NIRB Application for Screening #126196
Sylvia Grinnell Geoscience Program

Application Type: New

Project Type: Scientific Research

Application Date: Thursday, July 3, 2025

Period of operation: from 2025-08-13 to 2025-08-28

Project Proponent:

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Canada
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DETAILS

Non-technical project proposal description

English: The Canada-Nunavut Geoscience Office is proposing a 16-day field program for August 2025, the Sylvia Grinnell Geoscience Program (SGGP). The SGGP program will be focused on a 30 km2 area around Sylvia Grinnell Lake, approximately 50 kilometers northwest of Iqaluit, and will follow up on surficial geology work from 2015-16 which identified anomalous quantities of cassiterite and scheelite grains in stream sediment samples. Cassiterite is the primary ore mineral of tin, and scheelite is the primary ore mineral of tungsten. These minerals are often found in pegmatites.The project is to be based out of Iqaluit, Nunavut, supported by an helicopter, and the crew will consist of 6 personnel. Ten days of the program will be assigned to bedrock mapping and soil sampling, and six to thematic studies. A small camp consisting of three small tents will be erected for three days. The impact will be minimaland the sample sites will show little or no evidence of having been visited. Helicopter sampling will consist of 16 days of flying and will be at high elevation during transit flights. Wildlife will be avoided.

French: Le Bureau Geoscientifique Canada-Nunavut propose un programme de recherche qui prendra place le 13-28 aout 2025. Le projet sera ciblé sur un region de 30 kilometres carrées, près du lac Sylvia Grinnell, autour de 50 km au nord-ouest d'Iqaluit. Le but du projet est d'identifier la source dans le substrat rocheux des graines de cassiterite et scheelite, qui ont été identifie dans les échantillons du materiel surficiel après un programme de recherche en 2015-16. Cassiterite est une source majeure pour la production d'étain, et scheelite est une source majeure pour la production de la titane.Le projet sera basé a Iqaluit, et supporté par hélicoptère sans necessité des caches de carburant. L'equipe de recherche comprendra 6 personnes. Dix jours du programme sera assigné a cartographie du substrat rocheux, et six jours pour les études thématiques. L'échantillonage supporte par hélicoptère sera a haute elevation pendant des vols de transport. La faune sera evitée en tout cas.

Inuktitut: ᑖᓐᓇ ᐱᓕᕆᐊᖅᐸᕐᓇᑕᐅᕙᓪᓕᐊᔪᒦᑦᑐᖅ ᐊᒻᒪ ᐱᓕᕆᓂᖃᓂᐊᖅᑐᑦ ᐱᒋᐊᕐᓗᓂ ᐋᒐᓯ 13 ᑎᑭᓪᓗᒍ 28, 2025. ᐱᔾᔪᑎᖃᓗᐊᖅᑐᑦᖃᐅᔨᒋᐊᒃᑲᓂᖅᑕᐅᓪᓗᑎ ᖃᓄᐃᓐᓂᕆᔭᖏᑦ ᓄᓇᖓᓂ ᖃᐅᔨᓴᕐᓂᐅᓚᐅᖅᑐᓂᑦ ᓯᐅᕕᐊᒍᕆᓂᐅᓪ ᐱᓕᕆᐊᒥᑦ ᐅᐊᓐᓇᖓᑕᑲᓐᓇᖓᓂ ᐃᖃᓗᐃᑦ, ᐱᖃᓯᐅᑎᓪᓗᑎ ᖃᐅᔨᒋᐊᒃᑲᓂᕐᓂᐅᔪᑦ ᖄᖓᓂ ᐃᖅᑲᖓᓂ ᖃᐅᔨᓴᕐᓂᐅᔪᑦ 2015-16–ᒥᑦ.ᐱᓕᕆᐊᖅ ᐱᖃᓯᐅᔾᔨᓇᓯᐊᖅᑐᖅ ᓄᓇᖓᓂ ᓄᓇᖑᐊᓕᐅᓂᕐᒧᑦ ᐊᒻᒪ ᐅᔭᖅᑲᓂᑦ ᐊᒻᒪ ᖌᖓᓃᑦᑐᓂᑦ ᖃᐅᔨᓴᕋᔅᓴᓂᑦᓄᐊᑕᐅᔪᓂᑦ. ᐃᖃᓗᓐᓃᓗᐊᑕᕐᓂᐊᖅᑐᑦ ᐊᒻᒪ ᖅᑯᓛᒎᓕᒃᑯᑦ ᐃᑲᔪᖅᑕᐅᓗᓂ, ᐊᑐᕐᓂᖃᕈᓐᓇᖅᑐᓂ ᐱᖓᓱᓂᑦ ᐅᓪᓗᓂᖃᖓᑕᖃᑦᑕᕐᓗᑎ ᓇᔪᖅᑕᐅᔪᒧᑦ (ᐱᖓᓱᑦ ᐃᓄᐃᑦ) ᐱᓕᕆᐊᖅ ᐱᓕᕆᔭᐅᑎᓪᓗᒍ ᒪᕗᒪᑐᖃᒃᑯᑦ ᓄᓇᖏᓐᓂ ᐅᐊᓐᓇᖓᑕᐱᖓᓐᓇᖓᓂ ᐃᖃᓗᐃᑦ. ᓄᓇᖓᓂ ᖃᐅᔨᓴᕋᔅᓴᐃᑦ ᖃᐅᔨᓴᖅᑕᐅᓂᐊᖅᑐᑦ ᓇᓗᓇᐃᖅᑕᐅᓗᑎ ᓄᓇᖓᓂ ᐃᓗᓕᖏᓐᓂᐊᒻᒪ ᐊᕐᕋᒍᖏᓐᓂ, ᐊᒻᒪ ᖃᓄᐃᓐᓂᕆᔭᖏᑦ ᓴᖅᑭᖅᑎᑕᐅᓂᐊᖅᑐᑦ ᐊᒻᒪ ᐱᔭᕐᓴᐅᓗᑎ ᑭᒃᑯᑐᐃᓐᓇᕐᓄᑦ.

Inuinnaqtun: As the project is located in the Qikiqtani region we do not have an Inuinnaqtun project description.

Personnel

Personnel on site: 6

Days on site: 16

Total Person days: 96

Operations Phase: from 2025-08-13 to 2025-08-28

Activities

Location	Activity Type	Land Status	Site history	Site archaeological or paleontological value	Proximity to the nearest communities and any protected areas
SGGP field area:	Scientific/International Polar Year Research	Crown	Geological research has taken place regularly in the area over the last two decades.	Undetermined.	Study area is approximately 60 kilometres northwest of Iqaluit.

Community Involvement & Regional Benefits

Community	Name	Organization	Date Contacted
Iqaluit	Sally	Amaruq HTA	2025-05-14

Authorizations

Indicate the areas in which the project is located:

Authorizations

Regulatory Authority	Authorization Description	Current Status	Date Issued / Applied	Expiry Date
Aboriginal Affairs and Northern Development Canada	CIRNAC land use permit for Crown land	Applied, Decision Pending		
Hunters and Trappers Associations/Organizations	Amaruq HTA board suppports our research activities	Active	2025-05-14	
Qikiqtani Inuit Association	Application for land lease for IOL surface lands access, application 320545	Applied, Decision Pending		
Aboriginal Affairs and Northern Development Canada	CIRNAC land use permit for Crown land - Project below threshold, permit not required	Active	2025-06-11	
Nunavut Research Institute	Research permit, to be applied for following NPC-NIRB process	Not Yet Applied		

Project transportation types

Transportation Type	Proposed Use	Length of Use
Air	Helicopter-supported, helicopter based in Iqaluit	
Land	Hiking	

Project accomodation types

Temporary Camp

Other,

Material Use

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

Equipment Type	Quantity	Size - Dimensions	Proposed Use
helicopter	1	1	Helicopter for transport between Iqaluit airport and field research area.
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Detail Fuel and Hazardous Material Use

Detail fuel material use:	Fuel Type	Number of containers	Container Capacity	Total Amount	Units	Proposed Use
Aviation fuel	fuel	10	40	400	Gallons	helicopter refueling

Water Consumption

Daily amount (m3)	Proposed water retrieval methods	Proposed water retrieval location
1	By hand, via filling bottles (during hikes/traverses)By hand, via filling bottles (at temporary camp)	Streams in project activity area; stream(s) near fly camp location

Waste

Waste Management

Project Activity	Type of Waste	Projected Amount Generated	Method of Disposal	Additional treatment procedures
Camp	Non-Combustible wastes	minimal	Any noncombustible waste materials will be packed out and returned to Iqaluit at camp teardown.	none

Environmental Impacts:

Care will be taken to avoid unnecessary impacts on vegetation when landing helicopter, while on hike traverses, or while in temporary camp. Noise from helicopter will be mitigated by ensuring flight altitude is sufficient to avoid impacts on wildlife. Rock and sediment samples will be removed from the environment, but care will be taken to prevent unnecessary damage to outcrops when samples are taken from bedrock. Rock samples will consist of 0.5 to 5kg of rock material, either collected loose from the ground or removed from outcrop with a geological hammer and chisel. General practice when bedrock sampling is to remove as little rock as possible from an outcrop while ensuring sufficient fresh (e.g. unweathered) rock material for analysis. Sediment samples are expected to be up to 5 gallons of till collected in a grid pattern using shovels (the exact sample grid is not yet determined but spacing can be anywhere from 100 to 1000 m). Any surface vegetation present is removed from sample location and replaced after sample is collected.

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

Low rolling hills, often flat-topped. Ground cover is mostly glacial till, occasionally patterned ground, with some bedrock outcrop. Creeks and streams are frequent in the area on hill slopes and valley floors. Permafrost is continuous through the study area.

Description of Existing Environment: Biological Environment

Tundra with typical vegetation for the Northern Arctic ecozone - Arctic willow, Arctic heather, various flowering plants, mosses, and lichens.

Description of Existing Environment: Socio-economic Environment

Iqaluit is the nearest community to the study area and will be a source of logistical support and Inuit employment for wildlife monitor positions.

Miscellaneous Project Information

Identification of Impacts and Proposed Mitigation Measures

Minimal impact resulting from short-term (<5 days) fly camp. Permanent removal of rock and till samples.

Cumulative Effects

Permanent removal of rock and till samples.

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																									
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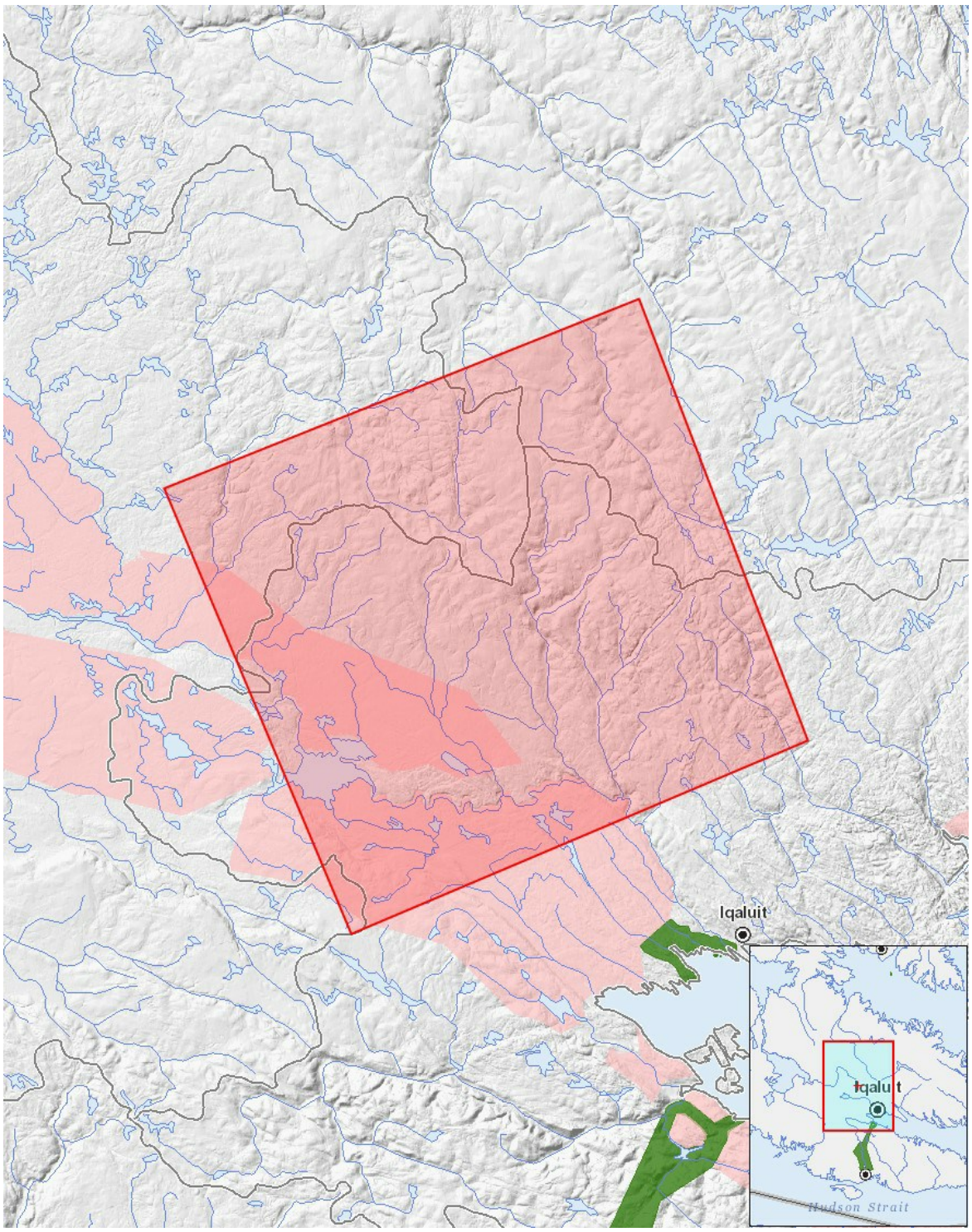
Operation																									
Scientific/International Polar Year Research		-	M	M	-	-	-	M	M	M	-	-	M		M	M	M	M	-		U	P	U	P	P
Decommissioning																									
-		-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-

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

Project Location

List of Project Geometries
1 polygon SGGP field area: