

## NEWS RELEASE

### **LOOKNorth funds Effigis Geo-Solutions permafrost monitoring project:**

*project to evaluate Earth observation technologies for monitoring mining-related infrastructure*

(12 September 2012) ... Supported by \$125,000 in co-funding from LOOKNorth's Technology Validation Program, Effigis Geo-Solutions will conduct a project to evaluate the usefulness of satellite-based interferometry technology for monitoring mining-related infrastructure for deformation related to changes in underlying or nearby soil permafrost conditions. The project will be conducted over the coming 20 months.

#### ***About the Project:***

The past 30 years has seen significant mining development in northern regions due to increasing commodity prices, significant deposits and technology improvements. Given this increasing northern investment, one of the major challenges for the Canadian mining industry is the management of mining operations during very short summer periods and in permafrost environments that are being increasingly impacted by climate change.

Large areas of permafrost are experiencing seasonal thawing, impacting both mining and community infrastructure located in these areas: the ground surface may subside after thawing and rise again as it re-freezes. Current methods of permafrost monitoring, based on on-site field investigation, provide accurate information but are usually costly and provide information on sampled points only. Earth observation data from satellites provide integrated information and maps over the full area of interest.

The purpose of the project is to validate the usefulness of satellite-based interferometry technology to monitor infrastructure deformation related to changes in underlying or nearby soil permafrost conditions. For that purpose, high-resolution radar images will be used to measure deformation of infrastructure or the ground that might be caused by changes in permafrost extent.

#### ***About the LOOKNorth:***

*LOOKNorth (Leading Operational Observations and Knowledge for the North)* is a national Centre of Excellence for Commercialization and Research hosted by C-CORE. In collaboration with a broad network of industry, northern, business and research partners, LOOKNorth validates and drives commercialization of monitoring technologies to support safe and sustainable development of Canada's northern natural resources. It promotes the use of remote sensing (RS) technologies in environmental monitoring for northern stakeholder groups.

#### ***About Effigis Geo-Solutions:***

*Recognized as a leader in the geomatics sector, Effigis (formerly VIASAT GeoTechnologies, VGI Solutions in the US) has been providing innovative geospatial solutions since 1991. Earth Observation services, infrastructure inventory, telecommunications network monitoring, GNSS software, geological studies: we are a one stop source for all our customers' geoinformation needs.*

- 30 -

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*Leveraging advanced technology for safe, sustainable development of Canada's Northern resources*



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