Project Title:
Arctic carbonates, sandstones and volcanic rocks, NW Ellesmere Island

Researchers names and affiliations:
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Timeframe:
June 28, 2011 to August 03, 2011

Project Description:

Purpose:
We will investigate different rock units of carbonate, sandstone and volcanic rocks that have recorded important interplay between large forces some 280 million years ago in the area now occupied by the Canadian Arctic. We will focus on an area of the Sverdrup Basin centered on NW Ellesmere Island, where this phenomenon is well displayed in outcrops.

Goals and objectives
The project will address four aspects of importance in the Sverdrup Basin:
1. **Carbonate units.** The focus of this project is to examine outcrops of large ancient reefs and surrounding rocks on NW Ellesmere Island.
2. **Sandstone units**. The focus of this project is to examine outcrops of sandstones on NW Ellesmere Island.
3. **Volcanic units.** The focus of this project is to examine outcrops of volcanic rocks on NW Ellesmere Island.
4. **Mapping.** The focus of this project is to map the various rock units and their structure on NW Ellesmere Island.

Method of transportation:
Twin Otter transportation from Resolute Bay to Eureka or strips designated by PCSP.
Helicopter transportation to study area. Walk from camp site to outcrops

Structures to be erected:
The research team will be broken down into three small groups of three people.
Only three personal tents will be erected at the different camp sites.

Restoration/abandonment plans:
Each camp site will be restored to its original conditions. All garbage will be gathered and shipped back to Resolute.

Methodology:

Collection protocol and mechanism
About 50 small rock samples (less than 0.5 kg each) will be collected for geochemical analysis. Samples will be collected with a geological hammer and will be catalogued and preserved in Calgary by the Geological Survey of Canada. No fossils will be collected.

Data:

Use of data:
In the short term, the data will be used in support of the work of the researchers and the graduate students. The data will then be published in peer-reviewed journals, after which it will be made publicly available through the GSC to anyone who wishes to use it.

Reporting
Five to ten peer-reviewed papers will result from this project. The results that are relevant to Arctic Institute of North America's outreach initiative.