

**Call for Expressions of Interest:**  
***Utilization of Remotely Sensed Data for Reconnaissance-Level Mineral Exploration in  
Canada's North***

**Application Deadline: 24 May 2013**

*LOOKNorth is soliciting Expressions of Interest (EOIs) from small and medium sized enterprises (SMEs) based in Canada that have demonstrated expertise in the use of remote sensing for mineral exploration applications, particularly in the context of Canada's North.*

***About LOOKNorth***

LOOKNorth is a national Centre of Excellence for Commercialization and Research (CECR) under the Government of Canada's Network of Centres of Excellence program ([www.nce-rce.gc.ca](http://www.nce-rce.gc.ca)). LOOKNorth supports responsible, sustainable development of Canada's Northern natural resources through implementation of innovative remote sensing (RS) technologies.

Funding for LOOKNorth is provided by the Government of Canada (through the CECR Program) and by the Province of Newfoundland & Labrador (through the Department of Innovation, Business & Rural Development and the Research & Development Corporation).

***Introduction***

LOOKNorth, in cooperation with HTX Minerals (a Canadian mineral exploration company with interests in Nunavut) is seeking the support of a company with expertise in geological remote sensing to undertake an analysis of remotely sensed data in support of reconnaissance-level mineral exploration.

The use of remotely sensed data for mineral exploration purposes is an established practice. However, its utility and methodology within smaller exploration companies is not well documented - either in terms of the benefits of various data sources or in terms of workflows for companies that do not have in-house RS expertise expertise.

In accordance with LOOKNorth objectives, this expression of interest seeks to identify qualified and interested parties to undertake the work described below. Based on responses, LOOKNorth and HTX Minerals will select a company to work with. A final project plan (including scope, timing and cost) will be developed in collaboration among the three parties.



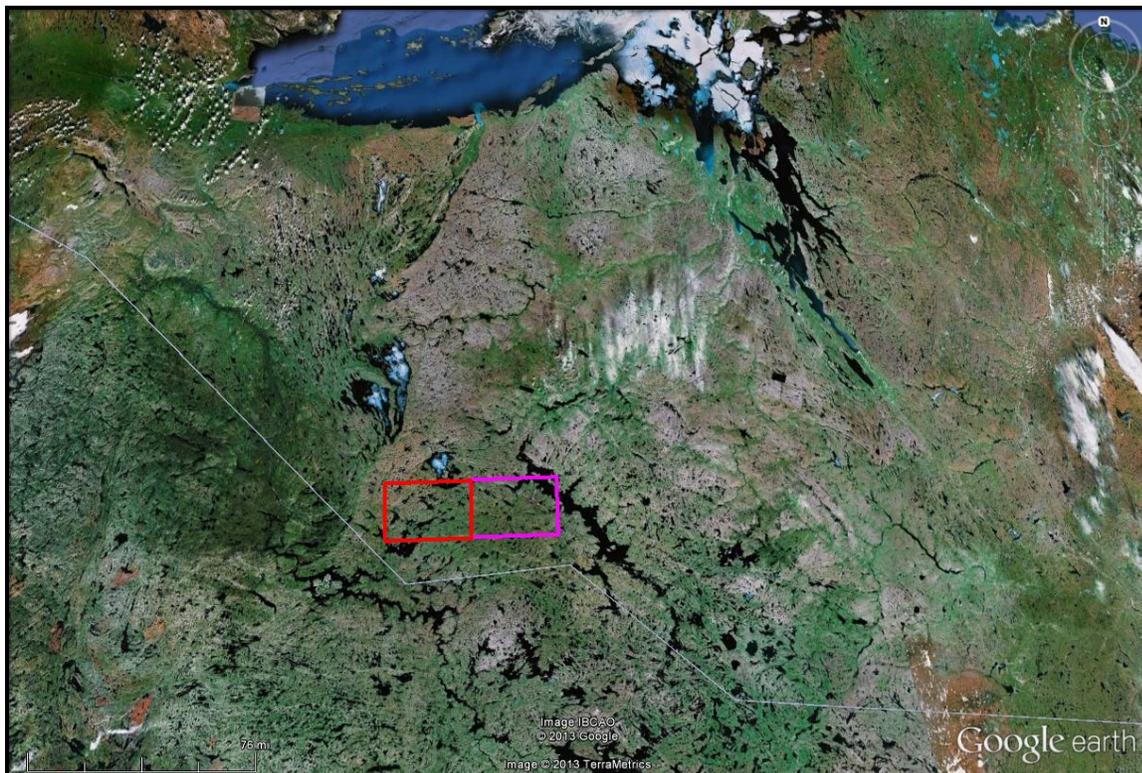
## Project Objectives

The primary goal of LOOKNorth is to promote broader use of RS technology in support of resource development in Canada's North. The objectives of this specific project are to:

- provide RS support to an active northern preliminary exploration program;
- assess relative RS data source benefits, as well as tradeoffs associated with various data sources (ie, Landsat, ASTER, RADARSAT, high-resolution optical imagery, etc.) for northern mineral exploration;
- work with LOOKNorth and HTX Minerals to develop a workflow for integration of Earth observation (EO) derived information with other geological and related data sets (geophysical surveys, field data, etc.) that can be used for future exploration efforts in other regions of Nunavut; and
- prepare a package of site-specific, EO-derived information products to support field exploration activities.

## Scope

The project will look at an area of interest in Nunavut within the Itchen Lake area geology map (Map 1473A) and shown in the figure below.



The primary area of interest (AOI) shows promising gold resource potential. It is also an area with considerable historical data that can be used to validate the RS results and aid in defining a workflow for future use in regions with less ancillary data. The size of the primary area of interest (including both polygons in the figure above) is approximately 3,000 km<sup>2</sup>.

A key aspect of the project is to draw on principals of Remote Predictive Mapping and investigate the potential to extend to mapping at scales of 1:25,000-1:50,000.

### ***Project Tasks***

The project will encompass several tasks:

- Evaluate various EO data options:
  - Consider standard data sets;
  - Evaluate potential for other data (i.e. hyperspectral) to be included.
- Acquire selected data sets:
  - Identify suitable data in both the public and commercial domains for this study.
- Process and evaluate various data sources for relevant geological information.
- Integrate derived data with company-compiled geophysical and related data.
- Produce information products for field use, including:
  - Preliminary information products for demonstration during the 2013 field season; and
  - Final set of information products as deliverables for the 2014 field season.
- Document work flow for ongoing project use.
- Produce final project report.

### ***Project Timeline***

The project is planned to begin in mid to late June, with the intent that initial information products can be made available for the summer field exploration season (tentatively, August and September).

**Estimated start date:** 15 June 2013

**Project duration:** 6 - 9 months

### ***Response to Expression of Interest***

Please respond to this expression of interest with the following:

- **Description of your (company's) experience** in the use of RS technology for mineral exploration in Northern Canada
- **Proposed potential approaches for use of remote sensing** for mineral exploration in this area for further discussion:
  - Identify potential challenges.
- **Proposed personnel for this project:**
  - Include personnel and corporate expertise in the application of remote sensing for geological exploration
- **Cost estimate:**
  - Provide a daily rate based on 10 - 15 days per month for 6 - 9 months
  - Please note that eligible costs are defined in the Tri-Agency Financial Administration Guide which can be found at: [http://www.nserc-crsng.gc.ca/Professors-Professeurs/FinancialAdminGuideGuideAdminFinancier/FundsUse-UtilisationSubventions\\_eng.asp](http://www.nserc-crsng.gc.ca/Professors-Professeurs/FinancialAdminGuideGuideAdminFinancier/FundsUse-UtilisationSubventions_eng.asp)
- **Schedule:**
  - Estimated June to December 2013



### ***Submission and Evaluation***

Responses are required by 5:00 p.m. Eastern Standard Time, May 24, 2013. Submission should be provided in digital form.

Submissions and/or questions should be directed to:

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**Program Director**  
LOOKNorth  
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