NIRB Application for Screening #125771
Community Geological Mapping of the Kivalliq Corridor

Application Type:	New
Project Type:	Scientific Research
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Proposed Authorization:	from 0001-01-01 to 0001-01-01
Project Proponent:	Geological Survey of Canada, Mary Sanborn-Barrie Geological Survey of Canada, Natural Resources Canada 490-601 Booth Street Ottawa Ontario K1A0E8 Canada Phone Number:: 343-543-4648, Fax Number::

DETAILS

Non-technical project proposal description

English: A proposed Churchill-Kivalliq Hydro-Fibre (CKHF) link involves construction of a 1200-km, 150 megawatt transmission line from Gillam, MB to Chesterfield Inlet, NU and west to Baker Lake to bring renewable, sustainable, reliable hydroelectricity to modernize electrical systems and advance the economy of western Hudson Bay communities. A road and upgrade to Rankin's airport are also planned. The geoscience character of the CKHF link corridor, portions of which are poorly known and under explored, should be assessed, updated and integrated by Kivallirmiut to deliver a seamless, modern, time-calibrated, geological map. This will support activities across a region for which access will increase, and on which future land-use decisions can be soundly based. This project targets the southern half of the CKHF corridor, a hard to access, heavily drift-covered region with outdated geological mapping (1969-1978), rare obsolete (K/Ar biotite) age constraints, and no litho-geochemical knowledge with which to correlate units within, and beyond, the region. This NRCan Geological Survey of Canada-led project aims to:• refine, update, and produce new geological knowledge of bedrock underlying thick glacial cover of lower Nunavut. • provide a meaningful way to engage Northerners, especially youth, to experience and participate in science, and enable knowledge sharing and knowledge co-production • strengthen the capacity of communities within the Churchill-Kivalliq corridor to address geoscience opportunities and challenges related to proposed infrastructure developments.Field methodology in 2023 will involve planning and execution of community-based, helicopter-assisted mapping based from Whale Cove (2-weeks) and Arviat (3-weeks). Compilation maps and Landsat imagery combined with aeromagnetic data will be analyzed with community members to devise a strategy for ground-truthing geophysical anomalies and new data collection. Bedrock mapping will be assisted by interested Northerners, with a focus on youth 20-30 years, carvers and prospectors who will be provided rotational opportunities as paid field assistants. Mapping will involve 10 days (30 hours) of helicopter support from Whale Cove (~July 2-12, 2023) and 10 days (30 hours) from Arviat (~July 18-30, 2023). All equipment needed will fit into a small backpack provided to all field assistants along with a bagged lunch, and will include a hand lens, compass, pen magnet, hammer (to break off a fresh sample) and digital camera. Observations will be recorded on small, hand-held computers with blue-tooth GPS, downloaded daily, and plotted on maps for interpretation on a new bedrock map, on which local assistants will be contributing authors.This community-based mapping approach is being designed in consultation with the priorities of Kivallirmiut. Consultation and engagement began in June 2022 with letters to introduce the activity and initiate Indigenous co-development. A positive response led to constructive in-person meetings (November 19 – December 2, 2022) in Arviat and Whale Cove where fieldwork is planned for July 2023. Activities related to this project are designed to provide a meaningful way to engage Northerners, especially youth, to experience and participate in science, and to enable knowledge sharing and co-production. They are intended to strengthen the capacity of communities within the Churchill-Kivalliq corridor to address geoscience opportunities and challenges related to this region's proposed infrastructure developments.

French: Cette approche de cartographie communautaire est conçue en consultation avec les priorités de Kivallirmiut. La consultation et l'engagement ont commencé en juin 2022 avec des lettres pour présenter l'activité et lancer le codéveloppement autochtone. Une réponse positive a mené à des réunions constructives en personne (du 19 novembre au 2 décembre 2022) à Arviat et à Whale Cove, où le travail sur le terrain est prévu pour juillet 2023. Les activités liées à ce projet sont conçues pour fournir un moyen significatif d'engager les habitants du Nord, en particulier les jeunes. , d'expérimenter et de participer à la science, et de permettre le partage et la coproduction des connaissances. Ils visent à renforcer la capacité des collectivités du corridor Churchill-Kivalliq à saisir les opportunités et les défis géoscientifiques liés aux développements d'infrastructures proposés dans cette région.La méthodologie de terrain en 2023 impliquera la planification et l'exécution d'une cartographie communautaire assistée par hélicoptère à partir de Whale Cove (2 semaines) et d'Arviat (3 semaines). Des cartes de compilation et des images Landsat combinées à des données aéromagnétiques seront analysées avec les membres de la communauté afin de concevoir une stratégie de vérification au sol des anomalies géophysiques et de nouvelle collecte de données. La cartographie du socle rocheux sera assistée par des habitants du Nord intéressés, en mettant l'accent sur les jeunes de 20 à 30 ans, les sculpteurs et les prospecteurs qui se verront offrir des opportunités de rotation en tant qu'assistants de terrain rémunérés. La cartographie impliquera 10 jours (30 heures) de soutien héliporté depuis Whale Cove (~2-12 juillet 2023) et 10 jours (30 heures) depuis Arviat (~18-30 juillet 2023). Tout l'équipement nécessaire rentrera dans un petit sac à dos fourni à tous les assistants de terrain avec un sac à lunch, et comprendra une loupe, une boussole, un stylo magnétique, un marteau (pour casser un échantillon frais) et un appareil photo numérique. Les observations seront enregistrées sur de petits ordinateurs portables avec GPS Bluetooth, téléchargées quotidiennement et tracées sur des cartes pour interprétation sur une nouvelle carte du substratum rocheux, sur laquelle des assistants locaux contribueront aux auteurs.

Inuktitut: ᓱᓪᓗᑯᑖᖅᓚᓂᖅᑲᐅᔾᔪᖅᑎ ᒥᐊᓂ ᓵᓐᐳᐋᓐ−ᐱᐅᕆ, ᓄᓇᒥᒃ ᖃᐅᔾᔪᖅᓂᖅ ᑲᓇᑕᒥ ᑐᒃᓯᕋᐅᑕᐅᓯᒪᔪᖅ ᑰᒡᔪᐊᖅ −ᑭᕝᕙᓪᓕᕐᒥ ᐃᒪᕐᒧᑦ ᐃᓚᓕᐅᔾᔪᖅ (CKHF) ᐊᑦᑕᑦᕿᐱᐅᔪᒪᔪᖅ ᐃᓕᖅᑲᖅᐳᖅ ᓴᓇᔾᔭᐅᓗᓂ 1200-ᑭᓚᒦᑕᓂᒃ, 150

megawatt ᐆᒻᒪᕐᑯᑎᑐᕈᓯᕐ ᒋᓕᐊᒻᒥ, ᒫᓂᑑᐸ ᐅᐊᖕᓇᖅᒐᓂ ᑲᓇᖕᓇᖅᒐᓄᑦ ᐃᒡᓗᓕᒑᕐᔪᖅᒧᑦ, ᓄᓇᕗᒻᒥ ᐊᒻᒪ ᑲᖅᒥᖅᒐᓄᑦ ᖃᒪᓂᑦᑐᐊᕐᒧᑦ ᐊᓯᔾᔨᒐᑉᓴᐅᔪᒥᑉ, ᐃᖅᑭᖅᐃᓐᓇᕈᓐᓇᖅᑐᒥᑉ, ᑕᑎᒋᔭᑉᓴᐅᔪᒥᑉ ᐃᒪᕐᒧᑦ ᐆᒻᒪᕐᑯᑎᖃᕐᓂᕐᒥᑉ ᓄᑖᙳᓇᐊᕈᑎᑉᓴᓂᑉ ᐆᒻᒪᕐᑯᑎᓕᓇᔾᔪᑎᓂᑉ, ᐱᕐᔪᐊᖅᒍᓪᓗᓂ ᓯᕗᒻᒧᐊᒍᑕᐅᓗᓂ ᒪᑭᒪᔾᔪᑎᓄᑦ ᑕᓯᐅᔭᕐᔪᐊᑉ ᐊᑭᓐᓇᖅᒐᓂ ᓄᓇᓕᖅᓄᑦ. ᐊᕐᑯᓯᐅᖅᑕᐅᓂᐊᖅᑐᖅ ᐊᒻᒪ ᓄᑖᕈᓇᐊᖅᑕᐅᕐᔪᐊᕐᓗᓂ ᑲᖅᒥᖅᓴᓂᐅᑉ ᒥᕝᕕᐊ ᐸᕐᓇᑉᑕᐅᓯᒪᖅᒥᔪᑦ. ᓄᓇᓕᕆᓂᖅ ᐊᒻᒪ ᓄᓇᐅᑉ ᖃᓄᐃᓕᖅᒐᓂᖅᒐ CKHF-ᑯᑦ ᐊᑦᑕᑦᕐᕕᖅᒐ, ᐃᓚᖅᒥᑦ ᖃᐅᔨᒪᔭᐅᑦᑎᐊᙵᑦᑐᑦ ᐊᒻᒪ ᕿᒥᕐᕈᔭᐅᑦᑎᐊᙵᑦᑐᑦ, ᖃᐅᔨᓴᖅᑕᐅᔭᕆᐊᖃᖅᐳᑦ, ᓄᑖᙳᕆᐊᖅᑕᐅᓗᑎᑉ ᐃᓚᓕᐅᔾᔭᐅᓗᑎᒡᓗ ᑭᕙᓪᓕᕐᒥᐅᓄᑦ ᐱᓕᕆᑎᑦᑎᓗᑎᑉ ᒥᖅᓱᕐᓇᙱᑦᑐᒥᑉ, ᒫᓐᓇᓕᓴᕐᒥᑉ, ᐱᕕᒃᓴᕆᑎᑕᐅᔪᒥᑉ, ᓄᓇᙳᐊᒥᑉ ᐊᑦᑎᖅᓂᖅᓴᒥ ᓄᓇᕗᒻᒥ. ᑕᒪᓐᓇ ᐃᑲᔪᖅᑐᐃᓂᐊᖅᐳᖅ ᐱᓕᕆᐊᒃᓴᓂᑉ ᑕᒫᓂᓕᒫᖅ ᐊᕕᒃᓯᒪᓂᕆᔭᐅᔪᒥ ᑕᒻᑯᐊ ᐊᑐᕈᓐᓇᕐᓃᑦ ᐅᔾᔨᕐᓇᖅᑐᒻᒪᕆᒃᑯᑦ ᐊᖅᒻᓕᒥᐊᖅᑎᑦᑎᓇᔭᖅᑲᑎᑉ, ᓯᕗᓂᒃᓴᒥᓗ ᓄᓇᒥᑉ ᐊᑐᕐᓂᕐᒧᑦ ᐋᖅᑭᒃᓯᒪᓕᖅᑎᑕᐅᔪᑦ ᑐᙵᕕᕐᑲᑦᑎᐊᓕᕈᓐᓇᕐᒪᖅᒫᑕ. ᑖᓐᓇ ᐱᓕᕆᐊᒃᓴᖅ ᑐᕋᒐᕐᑲᖅᑐᖅ ᓂᒥᖅᐸᓯᐊᓂ ᓇᐸᑖᓗᐊᖅᒐᓂ CKHF ᐊᖅᑯᑎᖅᒐᓂ, ᐊᑐᒐᒃᓴᐅᑦᑎᐊᙱᖅᑳᓗᓂ, ᐸᓂᖅᑐᒻᒪᓇᐊᓗᖅᒥ ᓄᓇᖅᒍᐊᕐᑲᖅᑳᓂ (1969-1978), ᐊᑐᒐᔪᙱᑦᑐᖅ ᐊᑐᕈᓐᓇᐃᑉᓕᔪᖅ (K/Ar biotite) ᐊᕐᕌᒍᖅᒥᑦ ᓄᖅᑲᖅᒐᔾᔪᑕᐅᔪᑦ, ᐊᒻᒪ ᖃᐅᔨᒪᓂᖅᑲᙱᖅᑳᓂ ᓱᓇᓂᑉ ᐃᓗᓕᖅᑲᕐᒪᖅᒫᑦ ᐃᒡᓗᔪᐊᑦ ᐃᓗᐊᓂ, ᐊᒻᒪᓗ ᐅᖅᒐᑖᓄᑦ, ᓄᓇᓕᖅᓂ ᐊᐅᓚᑦᓯᕕᖅᒐ ᓄᓇᒥᐅᑕᓕᓇᕈᒃᑯᑦ ᑲᓇᑕ ᐊᕕᒃᑐᖅᓯᒪᓂᐅᔪᓂ ᐱᓕᕆᐊᖅᒍᔪᑕᐅᓯᐊᖅᑐᑦ ᑕᕝᕙᓂ ᐱᓕᕆᐊᒥ ᐅᑯᐊᖅᒍᕗᑦ•ᐋᖅᑭᒥᐊᕐᓂᐊᕐᓗᒍ, ᓄᑖᙳᕆᐊᕐᓗᒍ, ᓴᖅᑭᑦᑎᓗᓂᓗ ᓄᑖᓂᒃ ᓄᓇᓕᕆᓂᕐᒥᒃ ᖃᐅᔨᒪᓂᐅᔪᓂᒃ ᖃᐃᖅᑐᖅᒐᓂᒃ ᓯᕐᒥᖃᕐᓂᖅᒐᓂᒃ ᐊᑦᑎᖅᓂᖅᓴᒥ ᓄᓇᕗᒻᒥ.•ᐱᑎᑦᑎᔪᒪᓂᕐᒧᑦ ᑐᑭᖃᑦᑎᐊᖅᑐᒥᒃ ᐃᓚᐅᑎᑦᑎᓂᐊᕐᓗᓂ ᐅᑭᐅᖅᑕᖅᑐᒥᐅᓂᒃ, ᐱᓗᐊᙳᐊᖅᑲᓂ ᒪᒃᑯᒃᑐᓂᒃ, ᐱᓕᕆᖃᑦᑕᖅᓯᒪᓂᑰᓂᕐᒥᒃ ᐃᓚᐅᓂᕐᒥᒡᓗ ᖃᐅᔨᓴᖅᑐᓕᕆᓂᕐᒥᒃ, ᐊᔪᖅᑎᑦᑎᔪᒪᙱᓐᓂᕐᒧᓪᓗ ᖃᐅᔨᒪᓂᐅᔪᓂᒃ ᐊᒥᖅᑳᖃᑎᖃᕐᓂᕐᒥᒃ ᖃᐅᔨᒪᓂᕐᒥᒡᓗ ᓴᖅᑭᑎᑦᑎᖃᑎᖅᑭᖅᓂᕐᒥᒃ•ᓄᓇᓖᑦ ᐱᔪᓐᓇᕐᓂᖅᒥᑦ ᓴᙱᒃᑎᒋᐊᕐᓗᒥᑦ ᑰᒡᔪᐊᖅ-ᑭᕙᓪᓕᖅ ᓱᓪᓗᑳᖅᒐᓂ ᓴᖅᑭᑦᑎᖁᐸᓗᒥᑦ ᓄᓇᒥᒃ ᖃᐅᔨᓴᕈᒪᓂᕐᒧᑦ ᐱᓕᕆᐊᖅᑑᓪᓗᐊᖅᑐᓂᒃ ᐊᒻᒪ ᐊᒃᓱᕈᕐᓇᖅᑐᓂᒃ ᐊᒃᑐᐊᓂᓕᖅᓂᒃ ᑐᒃᓯᖁᐅᑕᐅᓯᒪᔪᓄᑦ ᐊᐅᓚᔪᓐᓇᐅᑎᓄᑦ ᐱᕙᓪᓕᐊᑎᑕᐅᔪᓄᑦ.ᓯᓚᒥ ᐱᓕᕆᓂᕆᔭᐅᔪᖅ 2023-ᒥ ᐃᓚᖃᕐᓂᐊᖅᐳᖅ ᐱᕙᖁᔭᕐᓂᕐᒥᒃ ᑲᔪᓯᑎᑦᑎᓂᕐᒥᓪᓗ ᓄᓇᓕᖅᓂᒃ-ᑐᙵᕕᓕᖅᒥᒃ, ᖁᓕᒥᒎᓕᒃᑯᑦ-ᐃᑲᔪᖅᑕᐅᓪᓗᑎᒃ ᓄᓇᙳᐊᓕᐅᕐᓂᕐᒥᒃ ᑐᙵᕕᖅᑎᑕᐅᓗᑎᒃ ᑎᑭᕋᕐᔪᐊᕐᒥ (ᓴᓇᑕᐃᓕᑦ ᒪᕿᖅᓄᑦ) ᐊᕝᕕᐊᕐᒥᐅᓄᓪᓗ (ᐱᖅᒐᓯᓄᑦ-ᓴᓇᑕᐃᓕᓄᑦ) ᑲᑎᖅᓯᖅᑕᐅᓯᒪᔪᑦ ᓄᓇᙳᐊᑦ ᐊᒻᒪᓗ ᓄᓇᓕᕆᓂᕐᒧᑦ ᐊᔾᔨᓕᐅᖅᓯᒪᔪᑦ ᑲᑎᕆᓗᒥᑦ ᖃᖅᒐᑕᔪᓐᓇᐅᑎᓄᑦ ᑎᑎᖅᓯᒪᔪᑦ ᖃᐅᔨᓴᖅᑕᐅᑦᑕᕐᓂᐊᖅᐳᑦ ᓄᓇᓕᖅᓂᒥᖅᒫᖅᑐᓂᒃ ᐋᖅᑭᒃᓯᖃᑎᒥᓇᓯᒡᓗᑎᒃ ᖃᓄᐃᓕᐅᕈᑕᐅᔪᒪᔪᓂᒃ ᓄᓇᒃᑯᑦ-ᓄᓇᙳᐊᓂᒃ ᐊᒻᒪ ᓄᑖᓂᒃ ᑎᑎᕋᖅᓯᒪᔪᓂᒃ ᑲᑎᖅᓯᖅᑕᐅᔪᓂᒃ. ᐃᓪᓕᓕᕆᓂᕐᒧᑦ ᓄᓇᙳᐊᓕᐅᕐᓂᖅ ᐃᑲᔪᖅᑕᐅᓂᐊᖅᑐᖅ ᐱᔪᒪᔪᓄᑦ ᐅᑭᐅᖅᑕᖅᑐᒥᐅᓄᑦ, ᑕᐅᑐᓪᓗᐊᑦᑕᕐᓗᑎᒃ ᒪᒃᑯᒃᑐᓄᑦ 20-30 ᐊᕐᕋᒍᓄᑦ, ᖁᑦᑎᖅᓂᖅᓴᒥ ᐃᓕᓐᓂᐊᕐᕕᖅᒥ ᑭᒃᓕᓯᓂᐊᕈᑎᓄᑦ ᐃᓕᓴᐃᔨᑦ, ᓴᓐᖑᐊᖅᑎᑦ ᐅᔭᖃᒃᓯᐅᖅᑎᓪᓗ ᐱᑎᑕᐅᓂᐊᖅᑐᑦ ᓂᑭᑦᑖᕐᓗᑎᒃ ᐱᕕᒃᓴᓂᑦ ᐊᑭᓕᖅᑐᖅᑕᐅᓗᑎᒃ ᓄᓇᒥ ᐃᑲᔪᖅᑎᓄᑦ. ᓄᓇᙳᐊᓕᐅᕐᓂᖅ ᐃᓚᐅᑎᑦᑎᓂᐊᖅᑐᖅ ᖁᓕᓄᑦ ᐅᓪᓗᓄᑦ (30 ᐃᑲᕐᖃᑦ) ᖁᓕᒥᒎᓕᒃᑯᑦ ᐃᑲᔪᖅᑕᐅᓂᕐᒥ ᑎᑭᕋᕐᔪᐊᒥ (~ᓴᒡᒥᓈᕕᒃ 2-12, 2023) ᐊᒻᒪ 10 ᐅᓪᓗᐃᑦ (30 ᐃᑲᕐᖃᑦ) ᐊᕝᕕᐊᓂ (~ᔪᓚᐃ 18-30, 2023) ᑎᑎᖅᓯᒪᔪᑦ ᑲᑎᑕᐅᔪᑦ ᑕᒪᓇᓐᑯᑎᓂᒃ ᑎᒍᒥᐊᓚᕐᓂᒃ ᖃᓇᑕᐅᔭᕐᒧᐊᖅᑕᐅᑕᕐᓂᐊᖅᑐᑦ ᖃᐅᑕᒫᑦ ᐃᓕᔭᐅᓗᑎᒡᓗ ᓄᓇᙳᐊᓄᑦ ᑐᑭᓕᐅᖅᑕᐅᓂᕐᒧᑦ ᐊᒻᒪᓗ ᑭᒡᓚᖅᑐᖅᑕᐅᓂᕐᒧᑦ ᓄᑖᖅᒍᓗᓂ ᖃᐃᖅᓯᒫᖅᒍᓗᓂ ᓄᓇᙳᐊᖅᒍᓗᓂ, ᓄᓇᓕᖅᓂ ᐃᑲᔪᖅᑎᒥᔭᐅᔪᑦ ᐃᑲᔪᕐᓂᐊᖅᑲᑎᑉ ᑎᑎᖅᑎᓂᒃ.ᑖᓐᓇ ᓄᓇᓕᖅᓂ ᓄᓇᙳᐊᓕᕆᓂᖅ ᓴᓇᔭᐅᕙᓪᓕᐊᕗᖅ ᐅᖃᖅᑎᖃᕐᓂᒃᑐᑦ ᓯᕗᓪᓕᐅᖁᔭᐅᔪᓂᑦ ᑭᕙᓪᓕᕐᒥᐅᓂᑦ. ᐅᖃᖅᑎᖃᕐᓂᖅ ᐃᓚᐅᑎᑦᑎᓂᕐᒧᑦ ᐱᒋᐊᓚᐅᖅᑐᖅ ᒪᓐᓃᑦ ᔩᓂ 2022-ᒥ ᑎᑎᖅᑲᖃᕐᓗᑎᒃ ᖃᐅᔨᑎᑦᑎᓂᕐᒥᒃ ᐱᓕᕆᐊᒃᓴᒥᑦ ᐊᑐᕆᐊᕈᑎᖅᒐᓗ ᓄᓇᖅᑲᖅᑳᖅᓯᒪᔪᑦ ᐱᕙᓪᓕᐊᖃᑎᒌᒍᑎᖅᒥᓐᓂ ᑭᐅᔭᐅᑎᐊᓚᐅᖅᑐᑦ ᑲᑎᒪᔭᖅᑐᖅᑲᑎᑉ (ᑲᑎᒪᓇᖅᕕᒃ 2022-ᒥ) ᐊᕝᕕᐊᓂ ᐊᒻᒪ ᑎᑭᕋᕐᔪᐊᕐᒥ ᓯᓚᒥ ᐱᓕᕆᔪᒪᐸᓗᑎᑦ ᓴᒡᒥᓈᕕᒃ 2023-ᒥ.ᓱᓕᕆᓂᐅᔪᑦ ᐊᑦᑐᐊᓂᖃᖅᑐᑦ ᑖᑦᓯᒧᖅᒐ ᐱᓕᕆᐊᒧᑦ ᓴᓇᓯᒪᔪᖅ ᐊᑐᐃᓐᓇᐅᑎᑦᓯᓂᕐᒥᑦ ᑐᑭᖃᑦᓯᐊᖅᑐᓂᑦ ᐃᓚᒥᔭᐅᑎᑦᓯᓂᕐᒥᑦ ᐅᑭᐅᖅᑕᖅᑐᒥᐅᓂᑦ, ᐱᓗᐊᖅᑐᒥᑦ ᒪᒃᑯᒃᑐᓂᑦ, ᖃᐅᔨᒪᓂᖃᕐᓂᕐᒥᑦ ᐃᓚᒥᔭᐅᓂᕐᒥᒡᓗ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ, ᐱᕕᖃᖅᑎᑦᓯᓂᕐᒥᒡᓗ ᖃᐅᔨᒪᓂᕐᒥᑦ ᖃᐅᔨᒪᓂᕐᒥᑦ ᓴᓇᕐᑲᑎᒌᓐᓂᕐᒥᒡᓗ. ᑖᒃᑯᐊ ᓴᙱᑦᑎᒋᐊᕈᑕᐅᓇᓱᐊᖅᐳᑦ ᓄᓇᓖᑦ ᑰᒡᔪᐊᖅ-ᑭᕙᓪᓕᖅᒥᑦ ᐊᖅᑯᑎᖅᒥᓐᓂᑦ ᐱᓕᕆᐊᕐᑲᓂᐊᕐᓗᑎᑉ ᓄᓇᒥᑦ ᖃᐅᔨᓴᕐᓂᑦᓂᑦ ᐊᒃᓯᕉᑕᐅᕙᒃᑐᓂᒡᓗ ᑐᕌᖅᒐᔪᑦ ᓄᓇᐅᑉ ᐊᕕᒃᑐᖅᓯᒪᔪᑦ ᑐᒃᓯᕌᖅᒥᓐᓄᑦ ᒪᑭᒪᐅᑎᒃᓴᓄᑦ ᐱᕙᓪᓕᐊᓂᖅᒥᓐᓂᑦ.

Inuinnaqtun: Please see Inuktitut description (above) and attached as a separate file

Personnel

Personnel on site: 3
Days on site: 35
Total Person days: 105
Operations Phase: from 2023-06-26 to 2023-08-02

Activities

Location	Activity Type	Land Status	Site history	Site archaeological or paleontological value	Proximity to the nearest communities and any protected areas
region of proposed bedrock mapping	Researching	Inuit Owned Sub-Surface Lands	includes Crown and IOL. Includes mixed use and limited use (caribou calving grounds)	region likely contains historical markers, inuksuit, hunting and trapping sites that will be left undisturbed	area includes the municipalities of Whale Cove and Arviat
proposed northern fuel cache (8 sealed drums)	Fuel and chemical storage	Inuit Owned Sub-Surface Lands	mixed use	none	152 km WSW of Whale Cove
proposed southern fuel cache (8 sealed drums)	Fuel and chemical storage	Crown	mixed use	none	107 km west of Arviat

Community Involvement & Regional Benefits

Community	Name	Organization	Date Contacted
Rankin Inlet	Luis Manzo	Kivalliq Inuit Association	2022-11-21
Arviat	Steve England SAO	Hamlet Office	2022-11-24
Arviat	Mike Beauregard	Government of Nunavut Economic Development and Transportation	2022-11-24
Arviat	Nicole Issakiark	Arviat Hunters' & Trappers	2022-11-24
Arviat	Chi-Chi Arinze, Principal & Lyndsay Hines, Guidance Councillor	John Amaguluk High School	2022-11-25
Arviat	Steve England, Hamlet Office	Public Community Meeting with Interpreter	2022-11-25
Whale Cove	Brian Fleming, SAO	Hamlet Office	2022-11-28
Whale Cove	Eva Angoo	Issuark HTO	2022-11-28
Whale Cove	Peter, Science teacher	Inuglak School, Whale Cove	2022-11-29

Authorizations

Indicate the areas in which the project is located:

Kivalliq

Authorizations

Regulatory Authority	Authorization Description	Current Status	Date Issued / Applied	Expiry Date
Nunavut Research Institute	gateway to scientific research in Nunavut, responsible for licensing research in the natural sciences (e.g., geoscience) as required under Nunavut's Scientists Act. Clearinghouse for information on research in Nunavut, providing mentorship, guidance, and support to scientists working throughout the territory.	Applied, Decision Pending		
Indigenous and Northern Affairs Canada	Crown agency to which a permit to undertake geological mapping (land use) needs to be sought	Not Yet Applied		
Kivalliq Inuit Association	The Designated Inuit Organization (DIO) that represents the interests of all Inuit living in the Kivalliq Region. With a mission to represent, in a fair and democratic manner, Inuit of the Kivalliq Region in the development, protection, administration and advancement of their rights and benefits as an aboriginal people, as well as to promote their economic, social, political and cultural well-being through succeeding generations. The KIA's goals include: 1) to preserve Inuit heritage, culture & language; 2) to manage Inuit-owned-lands in the region and provide information to and consult with land claims beneficiaries	Not Yet Applied		

	on land use; 3) to protect Arctic Wildlife & environment, thereby preserving traditional uses for current and future generations; and 4) to assist Inuit in the Kivalliq region in training opportunities.			

Project transportation types

Transportation Type	Proposed Use	Length of Use
Air	helicopter transport from the airport for 10 days, returning each evening	
Land	foot traverse and ATV travel in the community	

Project accomodation types

Community

Material Use

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

Equipment Type	Quantity	Size - Dimensions	Proposed Use
helicopter	10	206L4	days proposed to ferry research scientist and 1-3 community assistants from Whale Cove airport to exposed bedrock localities, and return to hamlet each evening
aircraft	10	206L4	days proposed to ferry research scientist and 1-3 community assistants from Arviat airport to exposed bedrock localities, and return to hamlet each evening

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	32	205	6560	Liters	fuel 206L4 based from Whale Cove airport
Aviation fuel	fuel	40	205	8200	Liters	fuel 206L4 based from Arviat airport
Aviation fuel	fuel	8	205	1640	Liters	8-sealed drum cache located 83 nautical miles WSW of Whale Cove to enhance flexibility, ensure safety
Aviation fuel	fuel	8	205	1640	Liters	8-sealed drum cache located 57 nautical miles W of Arviat to enhance flexibility, ensure safety

Water Consumption

Daily amount (m3)	Proposed water retrieval methods	Proposed water retrieval location
0	municipal tapwater	Tavani Inn, Whale Cove; NRI bunkhouse, Arviat

Waste

Waste Management

Project Activity	Type of Waste	Projected Amount Generated	Method of Disposal	Additional treatment procedures
Information is not available				

Environmental Impacts:

Mapping will involve examination and documentation of exposed bedrock within the Kivalliq region west of Whale Cove and Arviat. Coverage will be via low-impact foot traverses by a 2-3 person team comprising the project proponent (Mary Sanborn-Barrie) and 1 or 2 community members. Transport to the exposures will be by helicopter which will return to Whale Cove (July 2-14) or Arviat (July 16-26) airport each evening. All equipment to be used will fit into a small backpack to be provided to all field assistants along with a bagged lunch. Examination of rock exposures is done using a hand lens, structural compass for measurements, pen magnet, hammer (to break off a fresh sample), and digital camera. Observations and interpretations will be recorded on small, hand-held computers with bluetooth GPS. ** No camps, buildings, ditches, trenches, dams, roads or other structures will be constructed ** No trace of our mapping will be detectable (very low impact). Positive impacts include employment, training and mentoring, increased knowledge of how the land evolved over time, so that land-use decisions are founded also on understanding of geological history of the region.

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

Please see the attached Detailed Plan

Description of Existing Environment: Biological Environment

Description of Existing Environment: Socio-economic Environment

July 1 – August 2, 2023 activities are community-based, and include helicopter-assisted mapping carried out by interested residents from the central Nunavut hamlet of Whale Cove (2-weeks) and the lower Nunavut community of Arviat (3-weeks). Compilation maps and Landsat imagery combined with aeromagnetic data will be analyzed with community members. Interested Northerners, with a focus on youth 20-30 years, carvers and prospectors will be provided rotational opportunities as paid field assistants for training and mentoring in geoscience.

Miscellaneous Project Information

Many details and relevant contact information are provided in the attached Detailed Plan with Waste Management and Spill Plan Contingency, with mitigation measures

Identification of Impacts and Proposed Mitigation Measures

Please see the attached Detailed Plan with Waste Management & Spill Contingency Plan with mitigation measures

Cumulative Effects

There will be no cumulative effects from this mapping activity, please refer to the attached Detailed Plan with Waste Management & Spill Contingency Plan with mitigation measures

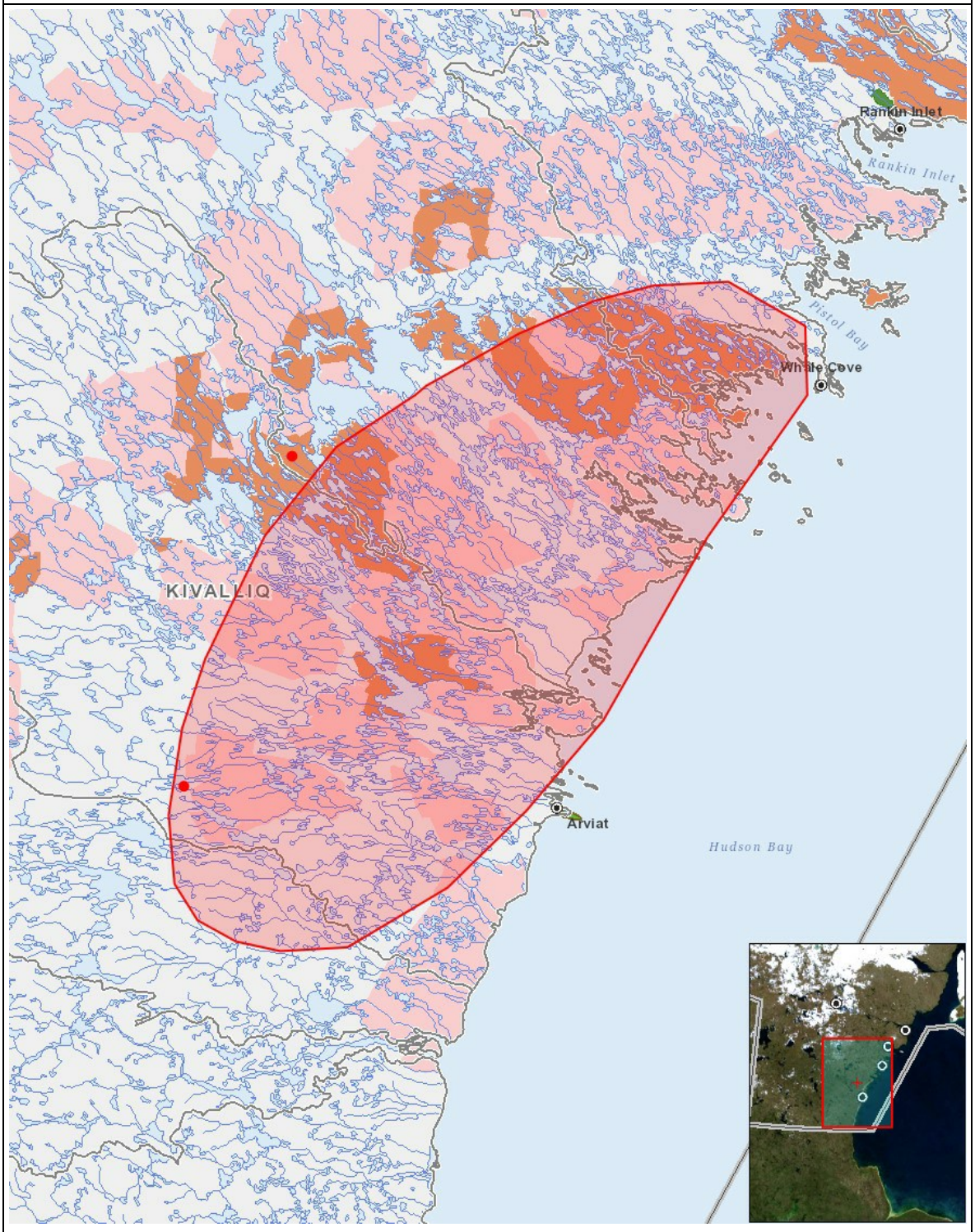
Impacts

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																									
Researching		-	-	-	-	-	-	-	P	-	-	-	-		-	-	-	-	-		P	P	P	-	-
Decommissioning																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-

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

Project Location



List of Project Geometries

1	polygon	region of proposed bedrock mapping
2	point	proposed northern fuel cache (8 sealed drums)
3	point	proposed southern fuel cache (8 sealed drums)