

# GEM

## *Ensuring Success in Northern Research through Community Engagement: GEM Cumberland project*

**Mary Sanborn-Barrie**  
Research Scientist  
Natural Resources Canada



*Community of Pangnirtung  
Community of Qikiqtarjuaq  
Geological Survey of Canada  
Canada-Nunavut Geoscience Office*



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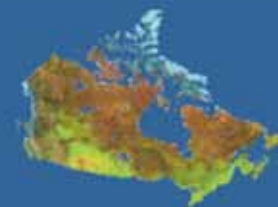
Ressources naturelles  
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Canada-Nunavut  
Geoscience Office



## GEM PROJECT AREAS



*Cumberland Peninsula project is providing new geoscience data for a remote frontier region of NE Canada supporting two Inuit communities.*

*New maps & data are refocussing exploration activity & better guiding land use decisions.*



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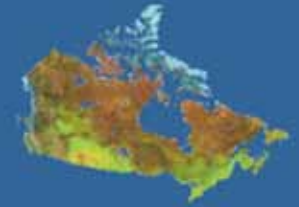
*Increasing economic prosperity of northern Canada through stable long term investment in natural resource development.*

*Accroître la prospérité économique du nord du Canada par un investissement stable à long terme dans le développement des ressources naturelles.*

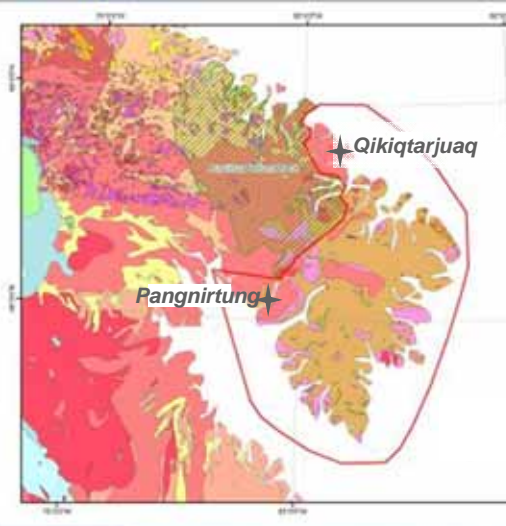
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## Primary Stakeholders



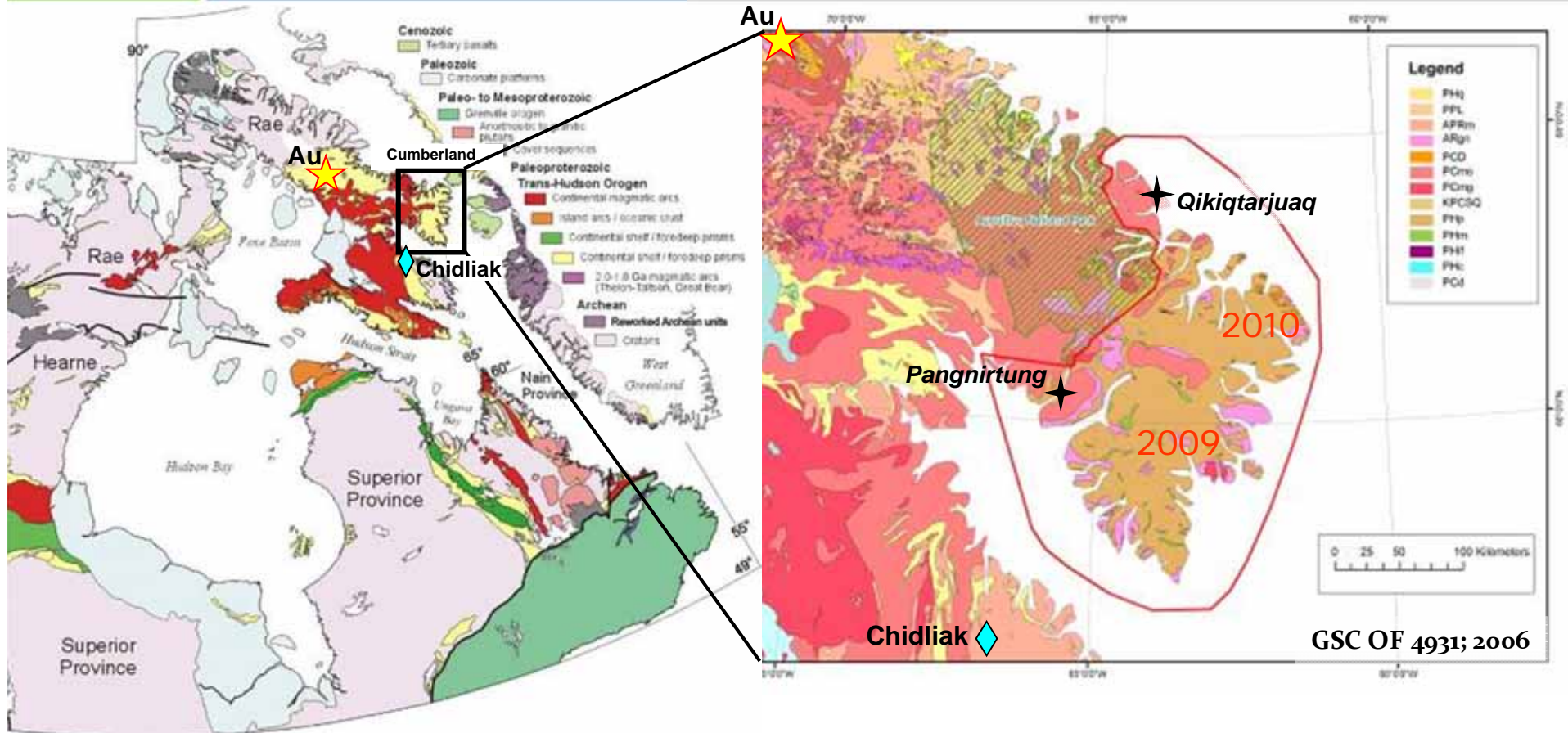
Pangnirtung



Qikiqtarjuaq

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## Why Cumberland Peninsula?



*Does Cumberland Peninsula have similar diamond potential to the Chidliak field to the south and similar gold potential to central Baffin's Piling Group (e.g., Bravo Formation) to the NW?*



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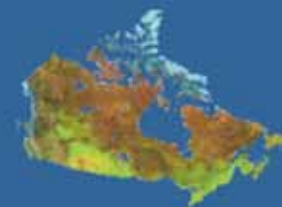
Increasing economic prosperity of northern Canada through stable long term investment in natural resource development.

Accroître la prospérité économique du nord du Canada par un investissement stable à long terme dans le développement des ressources naturelles.

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## *Information sessions & Community Consultation*



*School visits*



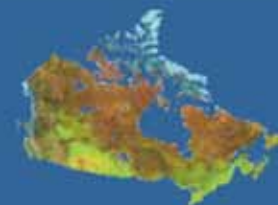
*Informal discussions*



*Public Meetings*

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## Proposed Activities



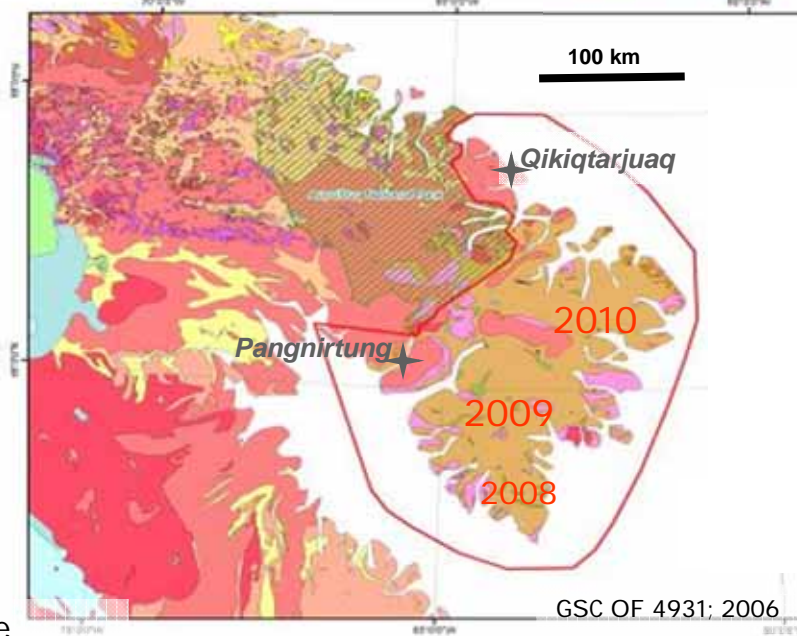
1970's Bedrock Mapping



Surficial Map: Dyke et al, 1975



Aeromagnetics 800m Analogue



- *Aeromagnetic Survey*
- *Bedrock Mapping*
- *Surficial Mapping*
- *Ice Movement Studies*
- *Prospecting of bedrock & till*
- *Geochronology*
- *Geochemistry & Petrology*
- *Tectonometamorphic History*



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## Pre-project training opportunities & consultation



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- 1) Government of Nunavut Prospecting Course, offered in both Pangnirtung & Qikiqtarjuaq in June 2008
- 2) St. John Ambulance Wilderness First Aid training offered in Pangnirtung, June 2009 (9 graduates) & Qikiqtarjuaq, June 2010 (9 graduates).



To ensure the highest levels of safety in a remote camp setting, preference for employment was afforded to those with First Aid training.

- 3) Helicopter safety training

## Valued Northern Perspectives

Advice on suitable & safe camp locations



Sharing Traditional Knowledge



Input on local rock & mineral showings

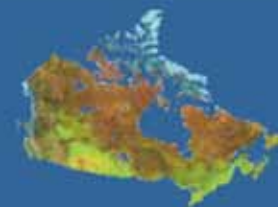


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*walking the ground:  
learning the Land*



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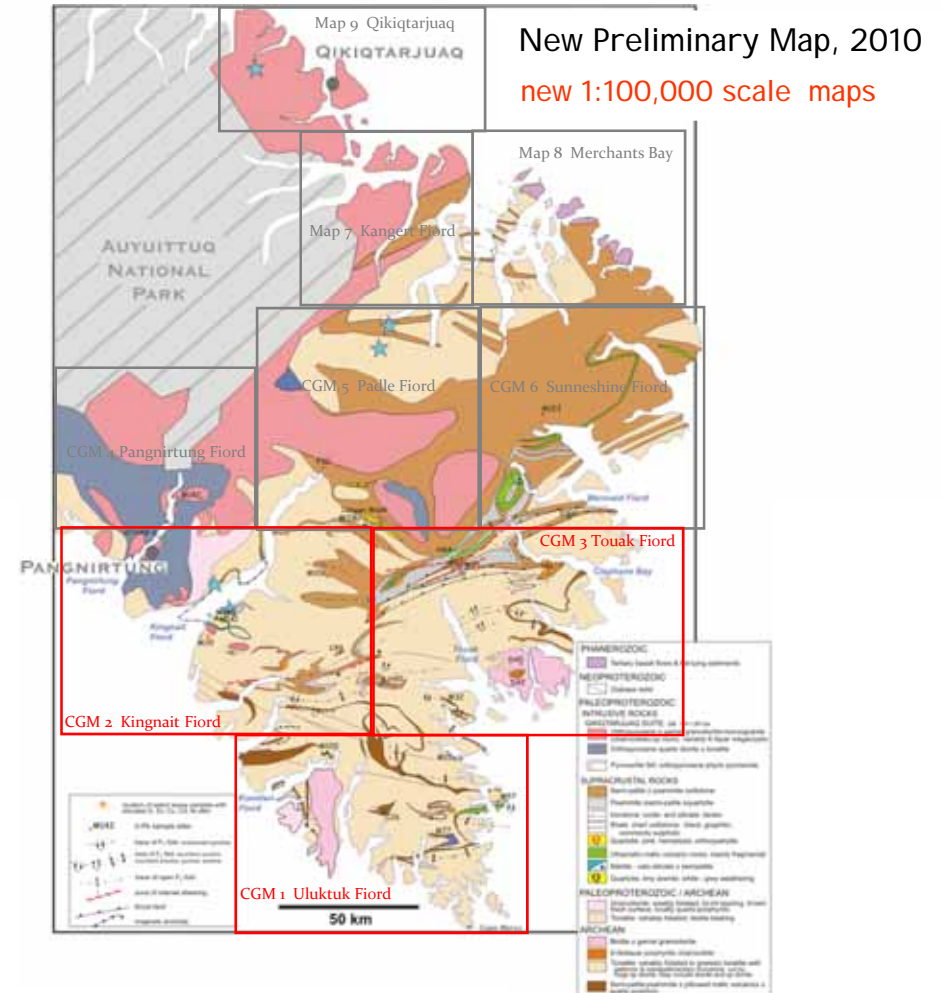
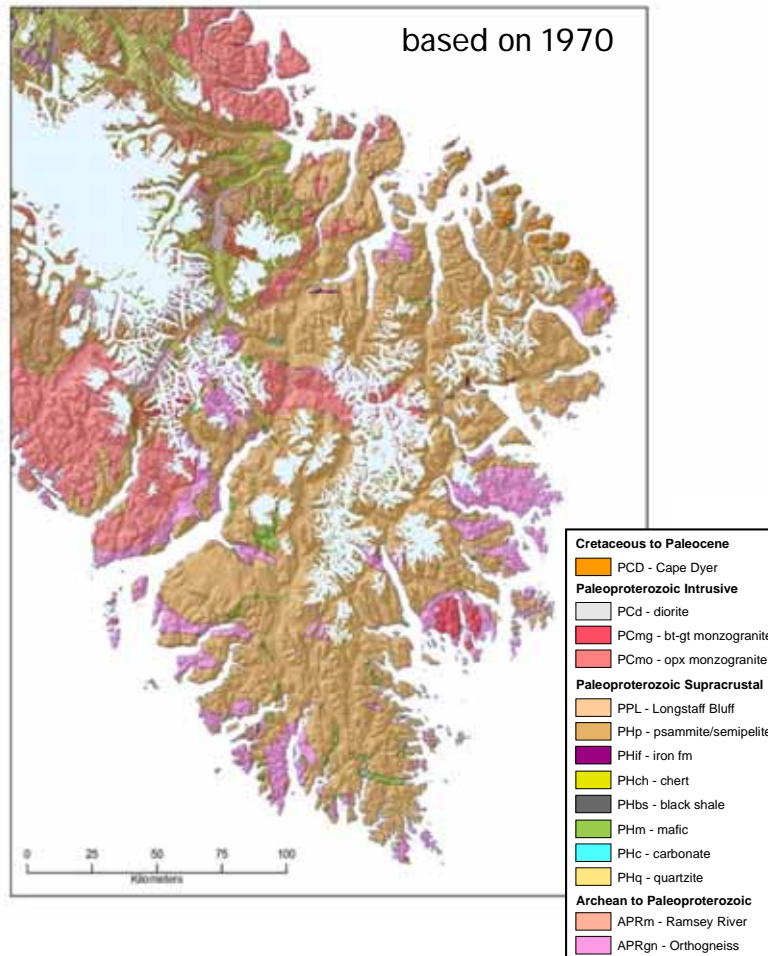
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.....results in significant revision to geological map & improved understanding



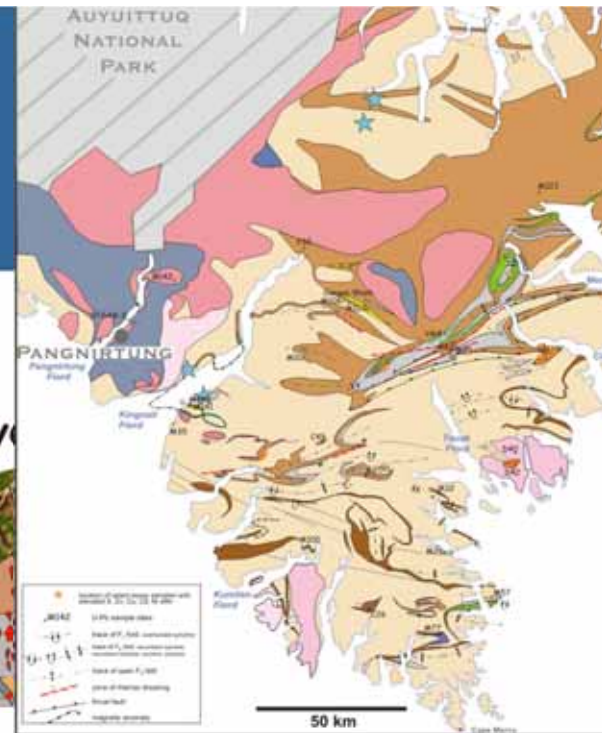
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- Increased understanding of lithologic distribution & associations
- Assay sampling, geochemistry & geochronology

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*what we have learned...*

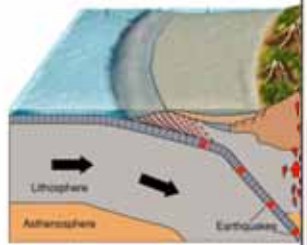


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c)

1890 million years



b)

1950 million years ago



Sediments form in warm ocean



a)

3000 million years ago



Foundation of tonalite



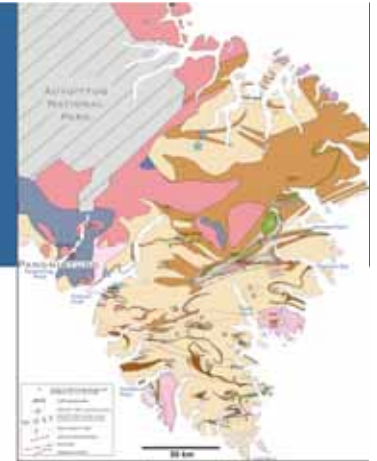
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*what we have learned... con't*



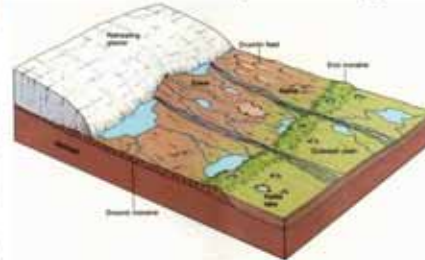
Ice covers & carves the land, depositing till upon melting

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f)



10,000 years ago



e)



1840-1860 million yrs ago

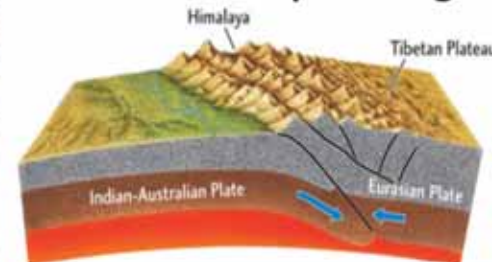


Crystal growth during heating

d)



1860 million years ago



Folding during collision



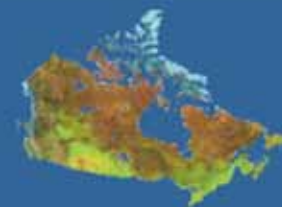
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*What we have learned... con't*



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## TODAY!



### *Rocks yield:*

- *a remarkable story*
- *riches of carving stone, metals, diamonds & sapphires*



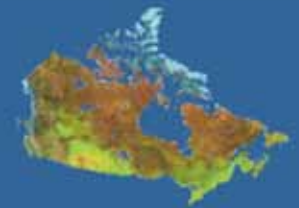
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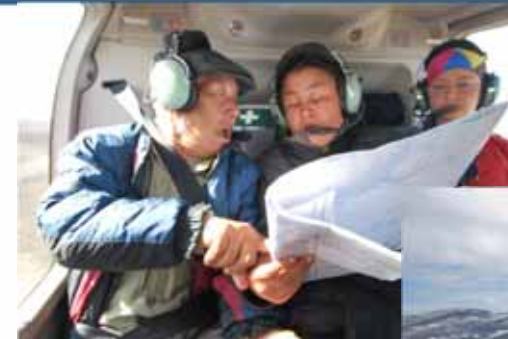
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## Guidance & mentoring



*résumé service*



*1st-hand knowledge of the land from Elder Elijah Kakee*



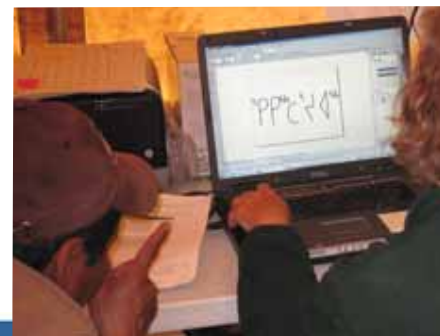
*Role model, Jimmy Qaqasiq highlighting job opportunities for northern youth through education*



*respect, safety & comfort on the land*



*the history of Nunavut told through rocks*



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## *Elders & community representatives*



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## Engaging Northern Youth



opening circle

**HIGH SCHOOL STUDENTS:  
GEO-SCIENCE  
RETREAT!**  
AUGUST 3-4, 2010

**WHO?** Students in grades 9-12  
**WHEN?** August 3-4, 2010  
**WHERE?** 75 km south of Qikstaptoo, at the head of Pelee Pond  
**WHY?** Have fun & participate in geo-science activities  
**HOW?** Fill out an application (available from school office). Selected students (in numbers) will be notified.  
**COST?** NO COST. All meals, equipment and transportation provided.



careers



mapping

**HIGH SCHOOL STUDENTS' GEOSCIENCE RETREAT  
AUGUST 6-7, 2010  
Application & Permission Form**

Name: \_\_\_\_\_  
 Grade: \_\_\_\_\_  
 Telephone Number: \_\_\_\_\_  
 Mailing Address: \_\_\_\_\_  
 Email Address: \_\_\_\_\_  
 Guardian's name: \_\_\_\_\_  
 Guardian's signature of permission: \_\_\_\_\_

\* Required information

\*\* Permission or guardian permission is required to travel by air (Twin Otter or helicopter) to the camp, located 100 km northwest of Pangnirtung at the head of Pelee Pond, participate in geoscience activities, games and entertainment on August 6th & 7th, eat meals prepared by an Ontario based chef and sleep one night in a tent. There is NO COST and equipment and transportation are provided. The camp has all required permits and licenses and is supervised by wildlife monitors. Selected students will be notified by telephone in late June with an opportunity to meet with project workers in Pangnirtung. A follow-up call in early August will re-confirm the time of departure from Pangnirtung airport on August 6th, 2010.



disc golf



kimberlite mineral ID

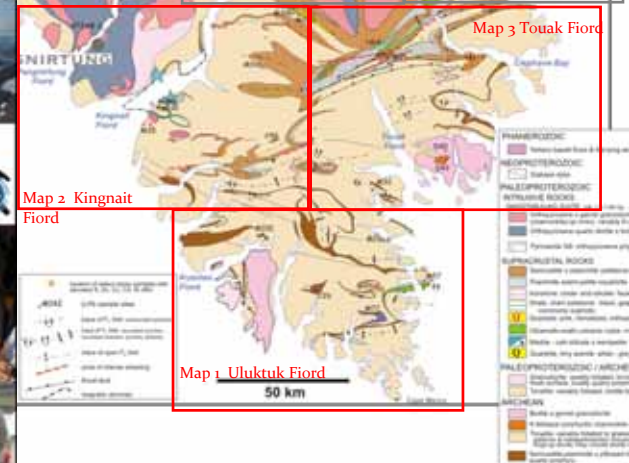
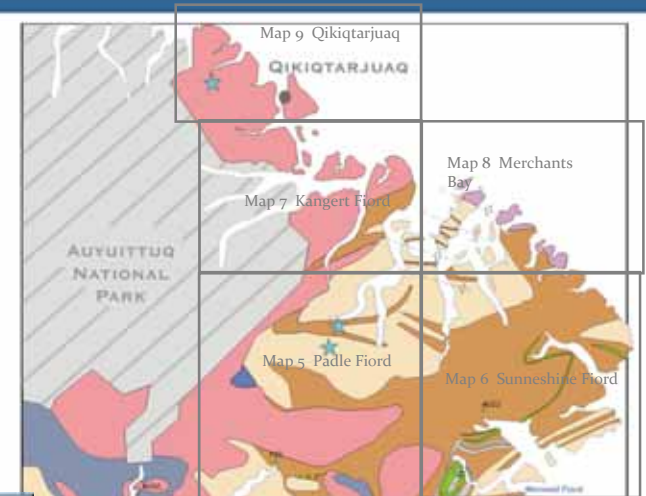
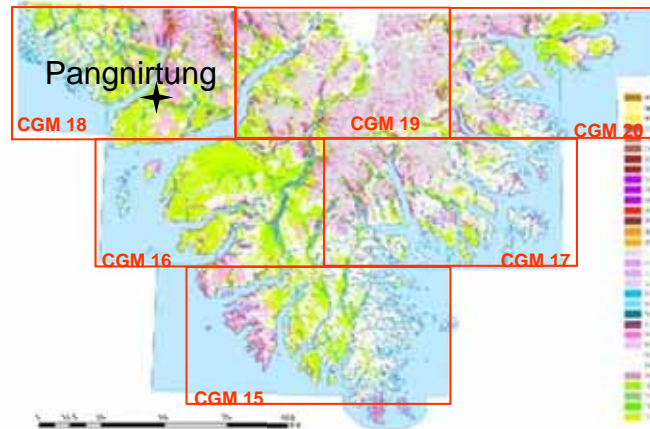
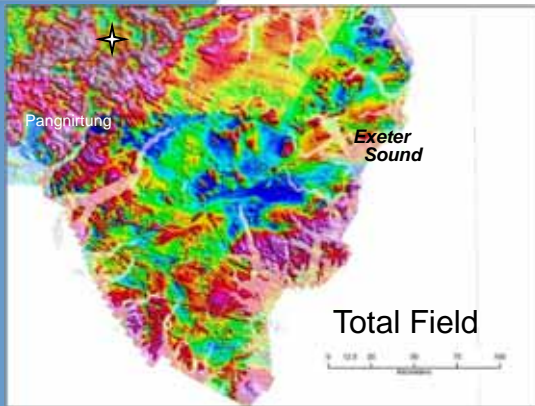
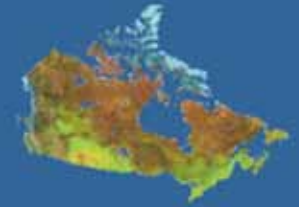


## Highschool Youth Geoscience Retreats



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## Public Release of Information



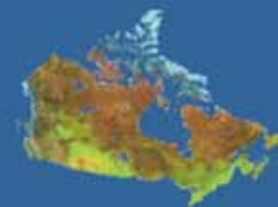
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## Qujannamiik!



- Community of Pangnirtung
- Community of Qikiqtarjuaq
- Continental Polar Shelf Project
- Canada-Nunavut Geoscience Office



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