

Fall - winter 2000

# Starfield Resources



Glen J. Indra, President and CEO, along with his fellow associates, are on to something more than substantial.

Starfield's Ferguson Lake nickel and copper prospect is proving to be something great beyond potential.

Perhaps history in the making for the Nunavut mineral exploration industry.

Certainly a landmark for Canada's largest and newest under-explored Territory.

# FERGUSON LAKE'S POTENTIAL

## INCO'S LOSSES ARE STARFIELD'S GAINS

Feature by Lawrence Stephenson

Photography by Tom Burley

In the early 1950's, Inco, then called 'Canadian Nickel Company Ltd.', discovered a wealth of mineralization at Ferguson Lake and conducted a significant exploration and development program that included the drilling of over 37,500 metres of core extracting a 10 tonne bulk sample. Inco was so convinced of their find they established a ninety man camp on the Ferguson sight. Considering the location, 240 km west of Rankin Inlet and 160 km south-southwest of Baker Lake and the period, the early 1950's, this effort demonstrated the high regard the company had for the Ferguson Lake Potential.

However further development activity on the Ferguson Lake Property was to be eclipsed by another important discovery 800 kilometres to the south. Although the property was taken to lease by INCO and was renewed until 1992, with their new discovery at Thompson, Manitoba, INCO had found its new source for sulphide ore with its initial reported grade and tonnage, respectively double and fourfold that initially reported.

In 1997, a hearty group of prospectors the current team includes geologists, geophysicists, miners and financiers utilizing more modern transportation means and staying at the Ferguson Lake Lodge established their mineral claims over the open ground. The Ferguson Lake Syndicate formed by these prospectors, found a willing and enthusiastic ear with Glen Indra, President of Starfield Resources Inc., which acquired the property in the spring of 1999.

Today, late fall of the millennium's first year, it's hard to find Glen Indra and his fellow associates not wearing the biggest smile in town,....indeed...., INCO's losses are Starfield's gains.

**S**tarfield was able to extract the detailed logs and reports of INCO's 1950's work and preliminary analysis of accumulated data compiled by the company's reputable and extremely qualified consultant, Dr. Nick Carter, and since then the published resource estimate has almost doubled.

The Ferguson Lake Nickel-Copper Prospect is hosted in a metamorphosed mafic to ultramafic amphibolite hornblende sill or volcanic unit that has characteristics of an ultramafic layered intrusive. The hornblende unit has been traced by surface sampling, drilling and geophysics for at least 18 kilometres and is between 50 and 200 metres thick. Mineralization occurs as massive sulphides in lenses within the hornblende unit and as stringers and veinlets in the brecciated part of that unit. The main sulphide mineral is pyrrhotite while the economic minerals are chalcopyrite, copper, pentlandite, nickel, moncheite, platinum and palladium, and gersdorffite, cobalt. Ore microscope work indicates that the sulphides are independent grains, which suggests no metallurgical separation problems.

Regionally, the property is situated near the western margin of the Hearne province within the Churchill Structural Province of the Canadian Shield. The proximity of this western margin marked by northeast trending Snowbird - Tulemalu fault or tectonic zone is quite significant when explorationists quest for a World Class Size deposit.

The rocks of the Hearne province consist of northeast to east trending Archean Greenstone belts, dominantly mafic volcanics with cherty iron formations and intermediate to felsic volcanics and clastic sediments, that have been metamorphosed to migmatites, paragneisses and schists. These belts which throughout the Canadian Shield host almost all major, and minor, economic mineral deposits, in the vicinity of the property, in part parallels the 500 km long Ennadai - Rankin greenstone belt to the south. The Ennadai - Rankin belt had the only recorded major nickel copper production in Nunavut, from the North Rankin Nickel Mine located at Rankin Inlet. This mine produced 460,000 tonnes grading 2.1% nickel and 0.6% copper from sulphide mineralization, pentlandite, chalcopyrite, pyrrhotite and pyrite in a metamorphosed ultramafic sill.

The airborne geophysics for the 1999 summer drill program was completed too late in the field season to be followed up by ground surveying.

Preliminary analysis of this data suggests two significant additions to the economic potential of the property. Firstly, additional geologic resource zones drilled and delineated by INCO but not included in the published record have been added to the resource in two areas increasing the inventory to over 11 million tonnes. These two zones, the East zone, 2.6 million tonnes grading 0.94% nickel, 0.73% copper and 1.15 g/tonne PGE; and the East zone II, 1.2 million tonnes grading 0.93% nickel, 0.8% copper and 1.2 g/tonne PGE, had less drilling density by INCO than the Main zone and are located across Ferguson Lake.

Secondly, the magnetic signature of the hornblende

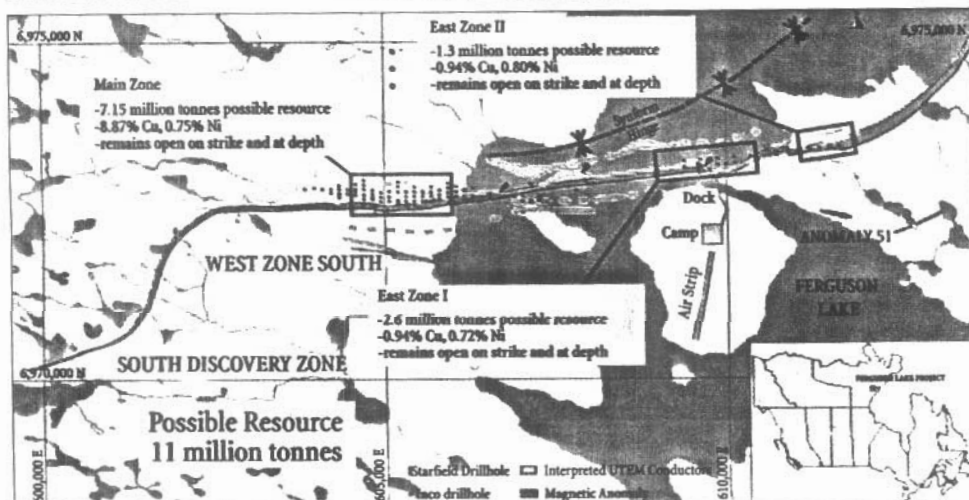
unit, and has now been traced for 18 kilometres has revealed some interesting structural features which suggest an unnoticed parallel or keel fold zone and areas of dilation which would thicken the sulphide horizon. More importantly to the ability to expand this resource, the magnetic signature of this host unit has shown a direct 1:1 correlation of magnetic high to significant, economic, sulphide mineralization in limited drill and surface stepout exploration completed to date by Starfield.

From this 1999 drilling by Starfield, as well as showing the magnetics:sulphide correlation mentioned above, has revealed that the mineralized zone used as a base for INCO's resource calculation is increasing in

This value excludes any contribution from the 1-2 pounds of cobalt per tonne reported in the assays.

With lots of magnetic strike length, the very distinct sulphide related geophysical anomaly and lots of depth, currently the drill indicated resource depth is between 90 and 180 metres, to develop, and it's safe to assume that this current \$2.6 Billion resource value will be significantly increased and with some higher grade areas of metallic mineral concentration leading the way will restart the development process eclipsed in the mid 1950's.

For Nunavut, the potential of this resource effect on its economy is staggering. It could represent an additional diversification of the economic base that



thickness with depth and indicates an increase of grade with depth. Reanalysis of some of last years drill intersections by more sensitive assay techniques increased grades of the zones by 20 -25% suggesting that the economic potential is greater than currently reported.

The company's initial Year 2000 exploration program has been tremendously successful in both delineating additional resources and outlining a significant area of additional geophysical strike, 2.2kilometres, of the West Zone. The character and juxtaposition of the anomaly increases the certainty that it is caused by sulphides.

Despite the perception of lower grade, a re-evaluation of the INCO data and this year's drilling program has increased the geologic resource calculation to 19 million tonnes of copper, nickel, cobalt, palladium and platinum with a value of over Cdn \$150 per tonne excluding any contribution from the 1-2 pounds of cobalt per tonne reported in the assays, LME July 2000 US\$ Nickel \$3.62 per pound, Copper \$0.82 per pound, PGE \$724 per ounce Cobalt \$12 per pound. This current value of a tonne of ore, given the significant increase in nickel and palladium prices is now making the deposit worth over \$2.5 billion which is what INCO produced in total sales in 1999.

could do for Nunavut what Thompson did for northern Manitoba.

At this point, the management of Starfield recognized the need to bring in the right qualified and experienced liaison to ensure, manage and protect the potential of this effect ensuring future community benefits.

The word, lucky, is the only way to describe Starfield's further good fortune with the added attentions of the best possible northern connection they could find, John Todd.

John Todd has been involved in the Northwest Territories from his base in Yellowknife for over 30 years. As the former Finance Minister for the government of the Northwest Territories he represented the Keewatin Central Rankin Inlet and Whale Cove.

Mr. Todd has been active in the Territories' political and business communities and will use this expertise to liaison between Starfield Resources and those communities, as the Ferguson Lake Copper-Nickel Property is developed.

As well, in January of 2000, Henry Giegerich joined the Board of Directors. Mr Giegerich has an impressive record in northern mine development. While with Cominco, he oversaw the development of the Red Dog mine in Alaska, the Black Angel Mine in Greenland,

continued on page 22



continued from page 21  
the Polaris Mine on Little Cornwallis Island, Northwest Territories and was involved in the operations at the Con Mine and Pine Point Mine NWT. This addition gives the company the expertise in northern mine development that will ensure a successful development of the project.



Starfield Vice-President Photo by Tom Burley

The Ferguson Lake Zone represents an extremely good exploration target that has not really been subjected to serious exploration since the 1950's. Since that period the model for a World Class Nickel deposit has been well developed. They are all associated with major deep seated structural features that are necessary to enable the nickel rich mantle, the molten portion of the earth's core

below the continental masses, to be tapped by subsidiary cracks or structures. These cracks or zones of structural weakness allow the nickel rich mafic to ultramafic magma to migrate from the high pressure at depth to the surface thus forming an ultramafic or mafic pluton sill or other intrusive body into the country rock. These intrusives are characteristically magnetic due to the iron content of the mantle source. Since volcanic belts are associated with these structural zones, it is not uncommon to find these intrusives associated with them or showing volcanic belt features. To develop a deposit and capture the nickel in an easily separated sulphide as opposed to silicate compound, significant sulphide or sulphur bearing units, that is sedimentary sulphide rich units - usually sulphide iron formations, have to be encountered by the migrating magma. This encounter will create the conditions so that the nickel in the magma can be captured and form a nickel copper cobalt platinum palladium sulphide World Class deposit. The significant amount of sulphides discovered to date, associated with the 18 kilometre long Ferguson Lake Copper-Nickel bearing Hornblende unit, metamorphosed mafic to ultramafic sill, shows that the mineralizing system that has introduced the economic metals has tapped the right source and encountered the right units to develop this deposit. The characteristics of the sulphide zone, mainly pyrrhotite, the unsaturated magnetic iron sulphide, pentlandite and chalcopyrite, fit the model of remobilization of the sulphides from a deeper concentration of metallic sources assimilating sulphide rich country rock. The proximity of the major structural feature marking the western boundary of the Hearne province, Snowbird - Tulemalu Fault, fits the model quite appropriately. Subsidiary structural zones, like the Tyrol Shear, north and west of Ferguson Lake show the presence of the conduit structures for the emplacement of the hornblende sill. The most direct comparison comes from the northern Manitoba Thompson Deposit, which is associated with a mineralized belt 40 kilometres long and has a direct anomalous 6 kilometre long surface trace. At Thompson, the stratabound deposits are all associat-

ed with mafic-Ultramafic sills and major sedimentary sulphide concentrations. The eastern boundary of the Hearne province of the Churchill Structural Province. These type associations are also found at Sudbury and Volsey Bay. Most ultramafic to mafic intrusives have a definitive magnetic signature associated with them, thus identifying them as potential exploration targets. The world class deposits' magnetic signature is associated with the universal presence of pyrrhotite within the magnetic ultramafic units. Starfield's Ferguson Lake Property, has all of these features for a world class model, including most significantly the close association of sulphides and magnetics. The presence of economic quantities of nickel-copper-cobalt and platinum group elements within the explored portion, to date, of the 18 kilometre surface trace of mineralization suggests that with further exploration and the continuing correlation of magnetic highs with sulphides, the size of the resource will grow appreciably. The Company's geophysical additional UTEM and magnetic surveys have traced the east and west extensions of the currently known 9 kilometre long host zone. The current program continuing 2000 exploration program will be focussed on further drill testing the geophysical anomalies to the west, east and adjacent to the Main resource indicated zones by 10,000 metres of core drilling. Previous drilling has had an impressive success ratio of discovery of economic intercepts and grades of mineralization. With the current rebound of the mineral exploration industry, this potential World Class Nickel, Copper, Cobalt - PGE prospect has started to become the focus of a strong investment opportunity especially in light of the palladium and nickel prices in the base and precious metal sector. With the probability of success a certainty, the shortage of nickel and palladium will result in continued strong metal prices. Starfield Resources will see a strong response to the continuing confirmation and expansion of the size of its Ferguson Lake Resource Copper, Nickel, Platinum Group massive sulphide zone this year.

continued on page 38



# TSL

## LABORATORIES

**Committed  
to Providing  
the Best  
Possible  
Service  
for the  
Exploration  
and  
Mining Industry**

- TSL Precious Metals by Fire Assay**
- TSL Geochemical Analysis**
- TSL Multi-element by ICAP**
- TSL Whole Rock**
- TSL Neutron Activation**



# TSL

## LABORATORIES

#2-302-48th Street East,  
Saskatoon, SK, S7K 6A4  
Telephone 306 931 1033  
Facsimile 306 242 4717  
tsllab@sk.sympatco.ca



continued from page 22

STARFIELD ADDENDUM

Junior Resource Market Comment

A comment is warranted that can have a significant positive impact on Starfield Resources and other current junior resource companies.

The past few years of exceptionally poor resource financing markets has seen a catastrophic drop in exploration and development programs. During this time, producing mines have slashed costs and tried to increase revenues, higher-grade mining to survive, and keep producing. One of the earliest casualties of these cuts has been, as always, the Mineral Exploration departments. The severity and length of this past recession has not only been felt in exploration but with fewer new mines being developed or being brought into development. These cutbacks not only curtailed new resources being brought into advance development stages and being discovered but the expertise to bring these new resources online has been lost. Geologists/miners/financiers faced with the worse period in over 20 years, changed to other professions.

Therefore even as the financing climate improves in response to increased demand and prices, significant shortages will develop in base and precious metals inventories. The usual lag between discovery, exploration and development will be further retarded by the lack of the expertise factor. The affect on the mineral exploration and development industry could be as dra-

DEPOSIT	NICKEL CARRYING SOURCE	DEEP STRUCTURE	SULPHIDE PROVIDER	SIZE AND GRADE-TONNES	SIZE AND GRADE-TONNES
Sudbury	Nickel Irruptive	Grenville Front/Meteor impact	magmatic?/ Sudbury area sediments	large and excellent	rim of Sudbury Basin-170 km
Thompson	Ultra mafic sills	Churchill Superior boundary/Owl River Shear	Sulphide facies Iron Formation	50-100 million tonnes at initial 3% Combined	40km belt at Thompson Mine 6 km
Voisey Bay	Gabbro	Archean Plate Boundry	magmatic? areal sediments	+50 million tonnes	+50km belt main deposit ?
Ferguson Lake Prospect	Hornblende Sill metamorphosed Ultramafic	Tyrol Shear	Sulphide Iron Formation? Lots of Sulphides	?	To date 9km in a 18km belt length-all open

matic as that seen in the 1960's, after the poor late 1950's, which saw mineral claims miles from the newly discovered Texas Gulf Sulphur deposit, Kidd Creek, camp at Timmins, Ontario, doubling or more in price, and geologists charging \$50 a day, 1964 \$ - up from \$10 a day. Later in the 1960's with the expertise factor still being felt, biologists were still being sent to the arctic to do geological mapping, black rock - purple rock!

The implications for new discoveries is that a premium price will be paid to offset these shortages.

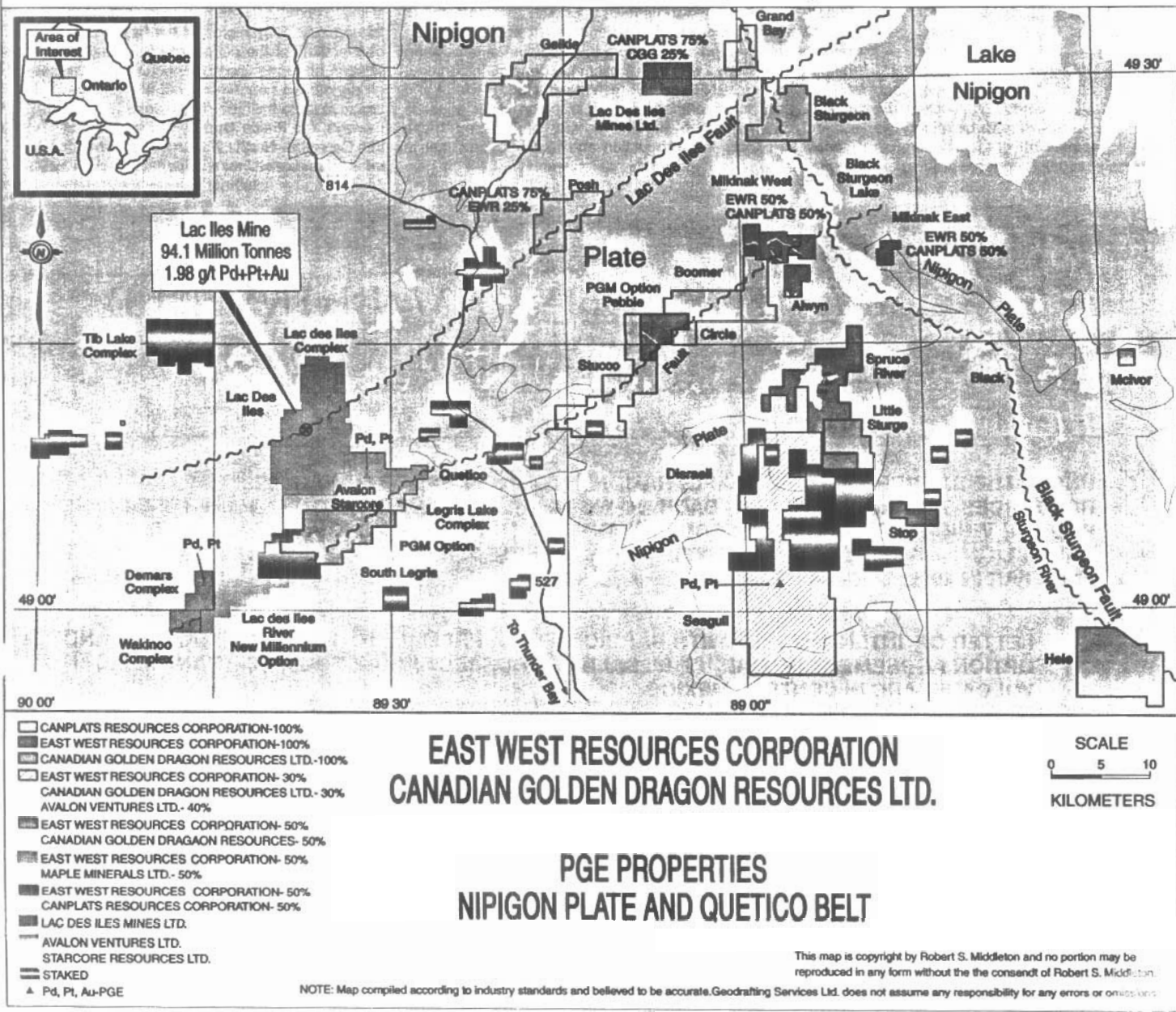
As of late Fall 2000, drilling is on-going at Ferguson

Lake with two drill rigs to trace the sulphide horizon both to depth and along the strike to the west. The Company's management team is pleased that the new results continue to expand the property's global resource with the ultimate target to define a resource in excess of 100 million tonnes.

Starfield Resources will be on the leading edge of this re-supply of metal to the producing market as the Ferguson Lake Resource is confirmed and developed. *Starfield is truly a success story whose time has come.*

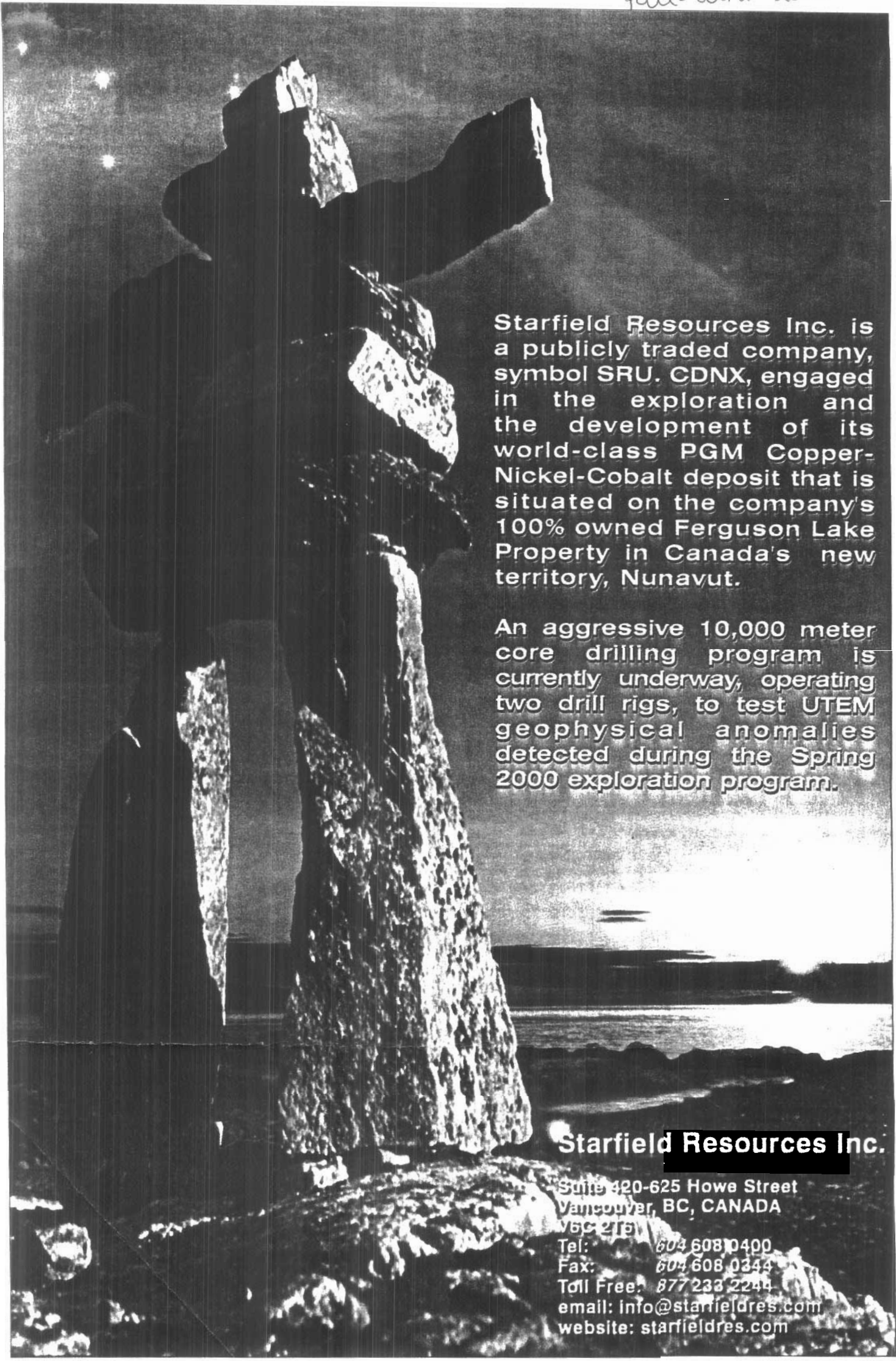


Canadian Golden Dragon Resources Ltd. (CGG) and East West Resources Corporation (EWR) began exploration in Thunder Bay in 1988. We are currently drilling the Seagull - Wolf Mountain and Disraeli properties. For more information visit our websites at [www.eastwestres.com](http://www.eastwestres.com) or [www.cgdrlimited.com](http://www.cgdrlimited.com) or call (604) 681-3154 (EWR) or (416) 789-5031 (CGG)





Canadian Miner  
Fall-Winter 2000



Starfield Resources Inc. is a publicly traded company, symbol SRU. CDNX, engaged in the exploration and the development of its world-class PGM Copper-Nickel-Cobalt deposit that is situated on the company's 100% owned Ferguson Lake Property in Canada's new territory, Nunavut.

An aggressive 10,000 meter core drilling program is currently underway, operating two drill rigs, to test UTEM geophysical anomalies detected during the Spring 2000 exploration program.

#### **Starfield Resources Inc.**

Suite 420-625 Howe Street  
Vancouver, BC, CANADA  
V6C 2T6

Tel: 604 608 0400

Fax: 604 608 0344

Toll Free: 877 233 2244

email: [info@starfieldres.com](mailto:info@starfieldres.com)

website: [starfieldres.com](http://starfieldres.com)