NIRB Application for Screening #126399

Geological Study of the Coppermine River Group volcanic rocks, Nunavut

Application Type:	New
Project Type:	Scientific Research
Application Date:	Monday, April 27, 2026
Period of operation:	from 2026-07-06 to 2026-07-31
Project Proponent:	Marie-Claude Williamson Natural Resources Canada - Geological Survey of Canada 601 Booth Street Ottawa ON K1A 0E8 Canada Phone Number:: 6137999513, Fax Number::

DETAILS

Non-technical project proposal description

English: Geological study of the Coppermine River Group volcanic rocks, NunavutMarie-Claude Williamson, Rob Rainbird, Elisha Whalen, and Mackenzie LIP project participants Fieldwork logistics – Part 1: Part 1 is planned for the period July 6 to 28, 2026, from a basecamp located 80 km south of Kugluktuk. In addition to 1 GSC research geologist and 3 university students, the team in Part 1 includes 1 Museum Science Advisor and a Wildlife Officer for a total of 6 field personnel. The team will set up one large kitchen tent and a maximum of 6 smaller tents for the field personnel. One portable generator requiring gasoline will be used for power, and one propane tank will be used for the camp stove. It may be possible to set up a small satellite dish, but this request is pending approval from the GSC. For the first two weeks, geological mapping and rock sampling will be carried out on foot by the participants operating from base camp to a maximum distance of 5 kilometers from base camp. All field personnel will use traditional geological tools, such as a digital mapping tablet, rock hammer, compass, camera, hand lens, notebook, and binoculars. If permission is granted, the team could use a small drone for mapping outcrops that are difficult to access but no scientific instruments will be used during fieldwork in Parts 1 and 2. On July 20, there will be a rotation of 3 participants returning to Kugluktuk and 3 others arriving from Kugluktuk for the last week of fieldwork at this location. For two days, July 21 and 22, the team will be transported by helicopter to two areas located about 20 km from the base camp. The pilot will return to Kugluktuk after each day of work with the team. Foot traverses will then resume from July 23 to July 26. Part 1 of the field season ends on July 27 with removal and transport of all field personnel, tents, equipment, and rock samples from the base camp to Kugluktuk.Fieldwork logistics – Part 2: Part 2 is planned for the period July 28 to 31 with activities based out of Cambridge Bay, Victoria Island. Our scientific objective in Part 2 is to travel to an outcrop located near Washburn Lake which was first visited by GSC research geologists in 1994. The team in Part 2 includes a total of 3 field personnel: 2 GSC research staff and Elisha Whelan, resident geologist for the Government of Nunavut. The 2 GSC research scientists have requested accommodation at CHARS for the two days of field activities; Elisha Whalen is a resident of Cambridge Bay. The team will travel to the Washburn dyke by helicopter to identify more rocks with a possible impact origin. The same field equipment used in Part 1 will be used for sampling the outcrops in Part 2 (field tablet, geological hammer, compasses, camera, hand lens, binoculars) but no drone will be used. The data generated during the lifetime of the project and field campaign will be released in one MSc academic thesis, an open access report (GSC open file), and peer-reviewed articles published in scientific journals.

French: Étude géologique des roches volcaniques du groupe de la rivière Coppermine, NunavutMarie-Claude Williamson, Rob Rainbird, Elisha Whalen et les participants au projet Mackenzie LIPLogistique des travaux de terrain – Partie 1 : La première partie se déroulera du 6 au 28 juillet 2026, à partir d'un camp de base situé à 80 km au sud de Kugluktuk. Outre une géologue de recherche de la CGC et trois étudiants universitaires, l'équipe de la première partie comprend une conseillère scientifique attachée à un musée et un agent de la faune, pour un total de six personnes sur le terrain. L'équipe installera une grande tente-cuisine et un maximum de six tentes plus petites pour le personnel de terrain. Un générateur portatif à essence fournira l'électricité, et une bouteille de propane alimentera le réchaud de camping. L'installation d'une petite antenne parabolique est envisageable, mais cette demande est en attente d'approbation de la CGC. Durant les deux premières semaines, la cartographie géologique et l'échantillonnage des roches seront effectués à pied par les participants, qui se déplaceront du camp de base jusqu'à une distance maximale de 5 kilomètres de celui-ci. Tout le personnel de terrain utilisera des outils géologiques traditionnels, comme une tablette numérique, un marteau de géologue, une boussole, un appareil photo, une loupe, un carnet de notes et des jumelles. Si l'autorisation nous est accordée, l'équipe pourra utiliser un petit drone pour cartographier les affleurements difficiles d'accès, mais aucun instrument scientifique ne sera utilisé lors des travaux de terrain des parties 1 et 2. Le 20 juillet, trois participants retourneront à Kugluktuk tandis que trois autres arriveront de Kugluktuk pour la dernière semaine de travail de terrain sur ce site. Les 21 et 22 juillet, l'équipe sera héliportée vers deux zones situées à environ 20 km du camp de base. Le pilote retournera à Kugluktuk après chaque journée de travail avec l'équipe. Les relevés accomplis en traverse reprendront ensuite du 23 au 26 juillet. La première partie de la campagne de terrain se terminera le 27 juillet par le démontage et le transport de tout le personnel, des tentes, du matériel et des échantillons de roche du camp de base à Kugluktuk. Logistique des travaux de terrain – Partie 2 : La deuxième partie se déroulera du 28 au 31 juillet à Cambridge Bay, sur l'île Victoria. Notre objectif scientifique est d'explorer un affleurement situé près du lac

Washburn, visité pour la première fois par des géologues de recherche du CGC en 1994. L'équipe comprend trois personnes : deux chercheurs de la CGC et Elisha Whelan, géologue résidente du gouvernement du Nunavut. Les deux chercheurs ont fait une demande d'hébergement au CHARS pour les deux jours de travaux sur le terrain. Elisha Whelan habite à Cambridge Bay. L'équipe se rendra en hélicoptère au dyke de Washburn afin d'identifier d'autres roches d'origine comparable. Le même équipement de terrain que lors de la première partie servira à l'échantillonnage des affleurements (tablette numérique, marteau de géologue, compas, appareil photo, loupe, jumelles), mais aucun drone ne sera utilisé.Les données générées pendant toute la durée du projet et de la campagne sur le terrain seront publiées dans un mémoire universitaire de maîtrise, des rapports en libre accès (dossier ouvert CGC) et des articles évalués par des pairs publiés dans des revues scientifiques.

Inuktitut: Nunamiutanik ilitukhaut Kugluktumi Kuuk Ikayoktiget nunap kagakniganit uyakanik, Nonavumi Marie-Claude Williamson, Rob Rainbird-lu, Elisha Whalen-lu, Mackenzie LIP-lu havami ilaoyut. Manikami Havauhiuyut – Ilagani 1: Ilagani 1 upalogaiktaoyok atoligeagani July 6-mit 28-mut 2026-mi, hiniktakveoyomit 80-kilamitamik hivogani Kugluktup. Ilagiya 1-mi GSC-mi ilitokhaeyoni nonameotanik pigahulo ilihakpalikvikmi ilihaktut, ikayoktiget Ilagani 1 ilakaktut ataohikmik Igilgaknitanik Naunaeyaotinik Ihomakhakheoktimik Angohikiyilo ataotimut sikseoneaktut manikami havaktut. Ikayoktiget napaktigineaktut ataohikmi agiyomik igavikhamik tupikmik amigaenikhaniklo siksinik mikitkiyanik tupiknik manikami havaktut atuktakhaenik. Ataohik nakhalaktok algoyaktutinut ignikotinoak kasilektoktot atoktaoneaktok algoyaktutaoyagani, ataohiklo puplakaktutaoyok atogeagani tomikakvikmi ignikmikmi. Atolagonakhiyok ihoakhageagani mikiyomik kilaenakheotitutikhamik aligaoyamik, kiheani una tukhiktaoyok utakiyotaoyok agiktaoyagani GSC-konit. Hivolikni malgukni saneonikni, nonameotanik nonaoyeokneaktut uyakaniklo ilitokhaelotik havagiyaoneaktut pihoklotik ilaoyut havaktut manikami hiniktakvikmit ugahiknikhaut talimanik kilamitanit hiniktakvikmit. Tamaeta manikami havaktut hananeaktut udr-mik igilgat manikami hanalgotinik, ajikotanik kagitaoyami nonaoyeoklotik, uyakanik kaotaoyanik, ulamnigepkotimik, piksaleonmik, algakni kingotiknik, titigakvikhamik, kitotikniklo. Agiktaokpat, ikayoktiget atokneaktut mikiyomik tikmeanoamik nonaoyeogeamikni kigikniginik ayoknaktonik atogeagani kiheani naonaeyaotinik ihoakotinik atolimaetut manikami havaktilogit Ilagani 1, 2-milo. July 20-mi, himaotaoyokakneaktok pigahonik ilaoyonik utiktonik Kigluktumut pigahulo tikilotik Kugluktumit kigolikmi saneonikmi manikami havami talvani inigiyaoyomi. Malgukni ublukni, July 21-mi 22-milo, ikayoktiget akyaktaoneaktut halikapkakut malguknut nonaknuk20 kilamitanik kanitoani hiniktakveop. Tikmealik utikneaktok Kugluktumut atoni ublotoagagat havaktilogo ikayoktigelo. Pihoklotik atolikneaktok July 23-mit July 26-mut. Ilagani 1 manikami iholineaktok July 27-mi ahivaktaolotik akyaktaolotiklo tamaeta manikami havaktut, pupkit, pikotik, uyakalo ihivgeogakhat topikakvikmit Kugluktumut. Manikami havamik naonaepkotit – Ilagani 2: Ilagani 2 upalogaektaoyok July 28-mit 31-mut holiyotit Ikaloktuteamit, Kelinikmit. Naonaeyaotini piyotigiyakut Ilagani 2 aolageami kigikniknut haneani Washburn-guyup tattip hivolikmik polaktaohimayok GSC-koni ilitokhaeyinit nonameotanik 1994-mi. Ikayoktiget Ilagani 2-mi ilakaktok ataotimut pigahunik manikami havaktunik: malguk GSC-konit ilitokhaeyik havaktuk Elisha Whelan-lo, talvani nonameotalikiyi Kavamanit Nonavumi. Malguk GSC-konit ilitokhaeyik tukhiktuk hiniktakpageamikni CHARS-koni malgukni ublukni manikami holitilogit; Elisha Whalen nonakaktok Ikaloktuteami. Ikayoktiget aolakneaktut Washburn-mi kigiknikmut halikapkakut naonaeyaeyamikni amigaetkiyanik uyakanik atokneakuktok aktoktaoniganik hivoani. Ayiket manikami pikotit atoktaoyut Ilagani 1 atoktaoneakmiyut naonaeyaotikhanik kigiknigit Ilagani 2-mi (manikami kagitaoyak, oyakanik kaotaoyak, ulamnigepkutit, piksaleot, algami kingotinoat, kingotilo) kiheani tikmilaktoneot atoktaolimaetut. Naonaipkotit titigaktaoyut atoktilogo havak manikamilo havaohik toniyaoneaktok ataotimi MSc-mi ilihaktut titigagini, hatkeomayok unipkak (GSC-kuni akmaomayok makpigakakveani), havakatinit ihivgeoknikmi titigat takupkaktitaoyut naonaeyaotinik taegoakhani.

Personnel

Personnel on site: 6
Days on site: 22
Total Person days: 132
Operations Phase: from 2026-07-06 to 2026-07-31

Activities

Location	Activity Type	Land Status	Site history	Site archaeological or paleontological value	Proximity to the nearest communities and any protected areas
Coppermine Base Camp	Camp	Inuit Owned Surface Lands	Mapped by the Geological Survey of Canada.	Unknown	80 km South of Kugluktuk
Washburn Lake	Sampling sites	Inuit Owned Surface Lands	Mapped by the Geological Survey of Canada.	Unknown	North of Cambridge Bay

Community Involvement & Regional Benefits

Community	Name	Organization	Date Contacted
Kugluktuk	Amanda Dumont, Manager	Kugluktuk Agnoniatit Association	2026-02-19
Kugluktuk	Kevin Niptanatiak, Senior Administrative Officer	Hamlet of Kugluktuk	2026-02-19
Cambridge Bay	Jim MacEachern, Chief Administrative Officer	Municipality of Cambridge Bay	2026-02-19
Cambridge Bay	James Panioyak, Chairman	Ekaluktutiak Hunters and Trappers Association	2026-02-19
Cambridge Bay	Tannis Bolt, Senior Lands Officer	Kitikmeot Inuit Association	2026-02-19

Authorizations

Indicate the areas in which the project is located:

Kitikmeot

Authorizations

Regulatory Authority	Authorization Description	Current Status	Date Issued / Applied	Expiry Date
Government of Nunavut, Nunavut Research Institute	Application received and accepted without any further changes - pending NIRB approval.	Active		
Nunavut Planning Commission	Application received and accepted without any further changes - pending NIRB approval.	Active		
Nunavut Water Board	Application for water license exemption will be sent on April 21, 2026.	Not Yet Applied		

Project transportation types

Transportation Type	Proposed Use	Length of Use
Air	Helicopter transport of field crew from Kugluktuk to Coppermine base camp.	

Project accomodation types

Temporary Camp

Community

Material Use

Equipment to be used (including drills, pumps, aircraft, vehicles, etc)

Equipment Type	Quantity	Size - Dimensions	Proposed Use
Helicopter	1	NA	Transport of field crew to base camp
Drone	1	small	Video record
Generator	1	Honda 1000	Power at Coppermine Base Camp
Satellite dish	1	small	Internet access

Detail Fuel and Hazardous Material Use

Detail fuel material use:	Fuel Type	Number of containers	Container Capacity	Total Amount	Units	Proposed Use
Gasoline	fuel	1	20	20	Liters	Portable generator for Coppermine base camp
Propane	fuel	1	20	20	Lbs	Camp stove at Coppermine base camp

Water Consumption

Daily amount (m3)	Proposed water retrieval methods	Proposed water retrieval location
0	Water for cooking and field crew will be obtained from local streams using buckets	local streams

Waste

Waste Management

Project Activity	Type of Waste	Projected Amount Generated	Method of Disposal	Additional treatment procedures
Waste disposal	Greywater	10 l per day	Disposed of at a single site located at regulatory distance from watercourse	N/A
Waste disposal	Sewage (human waste)	Unknown	Sealed bags	Flown out as garbage during rotation on July 20 and departure on July 28.

Environmental Impacts:

Fieldwork Part 1 - Coppermine Base Camp 80 km south of Kugluktuk: The temporary camp will be set with a rigorous attention to environmental impacts by ensuring that no trace of tents and field equipment remain at the selected site. The field crew will follow directives on water usage and waste management as listed in this application. In all our field research, we ensure our staff are properly trained and maintain high safety standards. We are committed to avoiding and reporting any wildlife observations or archeological artefacts or sites found as we work. To support this, the team is seeking to hire a local wildlife monitor to join the team in the field at the Coppermine base camp. Fieldwork Part 2 - Two days of work in the Washburn Lake area: This part of the fieldwork will involve helicopter transport to a pre-selected list of localities for sampling. Field personnel (3 geologists) and the pilot will strictly adhere to the regulations concerning all the sites to be explored in this area with no foreseeable impact on the wildlife and landscape.

Additional Information

SECTION A1: Project Info

SECTION A2: Allweather Road

SECTION A3: Winter Road

SECTION B1: Project Info

SECTION B2: Exploration Activity

SECTION B3: Geosciences

SECTION B4: Drilling

SECTION B5: Stripping

SECTION B6: Underground Activity

SECTION B7: Waste Rock

SECTION B8: Stockpiles

SECTION B9: Mine Development

SECTION B10: Geology

SECTION B11: Mine

SECTION B12: Mill

SECTION C1: Pits

SECTION D1: Facility

SECTION D2: Facility Construction

SECTION D3: Facility Operation

SECTION D4: Vessel Use

SECTION E1: Offshore Survey

SECTION E2: Nearshore Survey

SECTION E3: Vessel Use

SECTION F1: Site Cleanup

SECTION G1: Well Authorization

SECTION G2: Onland Exploration

SECTION G3: Offshore Exploration

SECTION G4: Rig

SECTION H1: Vessel Use

SECTION H2: Disposal At Sea

SECTION I1: Municipal Development

Description of Existing Environment: Physical Environment

Description of Existing Environment: Biological Environment

Description of Existing Environment: Socio-economic Environment

Miscellaneous Project Information

Identification of Impacts and Proposed Mitigation Measures

Cumulative Effects

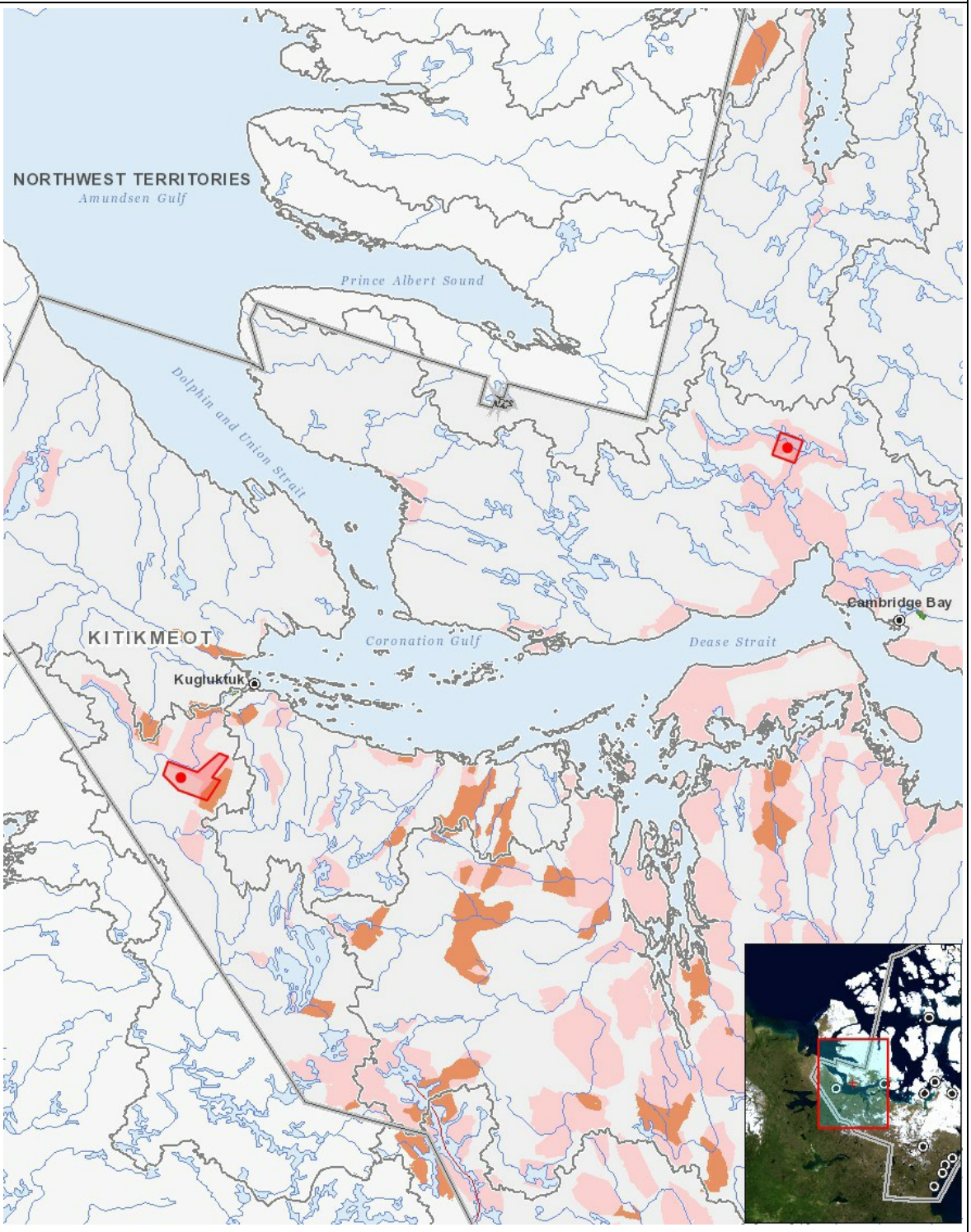
Impacts

Identification of Environmental Impacts

	PHYSICAL	Designated environmental areas	Ground stability	Permafrost	Hydrology / Limnology	Water quality	Climate conditions	Eskers and other unique or fragile landscapes	Surface and bedrock geology	Sediment and soil quality	Tidal processes and bathymetry	Air quality	Noise levels	BIOLOGICAL	Vegetation	Wildlife, including habitat and migration patterns	Birds, including habitat and migration patterns	Aquatic species, incl. habitat and migration/spawning	Wildlife protected areas	SOCIO-ECONOMIC	Archaeological and cultural historic sites	Employment	Community wellness	Community infrastructure	Human health
Construction																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-
Operation																									
Camp		-	-	-	-	-	-	-	-	-	-	-	M		M	M	-	-	-		-	-	-	-	-
Sampling sites		-	-	-	-	-	-	-	-	-	-	-	M		-	M	-	-	-		-	-	-	-	-
Decommissioning																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-

(P = Positive, N = Negative and non-mitigatable, M = Negative and mitigatable, U = Unknown)

Project Location



List of Project Geometries

1	polygon	Washburn Study Area
2	polygon	Coppermine Study Area
3	point	Coppermine Base Camp
4	point	Washburn Lake