



2013 Compendium of Research



A Message from the Senior Science Officer

Many new projects are being initiated by Nunavummiut with a desire to generate more data relevant to lives in Nunavut. We will continue to monitor the types, numbers and locations of these projects going forward in order to measure possible impacts and outcomes.

The Institute is continually working to seek out and develop new relationships to strengthen the range and type of research that is being carried out to improve knowledge of Nunavut and to improve the well being of our residents.

We also seek out relationships that will offer ever increasing opportunities for Arctic College students to gain experience in research, heading to careers in science and technology.

Mary Ellen Thomas
Senior Science Officer
Nunavut Research Institute



2013 Compendium of Research

PHYSICAL AND NATURAL SCIENCES

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Ice Islands of the Eastern Canadian Arctic

License Number: 02 002 13R-M Amended

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Number in Party 8
Region: North & South Baffin
Communities: Canadian Arctic Archipelago, Arctic Ocean, Baffin Bay

This research program brings together an international team of researchers to continue previous study on the drift, deterioration and shape of ice islands (large tabular icebergs of Arctic ice shelf or floating glacial tongue origin) in the Eastern Canadian Arctic. Four ice islands were studied in July and October of 2011 and future research will build on this work in 2012 and beyond. Ice islands have extensive dimensions (1 km² to 250 km²) and are considered ice hazards for shipping and natural resource exploration and development in the Canadian Arctic and Sub-Arctic. The objective of this work is to better understand the drift and deterioration of these ice islands. This will allow for accurate size and location prediction and proper risk assessment and management by stakeholders.

2013 Hackett River Environmental Baseline Program

License Number: 04 003 13R-M

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Region: Kitikmeot
Communities: Hackett River, BIPR (proposed road route)

Xstrata Zinc Canada (Xstrata) is exploring significant metal deposits near Hackett River in the Kitikmeot Region of Nunavut. Xstrata is also involved in leading the submission of an updated Draft Environmental Impact Statement (DEIS) for the Bathurst Inlet Port and Road (BIPR) Project. Xstrata is committed to support on-going exploration activities in the Kitikmeot Region, and would like to continue baseline studies in the area for potential future development.

2013 Back River Baseline Program

License Number: 04 001 13R-M

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Region: Kitikmeot
Communities: Back River

Sabina Gold & Silver Corp. is exploring gold deposits in the West Kitikmeot region of Nunavut. Baseline research will be conducted close to known deposits in the geographic area of the Goose and George Properties (located approximately 100 km and 50 km south of Bathurst Inlet), within a Marine Laydown Area located on the southern part of Bathurst Inlet, along potential access routes, and at reference sites. The following components will be included

in the sampling and data collection program: meteorology, air quality and dust, freshwater and marine water quality, sediment quality and aquatic biology, hydrology and bathymetry, deep groundwater hydrogeology; freshwater and marine fish and fish habitat, terrestrial and marine wildlife, terrestrial vegetation and soils, and geochemistry (metal leaching/acid rock drainage assessments). This work is being done to provide baseline characterisation in the area to support a future Environmental Impact Assessment. Data collected will also be used to help plan future project infrastructure.

Iqaluit Hydroelectric Project

License Number: 01 010 13N-M

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Number in Party 3
Region: South Baffin
Communities: Jaynes Inlet, Armshow River

Qulliq Energy Corporation (QEC) is initiating a feasibility study and the environmental review process for its Iqaluit Hydro-electric Project. The Project consists of two potential hydro-electric sites: Armshow River South, and Jaynes Inlet. QEC plans to conduct engineering investigations and supplemental baseline studies at the two sites and along the proposed transmission line corridor to Iqaluit in 2013. It is likely that these programs could extend into 2014.

Dynamics and Change of the Devon Ice Cap

License Number: 02 004 13R-M

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Number in Party 3
Region: North Baffin
Communities: Devon Island

Project Description: The project goal is to describe and explain ongoing changes in the area, mass and flow of the Devon Island ice cap so that we can estimate its recent current and future contribution to changes in global sea level. We are interested in how climate warming may cause faster flow of glaciers that end in the ocean, and how faster flow may lead to more mass loss by iceberg calving. Our work combines field studies with satellite and airborne remote sensing, and with modeling of ice cap flow and interactions with the atmosphere. Our fieldwork involves calibrating and validating measurements made by remote sensing, and measuring changes in ice thickness, snow properties, glacier flow, meltwater production and runoff, and rates of iceberg calving. It provides us with data that we can use in our models. We access the ice cap from Resolute Bay by PCSP Twin Otter or helicopter, and travel on the ice by snowmobile or helicopter. Each year we establish a base camp on the ice cap summit where we store food, equipment and fuel. Most work is carried out from mobile 2-person camps. We install some instruments on or adjacent to the ice, but all will be removed at the end of the project so that the ice cap is left as we found it.

Glacier Mass Balance and Pollution Studies in the Canadian high Arctic

License Number: 02 003 13R-M

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Number in Party 3
Region: North Baffin
Communities: Devon Island, Ellesmere

This is an ongoing study aimed at monitoring the mass balance and pollution levels of the Melville, Meighen, Agassiz, Devon ice caps, and the Grise Fiord Glacier. An additional component to this work will be to measure variations in flow rates of 3 glaciers on the Devon ice cap in order to understand how these glaciers will respond to future climate warming. Transportation at each site will be by snowmobile or helicopter where requested.

I. Glacier mass balance

Meteorological data will also be collected from the 11 automatic weather stations deployed as part of this network. Mass balance measurements provide an indication as to whether the ice caps under investigation are shrinking or growing in any particular year. This work will be performed out of permanent huts that exist on the Meighen and Melville ice caps, and tents on the Agassiz and Devon ice caps.

II. Snow sampling for monitoring pollution levels

Snow samples collected from each mass balance monitoring site will be returned to the GSC glaciology laboratory in Ottawa for analysis of the major pollutant ions (eg. Sulphates – acid snow) and pollen. Knowledge of the annual variability

of pollen and pollutant concentrations at the monitoring locations improve provide important information towards quantifying current trends in levels of atmospheric pollution, understanding atmospheric circulation patterns, and interpreting long-term pollution trends from ice cores.

III. Variability in flow rates of major outlet glaciers on the Devon Ice cap

In-situ global positioning systems (GPS) will be deployed on 3 major outlet glaciers that drain the Devon ice cap. The in-situ GPS's will track the glacier's velocity on a daily basis over the course of a 2 year period of time. These data will a) provide ground validation to measurements of glacier velocity fields derived from satellite-based methods and b) quantify seasonal variations in rates of glacier flow. These data are crucial to understanding the effects of climate warming on the dynamics and mass balance of high Arctic ice caps.

Chert Sourcing and Palaeo-Eskimo Stone Tool Technology

License Number: 01 003 13R-M

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Number in Party 5
Region: South Baffin
Communities: Amadjuak Lake, Mingo Lake

Archaeologists refer to the original inhabitants of the Arctic as Paleo-Eskimos, and chert or ammaaq was the most common type of stone they used to

make their stone tools. However, we know very little about how these people acquired this stone, when, and from where exactly. In the interior of Baffin Island, oral histories have long attested to the presence of chert in the region. Amadjuak Lake, or Ammaaq Lake, is an important place to find chert and our previous research in the area has identified widespread surface scatters of this stone thereby confirming its presence in the area. If we can locate the precise geological sources of ammaaq in the interior region, it will help us reconstruct how people were moving across the landscape throughout the entire southern Baffin region.

CANDAC – Canadian Network for the Detection of Atmospheric Change

License Number: 02 005 13R-M

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Number in Party 25
Region: North Baffin
Communities: Eureka

Canadians have a special responsibility for their sovereign Arctic territory. The unique environmental conditions – extreme cold, low humidity and seasonal daylight variations – give rise to unusual climate and chemistry processes, many of which are poorly understood. Gaps in our scientific knowledge of the Arctic impair our ability to effectively steward Canada's North. This lack of knowledge has serious social, environmental and biodiversity implications.

In 2002 a group of researchers joined together to form the Canadian Network for the Detection of Atmospheric Change (CANDAC) with the objective of improving the state of observational atmosphere research in Canada.

Environmental Baseline Data Collection, Meliadine Gold Project, Agnico-Eagle Mines Ltd.

License Number: 03 001 13R-M

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Number in Party 10
Region: Kivalliq
Communities: Meliadine

The purpose of the project is to collect baseline data in support of an Environmental Impact Statement being prepared for the Meliadine Gold Project. The goal is to collect sufficient information to characterize the “before development” of areas likely to be impacted by the development of the mine.

Local roads will be used in Rankin Inlet to access the Itivia barge landing area with a boat and driver rented in town. An Inuit assistant will be hired to participate in sample collection.

The Meliadine site is 25 northwest of Rankin Inlet. A helicopter contracted for exploration activities and located at the Meliadine site will be used to access areas to be sampled in the vicinity of the mine development. An Inuit Assistant will provide support in taking samples and at the same time learn various sampling techniques.

The existing Meliadine exploration camp will be used for accommodation as will a hotel in Rankin Inlet. A reclamation plan has been filed for the Meliadine camp with the Nunavut Water Board.

Northern Ellesmere Ice Shelves, Epishelf Lakes and Climate Impacts

License Number: 02 006 13R-M

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Number in Party 4
Region: North Baffin
Communities: Ellesmere Island

This research program will continue work on the current characteristics and stability of the northern Ellesmere Island ice shelves and adjacent multiyear landfast sea ice. Fieldwork started at this location in 2008, and will continue for the foreseeable future. Almost all of the ice shelves in this region have experienced dramatic break-ups over the last eight years, so this project aims to improve understanding of the causes of these events and the fate of the remaining ice shelves and related ice features.

Permafrost Hydrology and Environmental Significance of Perennial Springs in the Expedition Fiord Area, Axel Heiberg Island

License Number: 02 007 13R-M

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Number in Party 7
Region: North Baffin
Communities: Axel Heiberg Island

My research on the cold perennial springs on Axel Heiberg Island in the Canadian high Arctic has led to a better understanding about the unique nature of saline groundwater in permafrost. This is an ongoing study concerned with the technical analysis of several aspects of spring hydrology and geomorphology. The aims of this research are (1) to determine the origin of perennial spring flow, (2) to understand and explain processes related to the interaction between groundwater and permafrost, and (3) to describe the microbial communities associated with springs, lakes and permafrost. These efforts have contributed to a better understanding about the limits of life in cold climates and about unique physical processes that are occurring in the Arctic. This is the only research on cold perennial springs being conducted in the high Arctic. These springs have no commercial value and our research is driven entirely by scientific questions.

An investigation of the sensitivity of high Arctic permafrost to climate change

License Number: 02 008 13R-M

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Number in Party 10

Region: North Baffin

Communities: Ellesmere Island, Axel Heiberg Island

This project looks at the impact of climate change on high arctic permafrost conditions and high arctic landscapes. The aims of this project are: (1) to monitor climate conditions for different types of landscape (eg tundra, mountains, coasts, wetlands ...) and assess how much the climate is changing, (2) to determine the amount and rate of landscape change caused by warming and melting permafrost, and (3) to map these changes from for the period 2007-2011. The information collected in this study will improve our general understanding about climate and permafrost as well as help to predict how the land will respond as climates warm. This study also contributes new information about high Arctic permafrost and ground ice conditions, the sensitivity of high arctic permafrost to climate change and background data upon which landscape changes can be documented. Another component of this project looks at long-term changes in high Arctic landscapes by looking at how rock surfaces are being weathered and eroded. This research will help northern understand how landscapes are changing and will change in the future.

Roche Bay & Tuktu – Fresh Water Monitoring

License Number: 02 009 13R-M

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Number in Party 6

Region: North Baffin

Communities: Roche Bay (Hall Beach)

Sampling will be conducted according to standardized water quality guidelines, which includes a QA/QC program. Water samples will be collected at Roche Bay in June, July and August. The locations of water sampling stations will predetermined and a Global Positioning System (GPS) will be used to locate all stations. Water quality samples will be collected for standard analytical parameters including ultra-low dissolved metals, ultra-low total metals, major ions, low-level nutrients and inorganics. ALS Environmental (ALS) of Edmonton will prepare the water sampling bottles for all water sampling events. All samples will be transported in portable coolers with ice packs. In the field, powder-less latex gloves will be worn during handling of bottles and equipment to minimize contamination. All bottles will be rinsed three times with the source water (i.e. the same water the bottle will be filled with) prior to water collection. To minimize trace metals contamination from the filters, filters were rinsed three times with source water prior to filtering the sample water. As part of a Quality Assurance/Quality Control (QA/QC) program, travel blanks will be used; field blanks and duplicates will be collected and filter blanks submitted. Duplicates will be collected to test the validity of sampling procedures and laboratory methodology.

Validating experimental and modeled rate constants for reduction and oxidation of mercury species in Arctic snow: Assessing the modeling error

License Number: 02 014 13R-M

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Region: North Baffin
Communities: Resolute Bay

Mercury is known to be a problem in the Arctic. High levels of mercury accumulate in traditional food sources, which may pose a risk to local Arctic communities. The form of mercury that accumulates in these foods, methyl mercury, is not directly emitted, but is rather formed from environmental reactions involving other types of mercury, emitted by human activities. To understand how much mercury may accumulate in organisms, it is necessary to understand how these other forms of mercury move through the surface of the land.

Hydrology and Resilience of High Arctic Wetlands: Submerging vs. Emerging Ecosystems

License Number: 02 010 13R-M

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Number in Party 6

Region: North Baffin

Communities: Ellesmere Island, Somerset Island, Bathurst Island

The overall purpose of this study is to improve understanding of the seasonal hydrology of “sinking” or submerging coastal wetlands located on Melville Island and to understand how they are responding to rising sea level, wave action (both tidal and storm surges) and erosion from thick multi-year ice which moves through the Melville-Bathurst Island corridor. Ongoing wetland studies have been ongoing at Polar Bear Pass, Bathurst Island since about 2007. I would like to compare the hydrology of these wetlands to the wetland ecosystem at Polar Bear Pass (an emerging site-rising), where snowcover, pond storage and runoff studies will continue for the same interval. The new site at Alison Inlet (studying snowcover & runoff) is another example of an emerging extensive wetland site on Bathurst Island.

2013 Hope Bay Belt Environmental Baseline Program

License Number: 04 002 13R-M

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Number in Party 16
Region: Kitikmeot
Communities: Hope Bay Belt

Hope Bay Mining Limited (HBML) is exploring significant metal deposits near Hope Bay, Melville Sound, Nunavut. The Doris North Gold Mine Project is currently under construction and

is anticipated to move into operations in 2013. HBML is committed to support on-going exploration activities in the Hope Bay Belt, and would like to continue baseline studies in the area for potential future development. A map of the Hope Bay Belt area is included with this proposal. The majority of the sampling would be restricted to potential deposit areas, access corridors and from reference areas. Sampling could also be conducted in the marine environment for potential future marine access.

Industrial Minerals, Limestone (carbonate) resources, Southampton Island

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Number in Party 3
Region: Kivalliq
Communities: Southampton Island

Southampton Island covers an area of as 41,214 square kilometers; more than 2/3 of the island is covered by carbonate rocks, a portion of which may be pure limestone and have use as an industrial mineral. Industrial-grade limestones have a diversity of uses including acid-water treatment around mines, for the manufacture of lime and cement, aggregate (crushed limestone), and rock dust for explosion abatement. With a planned expansion of mining operations in the region, the potential to locally source and manufacture industrial lime products is feasible. Coral Harbour is the only settlement on Southampton Island.

NEIGE (Northern Ellesmere Island in the Global Environment)

License Number: 02 011 13R-M

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Number in Party 6
Region: North Baffin
Communities: Quttinirpaaq National Park, Resolute Bay Lakes, Markham Ice Shelf

For the 2013 season, we will apply for the renewal of our QNP research permit to continue monitoring and environmental measurements in Quttinirpaaq National Park's lakes, fiords and vicinity. We will determine the diversity of microbial life in shallow water communities using state of the art molecular techniques, characterize the physical characteristics and processes within northern Ellesmere Island's meromictic lakes, and define the structure and function of microbial food webs within Lake A, C1, Ward Hunt, Disraeli Fjord and Milne Fjord using HPLC and flow cytometry analyses at Laval University. Our climate stations will continue to provide long-term air and soil monitoring data for this globally important site.

Hall Peninsula Integrated Geoscience Project

License Number: 01 002 13R-M

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Number in Party 25
Region: South Baffin
Communities: Hall Peninsula

The geology of the Hall Peninsula (HP) is very poorly understood as it has only been mapped at reconnaissance scale (1: 5 000 000 scale). The mineral exploration potential of this region is largely unknown, except for recent discoveries of diamond-bearing kimberlites. More detailed and improved mapping will help decipher the potential for gold, precious metals, base metals and rare earth elements in the region. The Quaternary history of the peninsula is also complex and poorly understood. Glacial dynamics models and ice-flow history suitable for effective drift exploration are inadequate and there are currently no surficial geology maps of the Peninsula at a scale useful for mineral exploration and land-use planning.

Variability and Forcing of Fluxes through Nares Strait & Jones Sound

License Number: 02 001 13R-M

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Number in Party 13
Region: North Baffin
Communities: Nares Strait, Jones Sound

Our project was initiated in 2003 and continued through the IPY and beyond. Its purpose is to measure the strength and properties of ocean

currents flowing through the Canadian Arctic to Baffin Bay. The amount of fresh water mixed with the seawater is of special interest. The Arctic currents are important sources of nutrients for marine life in Nunavut and important pathways for fresh-water movement in the climate system. About half the outflow from the Arctic Ocean passes through Nunavut. The water that comes south was originally delivered to the Arctic by currents from the Pacific Ocean and by snow, rain and rivers. Our project's short name is CATs, for Canadian Arctic Through-flow study.

Air Quality Monitoring at Cape Dorset

License Number: 01 015 13N-M

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Number in Party 4
Region: South Baffin
Communities: Cape Dorset

Shipping and mining activities are expected to increase significantly in Nunavut over the coming decades. These activities bring with them and increase in air pollution. On one hand, we know that Nunavut is a very large place and that, because of dilution, air pollution will never reach the levels it does in southern Canada. On the other hand, the environmental conditions are very different: it is much colder, there is less precipitation, and an increase in air pollution may have a larger effect than it would in the south. To keep track, Environment Canada is developing air quality control programs, similar to those

producing weather forecasts, which will forecast air pollution levels for the future.

Upper Air Building Laboratory, Resolute Bay

License Number: 02 026 13N-M

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Number in Party 4
Region: North Baffin
Communities: Resolute Bay

The Canadian Aerosol Baseline Measurement (CABM) program under the Climate Chemistry Research Measurement and Air Quality Research sections are proposing to measure changes in the levels of absorbing (black carbon) and scattering aerosols and gases that may accompany increased ship traffic and increasing mining activities in the Canadian Arctic as well as from an increase in forest fires at more southern latitudes. In particular, black carbon, which is a strong light absorber that is released into the atmosphere from the incomplete combustion of fuels, is recognized as one of the "Short Lived Climate Forcers" that may contribute to more rapid melting of Arctic ice.

Geoscientific project to study gold mineralization at the Meadowbank mine and Meliadine

License Number: 03 003 13R-M

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Number in Party 6
Region: Kivalliq
Communities: Meadow Bank Mine, Meliadine
Deposit

This study will help improve our ability to predict the locations of mineralization and thus reduce the economic risks of exploration in Canada's North. We will also try to determine why some formations are barren while others are fertile (gold bearing). Nunavut deposits give us the opportunity to study this important scientific question by looking simultaneously at various gold deposits in an integrated study.

Investigation of Climate Change Effects on Arctic Lake Sediment Biochemistry

License Number: 02 012 13R-M

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Number in Party 2
Region: North Baffin
Communities: Cornwallis Island

The purpose of this study is to investigate the effects of warming climate on the chemistry and biology of Arctic lakes, focusing on changes in primary producers such as algae, and the effects on mercury cycling and mercury methylation. Methylation is a chemical process that occurs

mostly in the lake sediments, but is important because it leads to the accumulation of toxic mercury in arctic char and other aquatic organisms. This study focuses on environmental variables such as water temperature and length of the ice free season (i.e., effects of climate change) that may affect the methylation process.

Anik Nickel-Copper Project

License Number: 02 013 13R-M

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Number in Party 5
Region: North Baffin
Communities: Melville Peninsula

Sampling will be conducted according to standardized water quality guidelines, which includes a QA/QC program.

Water samples will be collected in the Anik Project area when possible in June, July, August and September. The locations of water sampling stations will be determined when project plans are finalized. A Global Positioning System (GPS) will be used to locate all stations. Water quality samples will be collected for standard analytical parameters including ultra-low total metals, major ions, low-level nutrients and inorganics.

SGS Canada laboratory of Lakefield, Ontario will prepare the water sampling bottles for all water sampling events. All samples will be transported in portable coolers with ice packs.

In the field, powder-less latex gloves will be worn during handling of bottles and equipment to minimize contamination. All bottles will be rinsed

three times with the source water (i.e. the same water the bottle will be filled with) prior to water collection when the bottles are not precharged.

The fate and toxicity of Arctic soil pollutants: how humans poison Arctic soils and how Arctic soils poison humans.

License Number: 02 027 13R-M

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Number in Party 7
Region: North Baffin
Communities: Alexandra Fiord

To determine how humans poison Arctic soils, we must first establish soil components critical for polar desert sustainability. Polar deserts cover a vast area of the islands in the Canadian Arctic but very little is known about the soil ecosystems of these deserts. I hypothesize that within the sorted circles present in Polar Deserts, there is a deep, productive soil horizon, called a Bhy. I hypothesize that these Bhy soils are a critical component of the Arctic deserts and are essential to the long term survival on these ecosystems.

Mary River Project

License Number: 02 018 13R-M

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Number in Party 5
Region: North Baffin
Communities: Steensby Port, Mary River, Milne
Port/Road

Baffinland and its consultants have carried out environmental baseline studies for a number of years, since about 2005. Baffinland plans to continue some aspects of its baseline studies to establish future monitoring programs that will begin as early as next year during construction. A research licence from the Nunavut Research Institute is being sought for ongoing freshwater and sediment quality work. Separate permits are being sought for archaeology and wildlife from the Government of Nunavut, and a scientific licence will be sought from the Department of Fisheries and Oceans related to fish and fish habitat work.

Standard water and sediment sampling methodologies will be used, consistent with those described in the baseline studies attached to the Final EIS. Sampling locations will be accessed by foot, by truck (along the tote road) or by helicopter, as necessary. The field staff will be located in the existing camp facilities at Mary River and Steensby Port.

A latitudinal investigation of ecosystem sensitivity to methylmercury bioaccumulation in Arctic fresh waters

License Number: 02 029 13R-M

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Number in Party 5
Region: North & South Baffin
Communities: Iqaluit, Resolute Bay

Mercury is a priority contaminant of the Northern Contaminants Program (NCP) due to its prevalence in the Arctic and high levels found in some traditional food species. The main objective of this project is to investigate how climate affects methylmercury (MeHg) bioaccumulation in Arctic lakes. The study design involves a comparison of MeHg bioaccumulation in three study areas along a latitudinal gradient in climate-controlled ecosystem types in the Canadian Arctic, specifically sub-Arctic taiga (Kuujjuarapik, Nunavik), Arctic tundra (Iqaluit) and polar desert (Resolute Bay). Building on work conducted at Kuujjuarapik in 2012, we propose to conduct a summer field program in 2013 at Iqaluit and in 2014 at Resolute Bay. In lakes and ponds, we will investigate key aspects of MeHg bioaccumulation—MeHg bioavailability to benthic food webs and organism growth rates—as well as how watershed characteristics affect the transport of mercury and organic carbon to water bodies. This information is critical for understanding how climate change is affecting temporal and geographic trends of Hg bioaccumulation in NCP-monitored fish.

Glacier-Climate Studies on the Prince of Wales Icefield, Ellesmere Island

License Number: 02 015 13R-M

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Number in Party 4
Region: North Baffin
Communities: Ellesmere Island

As glaciers retreat, they expose bare land that heats up during the summer months, providing a source of heat that can increase melt rates for adjacent glacier ice. Past studies by my research group on the Prince of Wales (POW) Icefield, Ellesmere Island, record these influences, but we have not systematically studied them; in summer 2012 I propose to set up a transect of weather stations on the southwestern margin of the POW Icefield and carry out a series of tethered ('weather kite') measurements of the atmospheric boundary layer, to ~300 m depth, to measure the atmospheric structure, energy balance processes, and heat transfer to the icefield. The proposed research will further understanding of glacier-climate processes and glacier response to climate change. We will also be measuring meltwater runoff from the glacier, which will contribute to understanding of high Arctic hydrology.

Arctic carbonates, sandstones and volcanic rocks, NW Ellesmere Island

License Number: 02 032 13N-M

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Number in Party 9
Region: North Baffin
Communities: Ellesmere Island

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.

Climate change effects of a changing cryosphere on Northern lakes

License Number: 02 016 13R-M

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Number in Party 6
Region: North Baffin
Communities: Cornwallis Island, Axel Heiberg Island, Victoria Island, Ellesmere Island, Queen Maude Gulf

Climate change is projected to cause significant change to arctic aquatic ecosystems. Changes in the thickness and composition of arctic lake ice covers will produce second order impacts on lake biological productivity and ecology. The most important effects are likely to result from changes in temperature (ice growth) and precipitation (ice cover composition). While a number of models have been developed to model

these changes, their validation has been stalled by lack of relevant field data.

Relevant field data will be obtained by sampling of lake ice thickness during spring 2011. Sampling will be completed by contracted local staff/individuals at the lake site.

Field Reconnaissance for favorable lake locations around Cambridge Bay will be completed in May 2011. Deployment of the Arctic Lake Monitoring System buoy and mooring near Cambridge Bay is scheduled for late August, 2011.

Environmental mineralogy and geochemistry, South Fiord, Axel Heiberg Island, Nunavut

License Number: 02 031 13N-M

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Number in Party 1
Region: North Baffin
Communities: Axel Heiberg Island

The project goal is to determine how the metals contained in mine waste are dispersed in the ground and local streams in an area where permafrost encloses the waste. To reach this goal, we identify and map rust-coloured deposits or 'gossans' that are unusually rich in copper and iron. In some cases, gossans are comparable to the mine waste deposits that result from the extraction of metals for industrial purposes. The natural occurrences found on Axel Heiberg Island have the advantage of being in contact with permafrost for thousands of years. As a result, we can observe the effects of long-term processes

affecting these materials, the enclosing permafrost, and the local streams and lakes. A better understanding of these processes will allow us to design effective and safe ways of containing mine waste in the Arctic environment.

High Arctic Permafrost Landscape Stability and Water Quality, Sabine Peninsula, Melville Island Nunavut

License Number: 02 017 13R-M

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Number in Party 4
Region: North Baffin
Communities: Melville Island

We plan on having will have 2-4 people in camp for three weeks, from July 10th to August 1st, 2013, for a total of approximately 55 person days. Field activities in 2013 will focus on characterizing how river and pond water quality and biological activity varies with the depth of seasonal thaw, and input of water from the subsurface. We will resample some of the ponds examined in 2013 to better determine the processes and organisms responsible for nutrient production. We will sample stream water and measure flow volumes in order to better characterise the impact of sources of subsurface water on water quality in rivers. We will continue to collect satellite images and to survey disturbance features and map variations in surface soil moisture to refine our ability to monitor and map changes in soil moisture and permafrost disturbance. We will also record observation of vegetation communities

types on the ground, to determine if the vegetation map that we have made from satellite images is accurate.

Canadian Arctic Buoy Program

License Number: 02 020 13R-M

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Number in Party 3
Region: North Baffin
Communities: Byam Martin Channel

We will deploy 3 ice buoys south of the Byam Channel and north of the M'Clintock Channel at the entrance of the Viscount Melville Sound on a multi-year sea ice floe. The goal of the project is to collect data to calibrate a sea ice model of the Canadian Arctic Archipelago (CAA) to study the future sea ice conditions in the Canadian Arctic. The buoys will be transported to the field using a Twin Otter operated by the Polar Continental Shelf Program. The buoy will be installed on the ice and have a life expectancy of 2 years. Next year, we will deploy 3 additional buoys and replace the battery in the buoys deployed this year. The buoy may also be lost in a sea ice ridge or drift in a location where maintenance is not possible. One the three buoys is a drifting buoy which tends to wash ashore and be picked-up by passing vessels. The deployment program is funded for 5 years – which means that we will perform such deployment for the next 5 years.

Land and water research at the Cape Bounty Arctic Watershed Observatory (CBAWO), Melville Island

License Number: 02 022 13R-M

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Number in Party 10
Region: North Baffin
Communities: Cape Bounty

In 2013, we will have two camps at Cape Bounty. In May, three people will collect frozen soil samples and sample snow, lake water and maintain weather stations. We will also install some stream measuring equipment for the summer, and some instruments to measure gases coming from the soil and plants. All travel during this early period will be with a skidoo and sled or on foot. Later, during July, 4-6 people will return to measure plants, soil and water, and to take samples of water from different locations at Cape Bounty. With these samples, we will measure the water quality by sampling the water and measuring sediment, salts, carbon and nutrients. We will also remove instruments from the lake to obtain the data, and return them to the lake. We will also sample the fish and lakes for mercury, and we expect Debbie Iqaluk (or another resident of Resolute) to work at the camp in late July.

Provenance of clastic sediments in the Sverdrup Basin, Canadian Arctic Islands

License Number: 02 023 13R-M

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Number in Party 6
Region: North Baffin
Communities: Axel Heiberg Island, Ellesmere Island

The 2012 to 2014 field programme aims to build on previous CASP research and existing published information (Geological Survey of Canada and other workers). The main aim of this research is to characterise the nature and origin of sediment within the Sverdrup Basin by targeting several sites over a three year period (2012, 2013 and 2014).

The islands within Nunavut which we would like to visit (Axel Heiberg and Ellesmere islands) are located around the margins of the Sverdrup Basin, where we can study the greatest range of sedimentary rocks.

The aim is to make detailed field observations and measurements, and in addition to undertake sampling for sediment provenance analysis (sandstones), with a complementary palaeontological sampling programme (permit pending) to allow correlation across the basin.

Other objectives are to compare the stratigraphic succession on the northern and southern margins of the Sverdrup Basin, to test existing sequence

stratigraphic interpretation and facies models, and to collect a sample set with which to quantify the uplift and burial history of the Mesozoic and Cenozoic successions.

The Houghton impact structure, Devon Island, Nunavut: Geological, biological, and environmental effects

License Number: 02 033 13N-M

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Number in Party 10
Region: North Baffin
Communities: Devon Island

The Houghton impact structure is one of the best preserved and best exposed meteorite craters on Earth. Geological investigations at this crater over the past several years have revolutionized our understanding of various aspects of the impact cratering process. The research of this project focuses on understanding the geological, biological, and environmental effects of the impact event. The objectives of this year's field work is to investigate magnetic/gravity anomaly in the centre of the crater. Map and investigate hydrothermal alteration. Examine endolithic habitats within shocked rocks. Detailed study of the intra-crater sedimentary deposits. Continuation of long term environmental monitoring via several weather stations installed around the crater.

Long-term limnological and paleolimnological monitoring of Nettilling Lake, central Baffin Island, Nunavut, Canada

License Number: 01 018 13N-M

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Number in Party 5
Region: South Baffin
Communities: Lake Nettilling

Lakes and ponds are a major feature of the arctic landscape, and these contain sediment archives from which biological, physical and chemical proxies can be extracted to reconstruct climate and environmental changes through time. To explore the past and recent natural environmental climate fluctuations of central Baffin Island, we are planning on collecting sediment cores and installing data loggers in Nettilling Lake. The faunal (chironomids) and floral (diatoms) fossil assemblages within each sedimentary sequence will be analysed, along with sedimentological and geochemical analyses to quantitatively track long-term environmental changes during the last postglacial period, which covers approximately the last 6000 years.

Izok and High Lake Project 2013 Environmental Baseline Program

License Number: 04 005 13R-M

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Number in Party 8
Region: Kitikmeot
Communities: Bathurst Inlet

MMG Canada Inc. (MMG) is preparing and planning data collection for the preparation of a project proposal and a Draft EIS. The deposits for the proposed project are located at the High Lake and Izok sites. Ore concentrate (zinc, copper) will be transported to an Arctic port at Grays Bay by an all-season road. The closest communities in the Kitikmeot include Kugluktuk and Bathurst Inlet.

MMG has retained a team of experienced environmental consultants to undertake baseline field programs. The overall objective of the baseline field programs is to gather information that can help MMG understand and document the potential environmental effects of the project. This information can also be used to develop mitigation measures and plans for the project. The field program includes studies in hydrology, water and sediment quality, marine environment, vegetation and habitat mapping.

Northern Biochar for Northern Restoration

License Number: 01 022 13N-M

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Number in Party 2
Region: South Baffin
Communities: Iqaluit

I propose to conduct a field trial with biochar slurries at Nunatta Environmental Service, Inc., located at 1575 Federal Road, Iqaluit, Nunavut. The trial will be setup in July, 2013 and monitored for one year. I will be staying in residence at the Nunavut Arctic College which is within walking/biking distance to Nunatta Environmental. Nunatta has been an industrial partner with the U of S and has been an important part of our research. A student from the Nunavut Arctic College will be hired to assist with experimental setup and sampling throughout the year. This student will be selected based on interest and experience with contaminated site remediation.

Ground ice dynamics and influence on vegetation microtopography of a polar desert ecosystem in the Canadian High Arctic

License Number: 02 025 13R-M

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Number in Party
Region: North Baffin
Communities: Axel Heiberg Island, Ellesmere Island

The goal of fieldwork for 2013 is to continue gathering vegetation and permafrost data from the important sites around the Fosheim Peninsula identified last summer. Fieldwork will once again be taking place entirely near Eureka, Ellesmere Island. The goal is to assess what affect climate change is having on both vegetation and permafrost in areas of the polar desert that are

experiencing temperature increases. The plan for this summer is, with the help of an assistant, to assess three sites around Eureka that are showing signs of vegetation community change and permafrost melt. The assistant and I will be based out of the Eureka weather station. All data collection will be passive and non-destructive. Data analysis will occur in Fall 2013, and should be completed by winter 2013.

Hydrological processes and change, Apex River, Iqaluit area

License Number: 01 021 13N-M

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Number in Party 9
Region: South Baffin
Communities: Iqaluit/Apex

We plan to develop a long term watershed monitoring program in a river that has important uses for community members and the City of Iqaluit. This information will help manage the river and inform users of changes that are occurring.

Lupin Mine Environmental Effects Monitoring Study

License Number: 04 004 13N-M

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Number in Party 6

Region: Kitikmeot

Communities: Lupin Mine

The Lupin Mine is located on the west shore of Contwoyto Lake, Nunavut at 65° 46' N and 111° 15' W.

The monitoring program is a requirement for Lupin Mine under the Metal Mining Effluent Regulations, which is part of the federal Fisheries Act (Environment Canada 2012). The monitoring program will document the health of fish exposed to treated mine effluent and compare it to areas without effluent. Data will be collected in August 2013 for approximately 14 days.

Geoscientific project to study the application of optical spectroscopic remote sensing to detection of the base metal mineralization in the Izok Lake deposit area.

License Number: 04 009 13N-M

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Number in Party 2

Region: Kitikmeot

Communities: Izok Lake Deposit

Collect remotely sensed data (data gathered while not touching an object) consisting of light reflected back from the surface of rock outcrops and existing drillcores. These data will then be analyzed and compared with their mineralogy. This study will help determine if this type of remotely sensed data can be used to improve our

ability to discover concealed mineral deposits and therefore reduce the economic risks of exploration in Canada's North. The Izok lake deposit is ideal because the surrounding area has very little vegetation that could disturb the data reflected back from the rocks.

Angilak Project 2013 Environmental Monitoring Program

License Number: 03 006 13N-M

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Number in Party 3

Region: Kivalliq

Communities: Nutaaq Camp

We will be monitoring the environmental components in Kivalliq's area to define baseline conditions. The ultimate goal is to ensure that Kivalliq's activities do not have negative residual impacts on the environment in Nunavut. Also, as the monitoring program grows we will seek to identify more Inuit employment opportunities.

ArcticNet marine-based research program: Integrated Regional Impact Study of the Canadian High Arctic.

License Number: 05 009 13N-M

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Number in Party 41

Region: North & South Baffin, Kitikmeot

Communities: All Communities within North & South Baffin, and Kitikmeot

The main objective of the proposed research program is to assess the changes occurring in the Canadian Arctic coastal marine ecosystem in response to climate warming. Using the Canadian research icebreaker CCGS Amundsen to access the vast expanses of the coastal Canadian Arctic, sampling operations in Nunavut waters in 2013 are scheduled to take place between 01 August and 13 October. The ArcticNet marine-based research program is however a long-term program scheduled to run every year until 2018. Shipboard sampling will be carried out along the ship track and at designated sampling stations in Hudson Strait, Baffin Bay, Lancaster Sound and the Northwest Passage. Shipboard operations will include mapping the ocean floor with sounding technologies, using a fish finding sonar to assess the distribution of important fish species, measuring meteorological parameters and sampling seawater, sediment, sea ice, plankton and juvenile fish.

Helicopter electromagnetic measurements of the sea ice mass balance

License Number: 02 028 13R-M

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Number in Party 6

Region: North Baffin

Communities: Lincoln Sea

The planned work will study changes of the sea ice mass balance as a result of variations of the thermodynamic and dynamic boundary conditions for ice growth, melt, and deformation, including the role of the snow cover. The focus of my research is the establishment of long-term, systematic ice mass balance observations of thick multi-year ice in the Arctic Ocean between the coast of Canada and the North Pole. These observations will include biennial airborne electromagnetic measurements of the seasonal and interannual ice thickness variability, as well as observations of ice deformation and snow properties. In-situ measurements will be complemented by satellite remote sensing and modeling work, and will contribute to the validation of new satellite products and model results.

The research is significant as the areal coverage of Arctic sea ice is rapidly decreasing, at a pace much faster than predicted by any climate model. This demonstrates our limited understanding of climate processes and feedbacks in the Arctic. The disagreement can partially be explained by a misrepresentation of the sea ice mass balance in existing climate models, which is largely due to a general lack of systematic ice thickness observations in the Arctic Ocean.

Winter to Summer Transitions in the Arctic-Ice Covered Ecosystem (Arctic- ICE) - Multiyear Project

License Number: 04 008 13R-M

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Number in Party 4
Region: Kitikmeot
Communities: Dease Strait, Wellington Bay, Queen
Maud Gulf

Climate warming has induced rapid change in the ice-covered marine ecosystem of the high Arctic. In this project we will investigate: (1) physical and biological processes controlling the timing of marine primary production, which has been hypothesized as an indicator of potential change in the ecosystem, (2) the influence of rivers and sea ice melt on the freshwater budget and organic carbon cycle in coastal bays near Cambridge Bay, and (3) microbial diversity in sea ice, seawater and marine sediments as it relates to in situ biogeochemical cycling and the potential microbial response to increased industrial activity, e.g., oil spills.

Peregrine Diamonds Ltd. Chidliak Property 2013 Baseline Environmental Studies

License Number: 01 019 13R-M

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Number in Party 3
Region: South Baffin
Communities: Peregrine Diamonds Chidliak
Camp, Iqaluit, Pangnirtung

Peregrine Diamonds Ltd. retained EBA Engineering Consultants Ltd. (EBA) to conduct environmental baseline studies at their proposed Chidliak project site, approximately 100 km northeast of Iqaluit, Nunavut. The proposed project will involve the following field studies: preliminary hydrology measurements, a preliminary habitat study, and wildlife surveys.

The 2009 field studies will be conducted over two short events in July and September. Each sampling event will be less than a week in duration. A small team of one biologist and one local research assistant will conduct these field studies in July and September; one research assistant per field event. A local research assistant from the two nearest communities, Iqaluit and Pangnirtung, are currently being sought.

Bathurst Island Remediation- Phase III Environmental Site Assessment

License Number: 02 041 13N-M

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Number in Party 9
Region: North Baffin
Communities: Bathurst Island, Ile Vanier

The Bathurst Island Remediation Phase III Environmental Site Assessment Project will be managed by David Wilson of Stantec Consulting Ltd. The project area is Ile Vanier and Bathurst and Cameron Islands. The field work is scheduled for mid-july to mid-august of 2013. If weather or other logistics delay the project, a second summer

field program in 2014 will be required. The objective of the project is to collect baseline data relating to the amount and nature of contamination at several individual areas of potential environmental concern (APECS) associated with oil and gas exploration activities.

Coastal seabed and benthic habitat mapping

License Number: 01 024 13N-M

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Number in Party 5
Region: North Baffin
Communities: Qikiqtarjuaq

The purpose of this project is to map clam habitat and submerged shoreline features along the coast of Cumberland Peninsula, Baffin Island, Nunavut. This research will help to constrain projections of sea level rise for the region and to contribute to possible future revival of the clam fishery. Submerged shore ridges and terraces in Broughton Channel will be examined to understand their significance as indicators of past sea levels. The bathymetric survey will be complemented by video camera surveys and sampling of the seabed to characterize the habitats for benthic organisms, especially clams, in the vicinity of Qikiqtarjuaq.

Uplift and provenance studies along Ellesmere Island, Baffin Island and the coast of Labrador.

License Number: 02 034 13R-M

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Number in Party 4
Region: North & South Baffin
Communities:

Concerning the uplift study, the goal is to collect rock samples for Apatite Fission Track Analysis (AFTA). The aim of the study is to understand the timing of the formation of the mountains along Baffin Bay, Davies Strait and Labrador Sea.

Concerning provenance sampling, the goal is to collect river sand samples that characterise the landmasses surrounding Baffin Bay, Davies Strait and Labrador Sea and hereby establish a database or "library" of mineral compositions and mineral ages. The purpose of this is to be able to tell from where sand mineral grains deposited offshore came from because rivers pick up a representative collection of the rocks present at the surface in the catchment area.

Natural hazards in Baffin Bay

License Number: 02 042 13R-M

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Number in Party 59

Region: North Baffin

Communities: Baffin Bay, Davis Strait

The purpose of this project is to study geological processes in the ocean that could be a risk to coastal communities or the environment. We are applying for a Nunavut Research Institute science licence to do a survey in Baffin Bay to collect information so we can better understand natural hazards (earthquakes, tsunamis, and underwater landslides) in the area. Natural hazards in this area are poorly understood and some of the largest earthquakes in Canadian history have occurred in the region (Magnitude = 7.3 in 1933). Information collected during this study will help support community and Nunavut government decisions on use of offshore areas and provide communities with better knowledge for improving public safety.

Disappearing Ice Caps

License Number: 02 036 13N-M

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Number in Party 3

Region: North & South Baffin

Communities: North & South Baffin Island

Our primary goal is to understand how climate is changing now and has changed in the past. We address these two questions by collecting tundra plants exposed by the melting of ice caps. We can determine how old the plants are by radiocarbon dating, which tells us when the ice cap formed, and how long ago it was that the summers were as warm as a present.

Microbial investigations of perennial springs, permafrost and ground ice in the high Arctic

License Number: 02 035 13R-M-amended

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Number in Party 7

Region: North Baffin

Communities: Axel Heiberg

Relatively few reports are found describing the ecology and biodiversity of microbial communities in the Canadian high Arctic where unique habitats exist including cold perennial salt springs, glacial ice and sub glacial soil, permafrost and ground ice, and cryptoedoliths (microbial communities within rocks). Little is known about the traits that enable such microorganisms to survive and thrive in these extreme habitats. Therefore, I am presently developing and expanding a research program focused on Arctic microbial biodiversity and ecology studies in these habitats to expand our basic knowledge of Arctic microbial communities, to determine the utility of these unique environments as analogs to those which may exist or existed on Mars, and, in the longer term, the potential biotechnological applications of cold adapted microorganisms (examples: antifreeze proteins, polyunsaturated fatty acids.) In 2003, small representative samples (~2 kg of soil/ permafrost or 2-4 L of water) of the microbial populations will be obtained from the Eureka and Axel Heiberg sites. Microbial biodiversity research will be conducted in my lab at McGill University on the collected samples. This data will provide information on

the microbial populations associated with these sites, the physiological types that are involved in biogeochemical processes and hopefully establish which organisms become fossilized or preserved in the system.

Reconnaissance Field Studies at the Canadian High Arctic Research Station

License Number: 04 011 13N-M

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Number in Party 6
Region: Kitikmeot
Communities: Cambridge Bay

The purpose of the proposed research is to conduct reconnaissance surveys of the land, streams, lakes and ocean around Cambridge Bay to inform selection of possible research and monitoring sites and associated infrastructure for the Canadian High Arctic Research Station (CHARS). CHARS is presently in the design phase and is scheduled for completion by July 2017.

Investigation of Carbon Dioxide Cycling Dynamics in Arctic Limnological (freshwater aquatic) Systems.

License Number: 01 025 13N-M

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Number in Party 1
Region: South Baffin
Communities: Iqaluit, Katannilik Territorial Park

Purpose: To assess, for the first time, whether Arctic lakes and ponds are sources or sinks of carbon dioxide (CO₂) to the atmosphere.

To better understand how carbon moves through the landscape from the soil to aquatic systems.

2. Provide an unique data set to address the knowledge gap in this field.
3. Establish a history of carbon flow in these lakes by analyzing trends in the sediment record.

Method of transportation: During periods when the tundra and lakes are free of snow and ice, methods of transportation to lake sites will be either on foot or by ATV and small trailer. Bathymetric data will be collected via a small wooden or folding boat. When there is adequate snow and ice cover, a snow machine and qamutik will be used.

Ecosystem inventories, mapping and monitoring of Ukkusiksalik National Park.

License Number: 04 010 13N-M

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Number in Party 9

Region: Kivalliq

Communities: Ukkusiksalik National Park

Purpose: To develop an updated ecosystem map of Ukkusiksalik National Park that will be used for Parks Canada projects including ecological integrity monitoring.

Goals & Objectives:

1.Collect GPS photographs and video for use as training data for ecosystem mapping.

2.Update the vegetation species list for Ukkusiksalik National Park.

3.Selection of locations for future monitoring stations in Ukkusiksalik National Park.

Flashline Mars Arctic Research Station

License Number: 02 038 13R-M

Zubrin, Robert

Mars Society

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Number in Party 11

Region: North Baffin

Communities: Haughton Crater, Devon Island

The Mars Society is a private international society dedicated to furthering the human exploration and settlement of the planet Mars. In July 2000, the Mars Society established a research facility at the Mars-like Haughton impact crater site on Devon Island, called the Flashline Mars Arctic Research Station (FMARS). Designed to simulate a landed spacecraft on

The Mars Society is a private international society dedicated to furthering the human exploration and settlement of the planet Mars. In July 2000, the Mars Society established a research facility at the Mars-like Haughton impact crater site on Devon Island, Nunavut, called the Flashline Mars Arctic Research Station (FMARS). Designed to simulate a landed spacecraft on Mars, the FMARS project serves three goals:

1) To provide a testbed for studying the many aspects of field exploration operations on a human mission to Mars.

2) To provide a capable field research laboratory to help further our understanding of the Arctic, the Earth, Mars, and the possibilities and limits of life on our planet and beyond.

3) To inform and inspire people around the world to greater interest in space and science by bringing before them in a tangible form the vision of human exploration of Mars.

The research program carried out at the FMARS is unique. For four to five weeks, a six person crew of scientists and engineers attempts to conduct a sustained program of field exploration in Devon Island's polar desert, while working under the same operational constraints as a human expedition exploring Mars. The crew lives in a combination habitat/laboratory module that is an architectural duplicate of a Mars mission unit. Anyone leaving the station to do field research needs to wear a simulated spacesuit, that limits the mobility, agility, dexterity, and sensory abilities of the wearer much as a real spacesuit would, and communication between EVA team members separated by more than a few feet has to be done by suit radio.

While in the station, crewmembers also perform laboratory analysis of samples brought in from the field, repair equipment, write reports (which are exchanged with Mars Society's Mission Support group via a satellite link that imposes a Mars-like delay on communications), and engage in the chores of daily life living together as a team. The purpose of conducting such simulated operations is to gain essential knowledge of Mars exploration tactics, human factors issues, and engineering requirements – in short, to start learning how to explore Mars.

Assessment of environmental vulnerability to warming permafrost.

License Number: 01 026 13N-A

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Number in Party 3
Region: South Baffin
Communities: Iqaluit

This work is part of the ongoing assessment of the permafrost conditions taking place at the Iqaluit International airport since 2010. The purpose of this project is to assess the environmental vulnerability to warming permafrost. In more details, the work proposed is to validate remote sensing images by ground truth observations. The remote sensing data are providing ground surface displacement related to thaw settlement.

Baffin Island Weather Monitoring Project

License Number: 01 001 13R-M

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Number in Party 3
Region: South Baffin
Communities: Hall Peninsula

Due to unpredictable variables, exploration, mining and other operations in Canada's Far North must not only deal with extreme weather but a climate influx because of global processes. Weather monitoring is especially important for day-to-day operations at a remote exploration camp, for seasonal planning and for evaluating weather-related risks. However, in such an extreme and remote environment, collecting environmental data is a daunting task.

Automated sensors are an ideal solution, as they can survive and operate under extreme conditions, even when staff is not present to download information. In order to research climate change in the Far North, meteorological stations are essential. During this research project, Symboticware Incorporated of Sudbury, ON, will collect weather data for Peregrine Diamonds Ltd. at its Chidliak Project in its centrally located Discovery Camp on the Hall Peninsula, approximately 120km north of Iqaluit, NU. The data collected will be used by Dr. Charles Ramcharan of Laurentian University in Sudbury, ON, for climate change research.

Marine Microbial Bioprospecting in Nunavut – A Pilot Program

License Number: 05 010 13R-M

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Number in Party 8
Region: Nunavut Wide
Communities: Arctic Bay, Cambridge Bay, Clyde
River, Iqaluit, Rankin
Inlet, Pangnirtung, Igloolik, Kugaaruk, Pond
Inlet, Cape Dorset, Kimmirut

In 2012, we collected and tested sediment samples from Clyde River and Iqaluit. In 2013 we hope to obtain sediment samples from Pangnirtung, Pond Inlet, Igloolik, Kimmirut, Cape Dorset, Arctic Bay, Rankin Inlet, Clyde River, Kugaaruk, Pond Inlet, and Iqaluit. In Pangnirtung, Pond Inlet, and Kugaaruk, samples will be collected by a research team, visiting the community for another project. The other communities, we will hire and pay a local member to collect sediment samples from the tidal zone (above the low tide mark) within municipal boundaries.

Garry Lake Airborne Geophysical Survey

License Number: 03 011 13R-M

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Number in Party 3
Region: Kivalliq
Communities: Garry Lake

The purpose of this airborne survey is to acquire high-resolution aeromagnetic data. Aeromagnetic surveys measure magnetic properties of bedrock and are one of the tools used in geological mapping. The bedrock may contain mineral deposits, such as gold, copper, lead, zinc, and diamonds. Understanding the geology will help geologists map the area, assist mineral exploration activities, and provide useful information necessary for communities, aboriginal associations, and government to make land use decisions. This survey will be flown to improve our knowledge of the area. It will support potential future ground-based geological mapping and to provide basic information to support mineral exploration.

Northern Boothia Peninsula Aeromagnetic Survey

License Number: 04 014 13R-M

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Number in Party 2
Region: Kitikmeot
Communities: Boothia Peninsula

The purpose of this airborne survey is to acquire high-resolution aeromagnetic data to provide publically available geoscience information to inform land-use decisions by landowners, governments, and industry. Aeromagnetic surveys measure magnetic properties of bedrock

and are one of the tools used in geological mapping. The bedrock may contain mineral deposits, such as gold, copper, lead, zinc, and diamonds. Understanding the geology will help geologists map the area, assist mineral exploration activities, and provide useful information necessary for communities, aboriginal associations, and government to make land use decisions. This survey will be flown to improve our knowledge of the area. It will support potential future ground-based geological mapping and to provide basic information to support mineral exploration.

Somerset Island Aeromagnetic Survey

License Number: 02 045 13R-M

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Number in Party 2
Region: North Baffin
Communities: Somerset Island

The purpose of this airborne survey is to acquire high-resolution aeromagnetic data to provide publically available geoscience information to inform land-use decisions by landowners, governments, and industry. Aeromagnetic surveys measure magnetic properties of bedrock and are one of the tools used in geological mapping. The bedrock may contain mineral deposits, such as gold, copper, lead, zinc, and diamonds. Understanding the geology will help geologists map the area, assist mineral exploration activities, and provide useful information necessary for communities,

aboriginal associations, and government to make land use decisions. This survey will be flown to improve our knowledge of the area. It will support potential future ground-based geological mapping and to provide basic information to support mineral exploration.

Acoustic study of marine mammals and ambient noise in Barrow Strait

License Number: 02 044 13R-M

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Number in Party 5
Region: North Baffin
Communities: Barrow Strait

This project seeks to understand the seasonal presence and acoustic behavior of marine mammals in Barrow Strait by conducting autonomous, long-term acoustic recording at a site south of Griffith Island.

Recordings will be compared to acoustic data collected in the 1980's by Canadian wildlife biologist, Dr. Ian Stirling, near the site (Calvert and Stirling 1985, Kingsley et al. 1985). Analyses will investigate changes in the behavior and presence of the animals over the past 30 years. Ambient noise will be characterized and quantified to provide a baseline description of the underwater acoustic environment.

AREVA Kiggavik Project 2013 Aquatic Data Collection

License Number: 03 013 13R-M

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Number in Party 10
Region: Kivalliq
Communities: Judge
Sissions, Siamese, Mushroom, Squiggly, Skinny, Kavisilik and Aberdeen Lakes

The Kiggavik-Sissions Project involves a proposed uranium mine and mill to be located on crown land in the Kivalliq Region of Nunavut, near Judge-Sissions Lake (64°26'29"N, 97°39'34"W), approximately 80 km west of Baker Lake. This proposal is for additional aquatic data collection to be carried out in August 2013 for several lakes near the project. This new information will add to the baseline aquatics studies already completed, be used in the final environmental impact statement (EIS) for the Kiggavik Project, and inform future Environmental Effects Monitoring (EEM) programs. In Canada, EEM studies are carried out every four years for metal mining projects with the goal of detecting potential impacts on aquatic life and aquatic habitat over time.

Cambridge Bay Undersea Observatory.

License Number: 04 013 13R-M

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Number in Party 3
Region: Kitikmeot
Communities: Cambridge Bay

NEPTUNE Canada, a division of Ocean Networks Canada, based at the University of Victoria, in Victoria, BC, would like to install a cabled undersea observatory in Cambridge Bay, as soon as the summer of 2012. This observatory would be the first location in Canada's Arctic for year-round monitoring of the marine environment. This would improve the knowledge of the northern environment and aid in the protection of fragile arctic marine ecosystems. It would create scientific and technical training opportunities for residents of Cambridge Bay, and there would be some local employment opportunities associated with the installation, operation and maintenance of the observatory infrastructure. The project also represents a pathfinder experiment for the future Canadian High-Arctic Research Station (CHARS), to be built in Cambridge Bay by 2017. This site was preferred for several factors: the existing community and infrastructure (power, airstrip and dock) and the opportunity for science education at the local school, the outreach potential both to the local community and to the cruise ship visitors.

Garry Lake Airborne Geophysical Survey

License Number: 03 016 12N-M-Amended

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Number in Party 3
Region: Kivalliq
Communities: Garry Lake

The purpose of this airborne survey is to acquire high-resolution aeromagnetic data.

Aeromagnetic surveys measure magnetic properties of bedrock and are one of the tools used in geological mapping. The bedrock may contain mineral deposits, such as gold, copper, lead, zinc, and diamonds. Understanding the geology will help geologists map the area, assist mineral exploration activities, and provide useful information necessary for communities, aboriginal associations, and government to make land use decisions. This survey will be flown to improve our knowledge of the area. It will support potential future ground-based geological mapping and to provide basic information to support mineral exploration.

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2013 Compendium of Research

SOCIAL SCIENCES

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Inuit Qaujimajatuqangit Practices in Entrepreneurship

License Number: 01 032 12N-M

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Number in Party 1
Region: Qikiqtani
Communities: Iqaluit

The study of I.Q. practices in Entrepreneurship will take place in Iqaluit over seven months from December to June 2013. Data collection will be conducted in the fall of 2012 to March 2013. The project objectives are to create a wider understanding of I.Q. that is used effectively in Inuit women businesses in Iqaluit based companies and to document five business cases to showcase and feature as role models in Nunavut that show cultural values intertwine very well among aboriginal entrepreneurs.

The Maintenance of Oral Living Languages in Nunavut

License Number: 03 019 12N-M

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Number in Party 2
Region: Kivalliq
Communities: Baker Lake

Inuktitut is spoken at various degrees. What we are able to do now is practice articulating the inuktitut language which needs to be understood amongst all generations. Bilingual adults and youth in Baker Lake need to be more articulate in Inuktitut as they are in English. In this research, I would like to explore with the residents of Baker Lake how we can become more articulate and deeply expressive in Inuktitut across our generations.

Inuit Language Proficiency courses at the Nunavut Arctic College Level

License Number: 01 031 13N-M

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Number in Party 2
Region: Qikiqtani
Communities: Iqaluit

I will collect the data through interviews of eight Inuit students from the main campus. The students will have to be in a program where Inuit language is taught as a course. I will not focus on the gender or the age of the students. My focus will be to determine if there is an interest in taking the Inuit Language program if one could be offered. Before I start, I will ask for permission from the campus Dean for eight volunteers before my arrival. My questionnaire consists of ten open questions. It will take approximately 30 minutes to fill the questionnaires out.

What are the bilingual competencies and practises in a Grade Five Classroom?

License Number: 01 004 13N-M

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Number in Party 2
Region: South Baffin
Communities: Iqaluit

My purpose is to find out whether there is a language barrier in our school system in Nunavut in teaching or learning from a bilingual standpoint, in grade 5 classes. I am seeking ways to help Nunavut students to overcome the problem of the language barrier, if the barrier, in fact, is the root of the problem.

Iqaluit Hydroelectric Project

License Number: 01 011 13N-M

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Number in Party 4
Region: South Baffin
Communities: Iqaluit, Pangnirtung, Kimmirut

Qulliq Energy Corporation (QEC) is initiating a feasibility study and the environmental review process for its Iqaluit Hydro-electric Project. The Project consists of two potential hydro-electric sites: Armshow River South and Jaynes Inlet. QEC plans to conduct Inuit Qaujimajatuqangit and social studies at the Iqaluit Hydro-electric Project

to collect specific information related to project development and identify the potential impacts of the Project. The study team will be lead by Richard Cook, Senior Scientist (Knight Piésold Ltd.) with the support of Anna Hutchison, Social Scientist (Knight Piésold Ltd.) and Jason Prno, Traditional Knowledge Specialist (Knight Piésold Ltd.) The studies are scheduled to take place from March 1, 2013 to February 28, 2016.

Arctic Food Network

License Number: 01 005 13N-M

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Number in Party 7
Region: South Baffin
Communities: Sanikiluaq

The purpose of this project is to create a system of community managed cabins and other supporting structures of a variety of different functions (lodging, cold storage, sharing, growing plants, smoking meat and fish, education etc.) to address food security, cultural transmission and local skills capacity. First stages will determine locally reflective needs and priorities, with potential to successfully develop physical prototypes and a sustainable food gathering and sharing network in the long term.

Dwelling off the grid

License Number: 01 012 13N-A

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Number in Party 2
Region: South Baffin
Communities: Iqaluit

Myriad lines exit and enter our homes. These webs are the grids through which our material and social relations are entangled. Not everyone, however, is reliant on these grids. People who—for a variety of motives—have spun alternative webs have come to know their lifestyle as “off-the-grid.” To date, no academic research has examined the culture of off-the-grid dwelling. Academic research on the cultural dimensions of off-the-grid dwelling can provide us with in-depth understanding of this lifestyle. The research aims to learn about off-the-grid dwelling across Canada and is directed at describing, interpreting, and understanding why and how a person or community chooses (if they choose at all) to live off-grid. In order to document the diversity of ways of life off the grid, the research unfolds as a series of case studies focusing on individuals and/or groups who dwell in households and/or communities off-grid, full-time or part-time.

Cultivating the Arctic's Most Valuable Resource: An Analysis of the Barriers to High School Completion Among Aboriginal Youth in Northern Communities

License Number: 01 007 13R-M

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Region: South Baffin
Communities: Iqaluit

The objective of this project is to uncover the key determinants of high dropout rates from high school among Aboriginal youth in Northern communities. Nunavut had the highest average dropout rate of all Canadian provinces and territories, at 50.0% of the population aged 20-24 between 2007 and 2010. By gathering information from focus groups and a survey of high school-aged youth in Iqaluit, our project will be able to answer a crucial question concerning Iqaluit's education system: what initiatives and resources are needed to ensure a higher rate of high school completion among youth? We anticipate that the results of our study will provide insight into effective policies for reducing early exits from high school. Increased educational attainment should foster social and economic prosperity as additional schooling at the high school level has been shown to bring about increases in earnings, improvements in health status, job stability as well as other important societal benefits such as reduced crime and cultural revitalization.

The Baha'I Faith in Baker Lake, 1953-present

License Number: 03 002 13R-M

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Number in Party 1
Region: Kivalliq
Communities: Baker Lake

The project will collect information about the development of the Baha'I Faith in Baker by interviewing people who were associated with that development. The eventual goal of the project is to produce a written history of the development of the Baha'I Faith in Baker Lake.

Improving Criminal Justice for People with Mental Illness in Remote Arctic Communities

License Number: 01 003 13R-M

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Number in Party 2
Region: Qikiqtani, Kivalliq
Communities: Arviat, Iqaluit, Qikiqtarjuaq

The purpose of this research is to explore the feasibility of creating specialized mental health criminal court programs that divert offenders with mental illness from the justice system to community treatment in remote Arctic communities affected by scarce resources, geographic isolation, and Inuit cultural considerations. The study's goal is to identify the principles that guide the specialty "problem-solving" courts that focus on the underlying individual and social causes of crime in many Canadian cities and elsewhere and to determine whether these principles can be used in the absence of the resources usually associated with

these courts to deliver "therapeutic jurisprudence" in remote communities in Nunavut.

Youth Participation in the Management of Auyuittuq National Park and Park Related Activities

License Number: 01 008 13R-M

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Number in Party 4
Region: Qikiqtaaluk
Communities: Pangnirtung, Qikiqtarjuaq

This work is part of an international project, and seeks to explore the cooperative management of resources by government and indigenous groups. Examples of this considered in the present study include Auyuittuq National Park in Canada, Uluru-Kata Tjuta National Park in Australia, and Te Waihora in New Zealand. Through these three case studies, we hope to determine if collaborative management does a good job at addressing indigenous aspirations, by incorporating and applying local knowledge to decision-making.

Standardization of Inuktitut in Nunavut

License Number: 01 033 12N-M

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Number in Party 3

Region: Nunavut Wide

Communities: All Communitites

My research project is on the standardization of Inuktitut in Nunavut. Inuktitut speaking teachers across the territory will be invited to participate in a study through a questionnaire. This questionnaire will look to find out what the attitudes of the teacher are on the dialectal differences in Nunavut. It will also be a tool to understanding what dialect is most easily accepted by the teachers of the seven major dialects we have in Nunavut. The outcome of the survey will be important to the orthography committee at Inuit Uqausinginnik Taiguusiliuqtiit, the Inuit Language Authority in Nunavut. This committee will be looking at standardizing Inuktitut writing for the territory. This will also be important for the Government of Nunavut, the curriculum division within the Education Department.

Connecting Inuit Elders and Youth: Learning about caribou, community, and well-being

License Number: 04 002 13R-M

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Number in Party 3

Region: Kitikmeot

Communities: Gjoa Haven, Cambridge Bay

This project was developed from a research planning workshop in Gjoa Haven in February,

Nunavut Research Institute

2010, with additional planning meetings and participation in the Qiqirtaq High School elder-youth land camp in August, 2010. From these meetings, six local research priorities were identified by community representatives, including: i) caribou health; ii) elder and youth camps; iii) caribou food (vegetation); iv) changing lifestyles; v) cultural values and skills; and, vi) Inuit health and diet (see <http://www.straightupnorth.ca/Sikuliriji/GH-SummReports.html> for details). Acting on these priorities, the purpose of this project is to explore the value of elder-youth land camps as a means of fostering inter-generational knowledge transfer and conceptualizing Inuit research methodologies. Our objectives are to investigate cross-cultural applications of Indigenous research methodologies, explore the role of place in northern education, Inuit identity, and human-animal relations, as well as understand how community-driven research and education can foster community health and prosperity. This case study will thus address community goals while informing broader debates around Indigenous and cultural geography theoretical approaches, Aboriginal identities, sustainable livelihoods, place-based education, wildlife management, and cultural knowledge transmission.

Back River Project: Socio-Economic and Land Use Studies

License Number: 04 003 13R-M

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Number in Party 5

Region: Kitikmeot

Communities: Cambridge Bay, Kugluktuk, Gjoa Haven, Taloyoak, Kugaruuk, Bathurst Inlet, Omingmatok Sabina Gold & Silver Corp. is exploring significant gold deposits near Back River, Nunavut. The area holds a number of potential ore deposits that are being investigated. The baseline studies could form the basis of Socio-Economic Impact Assessment and Analysis per Part 5 of Article 12 of the NLCA. The Socio-Economic study will focus on the communities of the Kitikmeot Region, including social, economic, education, cultural, and governance characteristics. The Land and Resource Use study is more site-specific, and will investigate land (and water) uses in the areas surrounding the Back River deposits.

Health Systems Performance in Circumpolar Regions: Can regional comparisons support policy and stimulate improvement?

License Number: 01 016 13N-A

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Region: South Baffin

Communities: Iqaluit

This study will evaluate how health systems stewardship (governance) in circumpolar countries and their northern regions works. We will learn about the countries values for health,

and the functions they have that enable them to deliver health services to northern residents. We will aim to learn about how the current health system works and how we can make it better and improve health for northern residents.

Improving Access to University Education in the Canadian Arctic: Learning from Past Experiences and listening to the Inuit Student Experiences

License Number: 01 009 13R-M

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Communities: Iqaluit

Increased participation in postsecondary education is of primary concern for Inuit organizations. The goal of this research started in 2010 and ending in 2014 is to provide evidence-based research on Inuit participation in University education throughout Inuit Nunangat and to promote a national discussion amongst provider of university program in Inuit Nunangat, Northern institutions and Inuit organizations in order to develop a more coordinated effort in program delivery, curriculum development.

Monitoring educational and professional success amongst Inuit of Nunavut who have registered in a post-secondary program

License Number: 03 004 13R-M

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Number in Party 4
Region: North & South Baffin, Kivalliq
Communities: Arviat, Baker Lake, Cape Dorset, Clyde River, Igloodik, Iqaluit, Pangnirtung, Pond Inlet, Rankin Inlet, Repulse Bay

In Nunavut, little is known about the level of success enjoyed by students with post-secondary education. There is no public data on the programs attended by Inuit students from Nunavut. Nor is information available on the graduation rate of students in post-secondary programs, their employment rate, the links between graduation and employment, whether their employment is related to their post-secondary education, and whether having post-secondary education affects their level of job satisfaction. The main goal of this research is to collect data on success among Nunavut Inuit who are attending or have attended post-secondary programs through the use of surveys. The objective is to make the data available to Nunavut organizations.

The Impacts of Mining and Mineral Development on Inuit Women and Families in Qamani'tuaq

License Number: 03 005 13N-A

Nunavut Research Institute

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Number in Party 4
Region: Kivalliq
Communities: Baker Lake

The purpose is to conduct research in Baker Lake to inform a gender-based analysis of the impacts of resource extraction on the social determinants of health and well-being. This case study will raise awareness of the implications, both positive and negative, of mining on Inuit women and ensure their voices are heard. The outcomes will allow Inuit women and women's organizations across the North to better engage in dialogue with resource extraction companies, federal, provincial and territorial governments and regulatory bodies such as the Nunavut Impact Review Board. As the research will be developed and collected by members of the community trained by the researchers, community members will gain practical and transferrable research skills.

Hope Bay Belt: Socio-Economic and Land use Studies

License Number: 05 005 13R-M

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Number in Party 5
Region: Kitikmeot, Qikiqtaaluk

Communities: Cambridge Bay, Kugluktuk, Gjoa Haven, Taloyoak, Kugaruuk, Bathurst Inlet, Omingmaktok, Iqaluit

The primary goal of this research is to gather and update on the socio-economic, cultural, education, governance and land use characteristics at community, regional and territorial levels. This will include socio-economic profiles and characteristics of the study communities and the identification and description of land uses/users. Research methods include a desk based review of existing literature and statistics, including quantitative and qualitative information. Issues scoping will draw from this initial research, as well as the findings and outcomes of past and ongoing developments in the area. The field study program will build upon this research through meetings, interviews, focus groups and workshops in the communities.

Inuit Qaujimajatuqanigut and Harvest Studies Supporting the Mary River Project

License Number: 02 019 13R-M

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Number in Party 6
Region: North & South Baffin
Communities: Arctic Bay, Cape Dorset, Clyde River, Hall Beach, Igloolik, Pond Inlet

Baffinland Iron Mines Corporation (Baffinland) is looking to build a mine at Nuluujaak (Mary River). Inuit Qaujimajatuqanigut (IQ) studies were initiated in 2006 to document the existing

condition of the land and wildlife in the region and obtain feedback on the potential effects of mine development. The studies proposed here include supplementing the IQ studies already initiated, as well as collection of current wildlife harvest information from local hunters. The IQ studies will help Baffinland plan a project that considers and respects local knowledge, including how the people use the land and which areas are most important. The information will be very important to support an environmental assessment, including identifying potential negative and positive impacts of the project on the communities and wildlife, and identifying mitigation opportunities.

These studies will be conducted and coordinated by Baffinland, with the assistance of Knight Piesold Ltd., with the participation of local researchers and Hunter and Trapper Organizations.

Inuit Qaujimajatuqanigut Study in Support of the Izok Corridor Project

License Number: 05 006 13R-M

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Number in Party 6
Region: Kitikmeot
Communities: Cambridge Bay, Kugluktuk, Kugaaruk, Taloyoak, Gjoa Haven, Pond Inlet, Resolute Bay, Arctic Bay

MMG Canada is planning to start feasibility studies for a proposed project that will include an

open pit and underground mine at the High Lake and/or Izok Lake. Ore concentrate (zinc, copper, lead) will be transported to an Arctic Port at Grays Bay by an all season road. The closest communities in the Kitikmeot include Kugluktuk and Bathurst Inlet. MMG Canada has retained Thorpe Consulting Services to undertake and manage the Inuit Qaujimajutuqangit (IQ) study in the Kitikmeot Region in support of an environmental impact statement, which MMG Canada plans to submit to the Nunavut Impact Review Board.

Hackett River Project: Socio-Economic and Land Use Baseline Studies

License Number: 04 004 13R-M

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Number in Party 6
Region: Kitikmeot
Communities: Cambridge Bay, Kugluktuk, Gjoa Haven, Taloyoak, Kugaaruk, Bathurst Inlet, Omingmaktok
The primary goal of the research is to gather and update data on the socio-economic, cultural, education, governance and land use characteristics at community, regional and territorial levels. This will include current socio-economic profiles and characteristics of the study communities, and the identification and description of land uses/users. Research methods include a desk-based review of existing literature and statistics including quantitative and qualitative information. Issues

scoping will draw from this initial research, as well as the findings and outcomes of past and ongoing developments in the area. The field study program will build upon this research through meetings, interviews, focus groups and workshops in the communities.

Creating Citizens, Building Societies: Education, Citizenship and Change in the Eastern Arctic

License Number: 02 021 13N-A Registry

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Number in Party 2
Region: North Baffin
Communities: Igloolik

The objective of the proposed research is to understand the extent to which formal education changed the ideas people held about, and the way in which they understood and practiced, citizenship in Igloolik, NU. I will examine the period of significant institutional and societal change between 1960, when the federal day school opened, and 1999 when Nunavut was established.

Building on existing academic and community research, I have assembled socio-economic statistical and historical data on the community of Igloolik, including the 2009-2010 Igloolik Socio-Economic Baseline Study, with which I was involved. I have also compiled an annotated record of all academic and grey literature on

community development in Nunavut, focusing on the North Baffin region.

Qikitani Inuit Association Inuit Qaujimajatuqangit Database

License Number: 01 013 13R-M

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Number in Party 1

Region: North & South Baffin

Communities: Arctic Bay, Cape Dorset, Clyde River, Grise Fiord, Hall

Beach, Igloodik, Iqaluit, Kimmirut, Pangnirtung, Pond Inlet, Qikiqtarjuaq, Resolute Bay, Sanikiluaq

Qikiqtani Inuit Association is creating an Inuit Qaujimajatuqangit (IQ) database. QIA has collected & digitized the Inuit Land Use and Occupancy (ILUO) Data created in the 1970's that was created to aid in the negotiations of the Nunavut Land Claim Agreement. QIA is involved in IQ collection through development (Baffinland) and through protected areas creation (Lancaster Sound National Marine Conservation Area). QIA is currently incorporating new IQ data into the database. This includes all IQ data that Baffinland has collected during the Environmental Assessment process. QIA is currently involved in the creation of the Lancaster Sound National Marine Conservation Area. As a part of the process QIA will conducting the Inuit Qaujimajatuqangit/Traditional Knowledge Study component to help aid the creation of the NMCA.

Indigenous Rights and Representation in Canada and Latin America

License Number: 01 017 13N-M

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Number in Party 1

Region: South Baffin

Communities: Iqaluit

The purpose of the proposed research project is to explain how and why indigenous-state relations differ in the Americas. Research on indigenous politics in the Global North and Global South only rarely intersects. The comparison between the struggle for indigenous rights and representation in Canada (with particular attention to Nunavut and Yukon) and Latin America with particular attention to Bolivia and Ecuador) has the potential to contribute new insights into and understandings of indigenous-state relations. A better understanding of the terms and implications of how indigenous groups and the state interact is critical for improving relations between the two parties.

Socio-Economic Studies in Support of the Izok Project

License Number: 05 007 13R-M

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Number in Party 7
Region: Kitikmeot
Communities: Cambridge
Bay, Kugluktuk, Kugaaruk, Gjoa
Haven, Taloyoak, Umingmaktuk, Bathurst
Inlet, Resolute Bay, Arctic Bay, Pond Inlet

MMG Canada Inc (MMG) is undergoing feasibility studies for a proposed project that will include an open pit and underground mine at the High Lake and/or Izok Lake. Ore concentrate (zinc, copper, lead) will be transported to an Arctic Port at Grays Bay by an all season road. The closest communities in the Kitikmeot include Kugluktuk and Bathurst Inlet. MMG has retained AECOM, Aarluk and Impact Economics to undertake Socio-economic studies in relation to the potential project. The object of the socio-economic studies is to collect and analyze information relating to the potential socio-economic impacts of the project.

TUKTU: Impact of mining on ecosystems, caribou herds and Inuit life styles in Baker Lake, Nunavut. Triangular research collaborations for alternative scenarios of change

License Number: 03 007 13N-M

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Number in Party 3
Region: Kivalliq
Communities: Qamani'tuaq

This research project aims to understand how mining exploration and development are affecting Arctic communities at the social, environmental and economic level using Baker Lake as a case example and pilot project for Nunavut. We will study with the community the existing mining impacts and factors of change on caribou herds and community development.

Community Energy and Emissions Inventory - Cambridge Bay

License Number: 04 006 13N-A

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Number in Party 4
Region: Kitikmeot
Communities: Cambridge Bay

Concurrent with climate change impacts are community responses to them. Management of energy resources, with a focus on conservation and the development of renewable energy, is one way in which northern peoples are responding to climate change—the reduction of greenhouse gas emissions being the central point. Beyond climate change, dependency on oil for electricity and heat generation creates added incentive for communities to seek more sustainable modes of energy production. It is in this context that Cambridge Bay and the Canadian High Arctic Research Station are exploring energy use and

greenhouse gas emissions inventorying as a tool to support energy-related planning and decision making.

Resource Governance in the Eastern Arctic Under the Nunavut Land Claims Agreement

License Number: 03 008 13N-M

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Number in Party 1
Region: Kivalliq & South Baffin
Communities: Baker Lake, Chesterfield Inlet, Rankin Inlet, Iqaluit, Pangnirtung

I am conducting interviews and documenting public meetings in five communities in Nunavut. My goal is to collect information about conflicts between communities in Nunavut and the mining industry, and how these conflicts are resolved by Nunavut's regulatory system. As a part of this research, I will document the perspectives of Inuit in Nunavut on mining development and the ways in which decisions are being made about mining. During interviews, I will ask questions about land use in the area, the history of the area and the animals that inhabit the area. I will also ask questions about peoples' perspectives on the way mining companies consult communities and their perspectives on the way decisions about mining are made in Nunavut. I will document NIRB meetings and other public consultation meetings held by the mining industry.

TUNDRA

License Number: 03 009 13N-A

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Number in Party 4
Region: Kivalliq
Communities: Baker Lake, Chesterfield Inlet, Rankin Inlet, Whale Cove

TUNDRA (www.TUNDRA.uit.no) is an international project with universities in Russia, Norway, Canada and the United States (Alaska) working together. The goal of TUNDRA is to better understand how environmental decision-making and resource management as well as social and economic conditions affect ecosystems and resources that Arctic communities depend upon locally. Researchers working in different parts of the Arctic around the world will compare their findings.

The project is proposed to take place in the communities of Qamani'tuaq, Igluligaarjuk, Kangiqliniq and Tikirarjuaq over the summer and potentially into the fall of 2013. These communities were selected to maximize differences in management and decision-making as well as social and economic conditions between communities working with the project across the Arctic.

Bathurst Island Remediation – Phase III Environmental Site Assessment

License Number: 02 037 13N-M

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Number in Party 3
Region: North Baffin
Communities: Resolute Bay

The objective of the traditional knowledge (Inuit Qaujimajatuqangit [IQ]) portion of the project is to obtain IQ regarding past and present land use of the project area from Elders with respect to potential contamination, and to ensure local community and Inuit involvement. The IQ studies may include, in addition to reviews of secondary data sources, key informant interviews and focus group discussions in Resolute. Key informant interviews and focus group discussions complement data from secondary sources, which often provide generalized information that may not specifically address people's concerns and interests with regard to the Bathurst Island Remediation - Phase III Environmental Site Assessment. Interviews with people who are knowledgeable about the land and its resources will provide information that can be integrated into the environmental assessment, in combination with scientific knowledge, such that the quality of the assessment is enhanced.

Adapting to Rapid Environmental and Economic Change in Nunavut: How do local communities leverage opportunities to create economic self-sufficiency?

License Number: 01 023 13N-A

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Region: North & South Baffin
Communities: Iqaluit, Pond Inlet

Climate change is influencing rapid development of remote previously unfeasible Arctic resources such as the Mary River Project. Because the mine is close to Pond Inlet, the community will likely see significant economic opportunities. The balance between taking advantage of this opportunity while mitigating associated risks will help define the long term success of the community. The goal of the research is to generate a greater understanding of the main factors that can contribute to a community's ability to leverage existing economic opportunities in order to develop greater economic self sufficiency.

Adaptation, Industrial Development and Arctic Communities

License Number: 05 008 13R-M

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Number in Party 8
Region: Kitikmeot, Kivalliq, North Baffin

Communities: Baker Lake,Arviat,Rankin Inlet,Kugluktuk,Arctic Bay,Resolute Bay

The key objective of this project is to engage in community-based, historical and comparative research into Arctic industrial development. By undertaking fieldwork in mining-affected communities and archival research into the legal and policy frameworks surrounding mineral development, our research team aims to inform debates and policy-making efforts surrounding the rapid industrialization of Arctic regions. The focus of this work is on three Nunavut communities currently encountering mineral exploration and development activity in their vicinities, and/or with a history of mining in the area: Kugluktuk (Coppermine) in the Kitikmeot region, Qamani' tuaq (Baker Lake) and Kangiqiniq (Rankin Inlet) in the Kivalliq region. In addition, we have extended our research to a fourth community, Arctic Bay (Ikpiarjuk Tununirusiq), where we will examine the legacies of the former Strathcona Sound (Nanisivik) lead-zinc mine.

Toward a Policy Framework to Guide Managers in the Use of Inuit Qaujimajatuqangit for Shipping Development in Nunavut.

License Number: 02 043 13N-A

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Number in Party 3
Region: North Baffin
Communities: Clyde River,Pond Inlet

The purpose of this study is to create a framework for marine managers to guide decision makers in the use of I.Q. into shipping development projects.The goal of the proposed interviews is to understand who is making decisions in Nunavut with regard to shipping and how I.Q. should be incorporated into those decisions.

Using Inuit Qaujimajatuqangit (IQ) and Scientific Approaches to Engage Youth in Outdoor Environmental Education in Kugluktuk, NU.

License Number: 04 007 13R-M-Amended

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Number in Party 5
Region: Kitikmeot
Communities: Kugluktuk

We initiated a project on berry producing shrubs and vegetation change near communities,including Kugluktuk,integrating environmental monitoring in collaboration with schools and inuit Qaujimajatuqangit (I.Q.).The project started as part of the international Polar Year project CiCAT (climate change impacts on Canadian Arctic Tundra) in 2008 and continues as a project in ArcticNet.

Climate Change Health Adaptation Strategies for Inuit Food Security- Arviat Nunavut and Beyond

License Number: 03 010 13Registry

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Number in Party 7
Region: Kivalliq
Communities: Arviat

Arviat has completed research in the area of food security over the past two years. Much of the work is informing Arviats response and participation in the poverty reduction strategy: The Makimaniq Plan. Stemming from this research came some pervasive questions about Inuit Qaujimajatuqangit beliefs and laws around sharing and food redistribution.

Conversations in Miniature: Historic collections of Inuit models and miniatures.

License Number: 01 020 12N-M/Amended

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Number in Party 2
Region: Baffin & Kivalliq
Communities: Cape Dorset, Chesterfield Inlet, Pangnirtung, Pond Inlet

This research project focuses on museum collections of Inuit models and miniatures produced in the Cumberland Sound, Chesterfield Inlet, and Pond Inlet regions between 1890-1910. The objective of this research is to learn more about how contemporary Inuit communities understand these historic collections today and how understandings of these collections have changed over time. The goal of this research is to learn more about what kinds of Inuit values and knowledge (Inuit Qaujimajatuqangit) are associated with miniatures and models, and what changes have occurred in the production, use and distribution of these objects over the past century.

Northern Men's Research Project

License Number: 05 002 13N-M

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Number in Party 8
Region: Kivalliq, Kitikmeot, Qikitanii
Communities: Cambridge Bay, Arviat, Cape Dorset

This research is being conducted by Inuit community-based researchers with support from a university-based academic advisor. The process builds the capacity of the Nunavut Literacy Council to carry out high quality, community-based research. It increases the number of Inuit trained in qualitative research techniques. The community-based, participatory approach creates space for men to reflect on their own experiences in post-secondary education and work, and for their voices to be heard by a broader audience. The understandings of men's

experiences gained through the project will be used to support and inform the work of Ilitaqsiniq - the Nunavut Literacy Council – a non profit, Nunavut-based, territorial organization.

An ethical space for dialogue about difficult history: Program Evaluation of a residential school education module in Canada's Northwest Territories and Nunavut
License Number: 05 011 12Registry

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Number in Party 3
Region: Qikiqtaaluk, Kivalliq, Kitikmeot
Communities: Arctic Bay, Grise Fiord, Repulse Bay, Iqaluit, Pond Inlet, Hall Beach, Rankin Inlet, Arviat, Gjoa Haven

I have been contracted by Nunavut's Department of Education to carry out this study on their behalf, to better understand student learning from the new residential school module which is part of the Nunavut Social Studies Curriculum.

The Nunavut curriculum team would like this information available as they move forward in the implementation of the Nunavut Social Studies Curriculum.

This project will identify whether the new module is meeting its goals: through understanding history, there can be greater hope for tomorrow. This hope involves encouraging students to become committed to civic engagement in their own communities. Exploring

Inuit artistic voice about Arctic environmental and sea ice change.

License Number: 01 027 13N-M

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Number in Party 2
Region: South Baffin
Communities: Cape Dorset, Iqaluit, Pangnirtung

The purpose of my doctoral research is to engage with artists to explore the perspectives of Inuit artists about environmental change, specifically climate change and its impact on sea ice, and to better appreciate how artistic expression can help communities, scientists and policy makers to navigate environmental change.

The research goal is to learn about, and bring attention to, Inuit artistic responses to Arctic environmental and sea ice change (e.g. drawings, songs, sculpture). This project will assess how art and artistic process may serve as a method, strategy or approach to connect ways of knowing (e.g. scientific, Inuit). Finally, the project will provide insights about how Inuit artistic perspectives can inform science and policy.

From the Land to the Virtual: Networks in the Canadian Arctic.

License Number: 01 028 13N-M

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Number in Party 2
Region: South Baffin
Communities: Iqaluit

Internet and social networks bring the opportunity to communicate and interact in different ways. Social networks provide a way in which messages can be thrown without a particular receiver. The objective of my research will be to explore how young Inuit are using social networks websites in order to communicate and build networks. In particular, I will study the use of social networks sites such as Facebook, analyzing how young Inuit relate to them, what use do they give to social network sites, and in which ways they interplay with their identities and culture. I will also try to make a conceptual link with the networks of trails in the land, through which people move and function as networks of communication.

Canada Truth and Reconciliation Commission: Follow-Up to Residential School Testimony Interviews.

License Number:

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Communities: Iqaluit

Nunavut Research Institute

The recent creation of the Truth and Reconciliation Commission on residential schools for Aboriginal and Inuit people provides an opportunity to examine some of the ways that universal principles of human rights and transitional justice are acted upon in a national venue and interpreted by the participants—and by those who choose to not participate. With a methodological starting point in the study of public events and processes, this project will explore the possibility that the Commission is not only a venue for the pursuit of human rights, but is at the same time reinterpreting common understandings of trauma and suffering, as well as the historical legacy of residential schools.

THE NORTHWEST PASSAGE: MYTH, ENVIRONMENT AND RESOURCES

License Number: 04 012 13N-A

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Number in Party 2
Region: Cambridge bay
Communities: Kitikmoet

The project will analyse the history of the Northwest Passage, focusing on the importance of the North as a cultural, natural and economic reference. Starting from the epic voyages in search of the mythical passage it intends to describe its evolution until the consequences of climate change.

"Expert on drums, could be experter": Video games as a technology of learning for Inuit youth

License Number: 03 012 13R-M

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Number in Party 3
Region: Kivalliq
Communities: Repulse Bay

This research aims to investigate a successful learning activity among Inuit youth, video gaming, in order to determine how, what and why they learn from video gaming. This would represent a "strength-based" approach to learning putting the focus on the aptitudes the Inuit may possess as opposed to those EuroCanadian standards and testing skills determined to be missing.

The goal of this research can best be summarized in the following statement: To determine the features of Inuit culture that influence learning, to decode where Inuit learning occurs in digital video games, and to learn how to develop educational affinity that avoids negative influences, while capitalizing on positive features.

Educational Change in Nunavut: Looking for the Past in Decolonizing Policy, Programs and Pedagogies

License Number: 01 029 13N-M

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Number in Party 2
Region: South Baffin
Communities: Iqaluit

This dissertation research examines some of the processes and goals of educational change underway in Nunavut since the creation of the territory in 1999, with a particular emphasis on how and why knowledge from and about the past (such as histories, memories, elder knowledge) figures in policy, leadership, and curriculum development. This research places decolonizing purposes at the forefront of studying teaching and learning in a cross cultural, Indigenous and arctic educational context.

Inuit Ways of Knowing, Being and Doing: The creation of a community School with Elders as teachers.

License Number: 01 032 13N-M

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Number in Party 1
Region: South Baffin
Communities: Qikiqtarjuaq

The main intent of this inquiry focuses on how a community worked together to create a community school, grounded in Inuit ways of knowing, being and doing with Elders as teachers. This will be accomplished by working with community to share and to celebrate the story and to document the creation of this community school as one example of a best practice in Inuit education.

Inuit Ways of Knowing, Being and Doing: Creating and conducting a community consultation process grounded in IQ (Inuit Qaujimajatuqangit).

License Number: 01 031 13N-M

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Communities: Pangnirtung, Qikiqtarjuaq

My central research question focuses on how community members of Qikiqtarjuaq and Pangnirtung want me to create and conduct a community consultative process, grounded in Inuit ways of knowing, being and doing (Inuit Qaujimajatuqangit).

Social policy, the mixed economy, and livelihood experience in Cambridge Bay, Nunavut

License Number: 01 032 13N-M

Nunavut Research Institute

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Number in Party 2
Region: Qikiqtani, Kitikmeot
Communities: Cambridge Bay, Iqaluit

The purpose of this research is to examine welfare state reforms in the eastern Arctic during the period 1973-2013 and to explore how Inuit in Cambridge Bay, Nunavut, have experienced them. The origins, objectives, administration, and interactions of three social programs will be analyzed in the context of an increasingly market-dominated welfare regime. These three programs are income support, employment insurance, and harvester support. This analysis will be complemented by an exploration how Inuit families in Cambridge Bay have experienced changing social policies. Oral histories of livelihood will be conducted with 30 families in Cambridge Bay in the fall of 2013 in order to better understand how social policies and employment opportunities have shaped the course of Inuit family life over the period 1973 – 2013. Through work with the Kitikmeot Heritage Society, a process has been developed to archive these oral histories in the Cambridge Bay library in order to ensure local knowledge is retained by the community for future generations.

Evaluation of CISCO's Inuit Nunangat Connected Classroom Pilot Project.

License Number: 01 034 13Registry

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Communities: Iqaluit

As the project is evaluating the effectiveness of the use of videoconferencing technology in classrooms, participants' input may influence school board policy related to virtual learning and future development of virtual learning programs for schools in Nunavut. The evaluation findings will also help the school board and the video conferencing service providers determine the effectiveness of the pilot program and how it might be improved.

Community consultation and traditional knowledge studies on Arctic char in Qikiqtarjuaq fishing areas with emphasis on changes in during last 15 years.

License Number: 02 003 13N-M

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Number in Party 3
Region: Qikiqtani
Communities: Qikiqtarjuaq

The objectives of this proposed research are to consult and collect traditional ecological

Nunavut Research Institute

knowledge (TEK) from Qikiqtarjuaq community on the Arctic char in adjacent community fishing areas with emphasis on changes that have occurred during the last 15 years and use this consultation and TEK information as base line information for proposing and designing further scientific research.

Adaptation, Industrial Development and Arctic Communities

License Number: 05 008 13R-M-Amended

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Number in Party 8
Region: Kitikmeot, Kivalliq, North Baffin
Communities: Baker Lake, Arviat, Rankin Inlet, Kugluktuk, Arctic Bay, Resolute Bay

The key objective of this project is to engage in community-based, historical and comparative research into Arctic industrial development. By undertaking fieldwork in mining-affected communities and archival research into the legal and policy frameworks surrounding mineral development, our research team aims to inform debates and policy-making efforts surrounding the rapid industrialization of Arctic regions. The focus of this work is on three Nunavut communities currently encountering mineral exploration and development activity in their vicinities, and/or with a history of mining in the area: Kugluktuk (Coppermine) in the Kitikmeot region, Qamani' tuaq (Baker Lake) and Kangiqiniq (Rankin Inlet) in the Kivalliq region. In addition,

we have extended our research to a fourth community, Arctic Bay (Ikpiarjuk Tununirusiq), where we will examine the legacies of the former Strathcona Sound (Nanisivik) lead-zinc mine.

Climate change and tourism change: a vulnerability and resilience assessment

License Number: 05 001 13R-M

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Number in Party 6
Region: North & South Baffin
Communities: Pond Inlet, Gjoa Haven, Iqaluit

This research examines approaches to managing tourism change and its interaction with climate change in several northern communities. Climate change is one of many changes affecting communities and having an influence on economic activities such as tourism. Communities and individuals who rely on tourism may be affected through negative outcomes and through opportunities for development. This research addresses the need to understand climate change adaptations in the tourism industry and their implications for northern residents and communities based on local strengths, experiences and visions. Using case studies, the research will explore changes for communities especially related to expedition cruising and terrestrial wildlife tourism. The study uses a framework that includes climate change, tourism change, community resilience and community adaptation. The goal of the study is to work with communities and individuals to identify

community-level adaptation strategies that could be used by local stakeholders and decision-makers. Adaptation will be unique to each community, but likely will focus on changes in visitor numbers, expectations, experiences and impacts, and will require a variety of strategies that can take advantage of the opportunities and minimize negative outcomes.

Inuit Qaujimajatuqangit Study in Support of the Izok Project

License Number: 05 005 12R-M

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Number in Party 6
Region: Kitikmeot
Communities: Cambridge Bay, Kugluktuk, Kugaaruk, Taloyoak, Gjoa Haven, Pond Inlet, Resolute Bay, Arctic Bay

TMMG Canada Inc (MMG) is planning to start feasibility studies for a proposed project that will include an open pit and underground mine at the High Lake and/or Izok Lake. Ore concentrate (zinc, copper, lead) will be transported to an Arctic Port at Grays Bay by an all season road. The closest communities in the Kitikmeot include Kugluktuk and Bathurst Inlet. MMG has retained Thorpe Consulting Services to undertake and manage the Inuit Qaujimajatuqangit (IQ) study in the Kitikmeot Region in support of an environmental impact statement, which MMG plans to submit to the Nunavut Impact Review Board.

Language Policy Innovation in Nunavut

License Number: 01 053 13R-M-amended

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Region: South Baffin
Communities: Iqaluit

This project will consider how the development of language policies in Nunavut has been shaped by:

- (a) The Government of Nunavut's public government commitment to addressing the language needs of Inuit Language, Anglophone and Francophone communities in Nunavut;
- (b) The dual objectives of developing and implementing official language legislation (that recognizes all major language communities in Nunavut) and Inuit Language protection legislation (that focuses on the needs of Inuit Language communities);
- (c) Processes of public/stakeholder consultation over the development and implementation of Inuit language legislation;
- (d) Intergovernmental dimensions of modelling and implementing the development of new legislation;
- (e) Initiatives undertaken by the department of Culture, Languages, Elders and Youth to develop the legislation;

(f) Government of Nunavut initiatives to implement those aspects of language legislation that pertain to the promotion of the Inuit Language in education, the public sector workplace, and more broadly in the private and municipal sectors;

(g) Initiatives undertaken by the Minister of Languages and the Official Languages Commissioner of Nunavut to monitor the implementation of the legislation.

Inuit Qaujimajatuqangit about wolverine, wolf and grizzly bear, and how they cope with environmental changes.

License Number: 03 006 12N-A-Amended

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Number in Party 4
Region: Kivalliq
Communities: Baker Lake, Arviat

We aim at collecting Inuit Qaujimajatuqangit to document wolverine, wolf and grizzly bear distribution and abundance changes, ecology (food, reproduction, behaviour) and how they adapt to changes in the environment. IQ should especially provide a longer temporal perspective than scientific knowledge and should then greatly help to assess trends in population abundances (past and current) and distribution and to detect environment changes.

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Follow-up of Universal Vaccination Against Hepatitis B Virus in the Canadian North

License Number: 01 034 12Registry

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Number in Party 3
Region: Kivalliq, South Baffin
Communities: Rankin Inlet, Iqaluit

This study will document and/or provide estimates of: 1) the coverage of residents of Nunavut who were candidates for universal HBV vaccination programs since they were instituted in 1992, 2) the percent of the population who did not acquire protection against HBV (either as a result of not participating or inadequate response to the vaccine) and funding permitting, more current estimates of: 3) the prevalence of HBV and 4) HCV infection in Nunavut.

Should Newborn Screening Be Initiated in Nunavut for Mild CPT1 (Carnitine Palmitoyl Transferase - 1) Deficiency?

License Number: 05 004 13R-M

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Number in Party 4
Region: Nunavut Wide
Communities:

CPT1 deficiency is caused by a genetic change (mutation) in the Carnitine Palmitoyl Transferase-1 gene. This gene normally produces a protein that is involved in producing energy from the fats we eat. We all have two copies of this gene (all of our genes come in pairs) as we inherited one copy from our mother and one copy from our father. People who have a mutation in both copies of their CPT1 gene produce a protein that does not work properly. These individuals have trouble producing energy from fats. The mutations do not usually affect people in day to day life, because we get most of the energy we need by breaking down sugars from our food rather than fats. However, when we get sick or are not eating enough food for other reasons our bodies start to break down our fat stores for energy. Thus, individuals (particularly infants) who have CPT1 mutations in both copies of the gene can run into health problems during periods of illness or fasting because they cannot produce enough energy from fats. The result may be low blood sugar (hypoglycemia) and seizures or, in the worst-case scenario, unexpected sudden infant death.

Gathering Community Perspectives on Infant Sleeping Practices in Nunavut

License Number: 05 003 13R-M

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Number in Party 5

Region: South Baffin, Kivalliq, Kitikmeot
Communities: Arviat, Cambridge Bay, Iqaluit

Nunavut has the highest rate of infant deaths (deaths until 1 year of age) in Canada. One important cause of infant death in Nunavut is sudden infant death syndrome (SIDS), where an infant dies during sleep without an obvious cause. When this occurs, it is devastating for families. Safe sleeping practices with a newborn infant are very important and may reduce the chance of SIDS. Sleeping practices that can make a difference include the position the baby is put to sleep in and other aspects such as sleep surfaces, other people in the same bed as the baby, etc. In partnership with Nunavut Tunngavik Inc (NTI) and the Arctic Health Research Network (AHRN), this project will hold multigenerational focus groups to explore traditional and current sleep practices (positioning, co-sleeping etc). Information from the focus groups and knowledge of Inuit cultural practices will help in development of a health promotion strategy encouraging safe sleep practices and culturally relevant Maternal Child Health practices.

Burden of Self-reported Acute Gastrointestinal Illness in Iqaluit

License Number: 01 014 13R-M

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Number in Party 5

Region: South Baffin
Communities: Iqaluit

Nunavut Research Institute

We are conducting a survey to estimate the prevalence of acute gastrointestinal illness (e.g. diarrhoea and vomiting) in your community. In this study, community members will be asked a number of questions, including questions about health information, food and water consumption habits, animal ownership, leisure activities, and demographic information. We would like to investigate what might cause gastrointestinal illnesses in your community in order to reduce this illness in your community.

Navigational Strategies in Young and Older Adult Inuit Trackers & Hunters

License Number: 01 020 13N-M

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Number in Party 2

Region: North Baffin
Communities: Igloolik

This study will shed light on what navigation strategies Inuit trackers and hunters – experts in navigation – use to orient. As such, the results of this study will contribute to our understanding of the strategies that contribute to good orientation skills in Inuit trackers and hunters. In addition, this study will inform us as to whether using a GPS has an impact on the navigation strategies used by Inuit trackers and hunters, and if so, this research has the potential to help us understand what happens when Inuit rely too much on the GPS. This study could bring awareness of the

shortcomings of GPS use and the importance of traditional navigation in the Inuit culture.

Gastro-intestinal bioaccessibility of metals and metalloids in food of Canadian populations.

License Number: 02 040 13N-A

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Region: North Baffin
Communities: Resolute Bay

Health Canada offers guidelines on the maximal amount of certain foods that may be consumed without being exposed to high levels of contaminants. These guidelines concern the concentration of a given contaminant measured directly in the meat. However, recent studies have shown that this measure is potentially unrepresentative of the actual exposure risk in humans. Indeed, the food we eat goes through many transformations like cooking, ingestion with other food and digestion, which can modify the risk associated with the consumption of these pollutants. Thus, the concentration of a contaminant found in food does not necessarily represent the fraction that will be absorbed by the body.

Negotiating Pathways to Adulthood: Social Change and Indigenous Culture in Four Circumpolar Communities

License Number: 02 037 13R-M

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Region: North Baffin
Communities: Igloodik

Contemporary aspects of rapid social change have dramatically affected the political, cultural, and economic systems of circumpolar Indigenous peoples. The study will explore community responses to the social transition through the experiences of Inuit youth who are genealogically linked across the North and share a common language group. Youth in the circumpolar North are experiencing a very high suicide rate, reflecting some of the very negative effects of this change. Rather than learning more about problems, this study will focus on strengths among youth, what is called resilience, as they navigate their way toward adulthood. We need to learn more about how youth and their families are coping positively, so that this information can be shared across Northern communities to help with suicide prevention and youth wellness

CanMEDS Portfolio Project

License Number: 01 012 13Registry-Amended

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Number in Party 4
Region: Baffin Island
Communities: Arctic Bay, Cape Dorset, Clyde
River, Hall
Beach, Iqaluit, Kimmirut, Nanisivik, Pangnirtung, Qik
iqtarjuaq, Resolute Bay, Grise Fiord

The Projects ultimate goal is to ensure that residents derive maximum benefit from unique educational opportunities in the northern setting of Baffin Island using the CanMEDSA roles, and through that means, to improve the quality of care offered to the residents of Baffin Island.

Using agent-based models to evaluate the effectiveness of novel public health interventions for tuberculosis in Canada's north: a case study

License Number: 05 011 13M-Registry

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Region: Nunavut
Communities:

Tuberculosis (TB) rates are high in Canadian Aboriginal populations and progress to combat the disease

has been slow. It has been hypothesized that in Aboriginal communities, specifically focusing public

health resources on enhanced screening and treatment of latent TB (LTBI) cases will improve health. The

decision to adopt an enhanced TB program in Aboriginal communities must incorporate information about

projected program effectiveness. It is believed that enhanced screening and treatment for LTBI when

combined with existing public health interventions will be an effective strategy. We will use the computer

models to test the effectiveness of this approach.

Measurement of Partner Perspectives involved with Innovation Strategy MHP-Projects

License Number: 01 030 13Registry

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Number in Party 3
Region: South Baffin
Communities: Iqaluit

The Public Health Agency of Canada has contracted the Propel Centre for Population Health Impact (Propel) at the University of Waterloo to conduct a "mid term" performance evaluation of the 9 Innovation Strategy

(IS), Mental Health promotion projects (MHP-Projects) across Canada. Of these 9 funded projects, one, entitled Child and Youth Mental Health intervention, Research and community Advocacy project in Nunavut, occurs in Nunavut.

iPad audiometry in Canada's North: a portable and cost-effective method for hearing screening.

License Number: 01 035 13N-M

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Region: Qikiqtani
Communities: Iqaluit

This is an opportunity for school-aged participants in Iqaluit to have their hearing tested by a validated audiometry modality. If there is any hearing deficit present, a follow up visit with both an audiologist and an Otolaryngologist will be offered for confirmation and workup of the hearing loss.

This is also an opportunity to advance health research specific to the children of Canada's north. This population is at risk for middle ear disease and subsequent hearing loss. Due to the remote location of Nunavut and the subsequent difficulties in providing medical care, childhood ear pathology often presents late or is missed entirely. This results in significant language delay, as well as other serious sequelae of ear disease.

Our hope is to not only improve our understanding of hearing loss in this population,

but also detect hearing conditions much earlier. This would enable for earlier treatment and therefore less morbidity from hearing-related disorders.

Developing Culturally Sensitive Indicators of Community Wellness in a Nunavut Community.

License Number: 01 003 14N-M

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Region: South Baffin
Communities: Cape Dorset

The research question to this study is: How can western and traditional knowledge be combined to promote community wellness in a Nunavut community? The goal of the proposed research is to collaborate with a Nunavut community to create a program evaluation framework that includes community wellness indicators that could be used to evaluate current wellness programming and identify future needed programming. The objectives within this study are to: engage community partners within the research process, collaborate with community members to identify indicators for community wellness, and propose an evaluation framework for community programming based on

those indicators. The study will use the framework of Participatory Action Research (PAR), which engages and empowers community members to take ownership of the research process.

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