferguson Lake. However, one pond located along the edge of the ore zone on the eastern side of the lake was abundant with ninespine sticklebacks.

#### Hydrology

In the 2007 field season three continuous hydrologic monitoring stations were constructed at the Ferguson Lake Project. Two hydrometric stations were installed on creeks close to the proposed pit area (W1 and W2) and one reference station on the other side of the lake (R1) (Figure 1). Manual flow measurements at these locations were conducted at weekly intervals throughout the open water season. The manual flow measurements were used to develop annual flow hydrographs for those watersheds.

#### Metal Leaching/Acid Rock Drainage (ML/ARD)

The first phase of ML/ARD work began in 2007. 149 samples of one meter of half drill core has been selected from the Ferguson Lake deposit. Samples were sent for ABA (Acid-Base-Accounting) testing. The resulting data will be used to begin the characterization of material to be mined and provide information for feasibility and permitting requirements.

Samples collected include wall rock, low-sulphide PGE gabbro rock, massive sulphide ores, stringer-disseminated and fracture-controlled ore-halo gabbro rocks and others. The samples have been selected from along the 4-km plus strike and from potential open pit depths and underground operation areas.

#### Meteorology

An automated meteorological station was installed at the Ferguson Lake mineral exploration site in August 2005 and includes sensors for wind speed and direction, air temperature and relative humidity, solar radiation, rain or snow-water-equivalent precipitation (depends on the season) and snow depth. The location of the meteorological station is Easting 606338 Northing 6975578 (UTM Zone 14N, NAD83 datum) or Longitude 96° 54.5', Latitude 63° 53.7'. The station (elevation  $\approx$  150 masl) is situated approximately 180 m north west of the new camp.

Meteorological data have been collected continuously since the station was installed, and therefore data have been collected during the entire 2007 year.

#### Traditional Knowledge

In 2007 Nunami and their joint venture partner Jacques Whitford/FMA Heritage Consultants were contracted to begin a traditional knowledge study with the Ferguson Lake Native Group (FLNG). Meetings were held in Baker Lake with the group and interviews to prepare a Constraints Map for Starfield were begun with locally trained and hired interviewers. At the request of the FLNG a Place Names map was also initiated.

In addition to the traditional knowledge study with the FLNG, studies were initiated with other interested knowledge holders in Baker Lake, Arviat and Rankin Inlet. Studies began in 2007 and are expected to be completed by end of summer 2008. Studies with knowledge holders in Whale Cove and Chesterfield Inlet are planned for 2008.

#### Socio – Economics

Nunami (Jacques Whitford/FMA Heritage) was contracted to conduct a desk-top socio-economic study in 2007. A baseline socio-economic study has been contracted for 2008.

#### Social Engagement

In 2007 Starfield Resources committed to providing affected communities in the Kivalliq Region timely information on the Ferguson Lake Project. A brochure in English and the two local dialects was used as a communications tool. This brochure was provided at the November community relations tour (Rankin Inlet, Chesterfield Inlet {meeting cancelled due to aviation breakdown}, Arviat, and Whale Cove). Baker Lake was not included in this tour due to a conflict with the Kivalliq Mayors Meeting.

Presentations and meetings were held with the Directors of the KIA in March in Chesterfield Inlet, the Kivalliq Chamber of Commerce AGM in Rankin Inlet in March, the KIA Annual General Meeting in October, in addition HTO's, CLARC's, Hamlet Councils and interested community members during the community consultation tour in November 2007.

Tours of the project were provided to MLA David Simailik, Mrs. Simailik and members of the Ferguson Lake Native Group in August. In addition a tour of the project was provided to a group of Rankin Inlet business people.

Donations were made to the Midnight Sun Fun Run, the Kivalliq Arts Festival and the Kivalliq Doll Festival.

Starfield Resources Inc. has rented full-time accommodation in Rankin Inlet for many years. This accommodation is used for temporary {weather related} accommodation and office space.

In 2008 community consultation visits to Rankin Inlet, Arviat, Chesterfield Inlet, Whale Cove and Baker Lake to present the 2008 work plan is planned. Specifically

presentations to Mayors and Councils who were unavailable to meet due to the conflict in November 2007, and presentations to the HTO, CLARC and interested community members in Baker Lake is also planned.

Posters have been distributed to the CLO's and Hamlets in each community have been distributed requesting that interested and qualified persons submit resumes. In addition, Starfield Resources has submitted a letter of support to the KIA for their funding proposal under ASEP.