



## **Demande de la CNER faisant l'objet d'un examen préalable #126248**

### **Hook Lake Project**

**Type de demande :** New

**Type de projet:** Mineral Exploration

**Date de la demande :** Thursday, December 18, 2025

**Period of operation:** from 2026-07-24 to 2026-10-23

**Promoteur du projet:** Eric Sondergaard  
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# DÉTAILS

## Description non technique de la proposition de projet

Anglais: 6106 Resources Limited (the Company) is an exploration company based out of Calgary Alberta and is a subsidiary of Manhattan Corporation. The Hook Lake Project is located within the Rankin-Ennadai greenstone belt. The Rankin – Ennadai is the second largest greenstone belt in Canada, however the area has seen only minimal exploration and detailed geological mapping. At Hook Lake, mineralization within the project consists primarily of gold, with various other metals including silver, copper and zinc. The Company holds mineral claims on both Crown Land and Inuit Owned Land (IOL). In July 2025 a Land Use License was granted by the Kivalliq Inuit Association (KVL125B05), for exploration activities on Inuit Owned Land (IOL) parcels AR-16, AR-23, WC-10, and RI-23. No Land Use Permit was required for exploration on Crown Land as there was no water use or camp. Exploration activities including surface rock sampling, geological observations and location of historic core samples took place at the project site approximately 140 km northwest of Arviat. These activities were helicopter supported, based out of Arviat. No camp was used at that time. The Company is now proposing to continue exploration activities including drilling, electro-magnetic (EM) surveys, ground and air geophysics, prospecting and sampling and to build a small, temporary exploration camp (20-person) to support the activities. It is proposed that the camp could be built in the Spring, and that exploration activities carry on until the Fall of 2026 and remain closed during the Winter months. The camp could be accessed via air in the summer and perhaps via trail from Arviat during winter depending on permissions. Mobilization of equipment and supplies to the proposed camp location, could take place in the Spring with the help of local contractors experienced in Arctic conditions. A specific site for the camp has not been chosen at this time, but rather a general location, which may be on Crown or Inuit Owned Land (see map). Once more information is obtained from local knowledge holders, a specific site will be chosen and regulators advised. In order to support these activities, the Company is applying for a Type 111 Land Use License from the Kivalliq Inuit Association (KIA), a Type B Land Use Permit for exploration activities on Crown Land, and a Type B Water License from the Nunavut Water Board for water use, and waste disposal. Mineral exploration activities have been undertaken in this area for many years, with gold first discovered in 1948, and work completed on all mineral claims by previous proponents. 6106 Resources Ltd. strongly respects the wildlife, the environment and the advice of local knowledge holders regarding timing and migration of wildlife and will abide by the terms and conditions of all licenses and permits. At the advice of the Arviat CLARC, Kivalliq Inuit Association's Mobile Protection Measures would be adhered to. Previous engagement by Eric Sondergaard took place via the KIA who held two CLARC meetings on April 15 2024 and June 12th 2024. After thorough review, the Arviat CLARC members are in support of the work plan, as it brings potential employment opportunities to the community members of Arviat. The Arviat HTO has been informed about the potential project activities and location, as well as the recommendations by the CLARC committee. Additional information regarding wildlife sensitivities has been sought, and 6106 Resources is optimistic for an open, constructive dialogue. In person meetings have been offered by the company as the permitting process advances. It is worth noting that Mineral exploration activities have been undertaken in this area for many years, including on portions of mineral claims and agreements by previous proponents. These overlapping exploration activities have been subject to a number of previous Nunavut Impact Review Board (NIRB) screenings, NPC review, and further screening may not be required (NIRB File 21EN009, NPC File No 149463, 16EN035). 6106 Resources has a high regard for the environment and for the people on whose land they are exploring and intends to work hard to gain their respect. In order to do that, they will work within the terms and conditions of all their licenses and permits and seek the advice and experience of local knowledge holders. 6106 Resources Ltd. plans to conduct meaningful community consultation as well as meetings with the Hunter's and Trappers Organization (HTO) and the KIA Community Lands and Resources Committee (CLARC) in the Winter of 2026. Employment and business opportunities are somewhat modest at this early stage of mineral exploration but every effort will be made to prioritize benefits to Arviat

Français: 6106 Resources Limited (la société) est une société d'exploration basée à Calgary (Alberta) et une filiale de Manhattan Corporation. Le projet Hook Lake est situé dans la ceinture de roches vertes Rankin-Ennadai. La ceinture Rankin-Ennadai est la deuxième plus grande ceinture de roches vertes au Canada, mais la région n'a fait l'objet que d'une exploration et d'une cartographie géologique détaillée minimales. À Hook Lake, le projet se caractérise par une





Aturniitigut Laisit tunijaujut hapkunanga Kivalliq Inuit Katimajiinin (KVL125B05), qiniqhianikkut hulidjutinik hapkunani Inuit Nanminirijait Nunat (IOL) najugait AR-16, AR-23, WC-10, unalu RI-23. Piqangittuq Nunanik Aturniitigut Laisimik pijariaqangitut qiniqhiajaamingni Kuin Nunaani imaqanginmat uvaluuniin hiniktarviqanginmat. Qiniqhiajut hulidjutit ilaujut nunap qangani ujaqqat uuktuutit, ujaqqat qungiaqtaujut uvalu najugait ingilgaanin ikuutaqhimajut uuktuutit havaktaujut uvani havaap najugaani naamavjaktuq 140 km tunungani uataanivjak Arviat. Hapkuva hulidjutit halikaptakkut ikajuqtaujut, najugaqtaqtut hamanga Arviani. Tangmaarvingmik atuqhimaitut talvanga. Havagviujuq tadjja upalugajaliqtuq qiniqhiahimaariamingni hulidjutikhanik, ikuutarlutiklu, alrujaqtuqtunik nipitqaqtautunik (EM) naunaijarninginik, nunami ikiakkut qanurinmanganginik, nalvaaqhiurnirmik, naunaijaqtakhaniklu, ihuaqhailutiklu mikijumik, atukaffuktukhamik qiniqhivikhamik najugakhanik (20-nik inungnik) ikajuutikhanik hulidjutinun. Tukhiqtaujut tamna najugahaq havaktauluni Upingaami, uvalu qiniqhianikkut hulidjutit aulahimaaqlutik Ukiakhaq 2026 umikhimahimaaqluni Ukiumi tatqiqhiutini. Tangmaarvikhaq tikitaqtuq tingmitikkut aujami immaqaalu apqutaagut Arvianit ukiumi angirutaitigut. Ingilgajaaqlugit tamajat uvalu tamajat tukhiqtaujumun najugahaanun, havaktaujaaqtut Upingaami ikajuqtaulutik nunamingni katulaaktut ajuittiaqhimajut Ukiuqtaqtumi qanuginiitigut. Naunaituq inigijaujuq hiniktarvikhamik tikuaqtauhimagituq taja, kihiani hunanikliqaa inigijaujumik, Kavamatuqanit Inuit Nanminirijaaniluniit Nuna (takulugu nunaujaq). Kangiqhidjutikhat pijaukpata nunamingni ilihimanikkut tigumidjutiqaqtunin, kitu najugakhaa tikuaqtauniaqtuq uvalu maligaliqijit uqaudjaulutik. Ikajuriangani ukuninga hulilukaaktunik, tamna Havagvingat uuktuqtun tapfuminga Type 111 Nunanik Atuqtaujukharnik Laisikharnik talvanga Kivalliq Inuit Katidjutiqatigiinin (KIA), Naunaitkutinga B Nunanik Atuqtaujukharnik Laisikharnik ujaraqhiuqtunik hulilukaaktunik Kuin Nunaani, unalu Type B Imarmik Laisikhaq talvanga Nunavunmi Imarnik Katimajiinin imarmik atugianganik, iqakuurvikhangitlu. Ujaraqhiuqtut qiniqhiajut havaarijaujut uvani amihuni ukiumi, kuulmik nanijauhijaujut 1948-mi, havaalu iniqhimajut tamaita ujaraktaakhat nanminirijauninginiv hivuani ikajuqtiujunit. 6106 Resources Ltd. akhut pittiaqtait huradjat, avatiit uvalu uqaudjidjutait nunamingni ilihimanikkut pihimajut mikhaagun qakugungutigut uvalu aulaniitigut huradjat uvalu maliklugit atuqtauvaktut uvalu qanuriniit tamaini laisini uvalu laisikhatlu. Uqaudjutaitigut hapkuva Arviat CLARC, Kivalliq Inuit Katimajiit Nuutiqaqtut Munaridjutit maliktauniaqtut. Kinguagut ilauqatigivakhimajait Eric Sondergaard talvuuna KIA-kut katimapkaivakhimajut malrunnik CLARC talvuuna Qittiqqautijuuq 15, 2024 uumanilu Imaruqtirvia 12 2024. Ihivriuriumik, Arviani CLARC ilaujut ihuarijaat havaakhatigut upalungajautit, havaakhanik pidjutiqaqngman nunamingni ilaujunun Arviani. Ukua Arviani HTOkut tuhaqtitaujut mikhaagun havaakhat aulajut uvalu najugahait, imaalu pitquidjutait hapkunanga CLARC katimajiinin. Ilaliutihimajut kangiqhidjutit mikhaagun hugadjat qajangnautait qiniqtaujut, uvalu 6106 Ikajuutit niriuktut angmaumajumik, ihuangnikkut uqautigilugit. Upautiblutik katimadjutit tunijaujut nanminiqaqtunin laisikkut havauhiit hivumuuqtilugit. Taima naunairutiqaqhimajuq taima Ujaraqhiuqtunik qiniqhiajut hulilukaaktunik aulatitivakhimajut uvani najugaani qaffiujunik ukiunganik, ilaujutlu ilanganik ujaraqhiuqtunik nanminikharnik angirutikharniklu kinguliujunik uuktuqtunik. Hapkuat qaliriiktut qinirhianikkut hulidjutit pidjutiqaqpakhimajun kaffiujuni hivuagun Nunavunmi Avatilirinirmut Katimajiinnin (NIRB) naunaijarutainnin, NPC-kut ihivriurutainnin, aallaniklu naunaijarninik pijariaqangittungnarhijun (NIRB File 21EN009, NPC File No 149463, 16EN035).6202 Ikajuutikkut nakuugiqpiaqtaat avatikput uvalu inuit kitut nunani qiniqhiajut uvalu havakniaqtut akhut pittiaqtaujaamingni. Taimailiuriami, havangniaqtut maliklugit maligahait uvalu qanuginiit tamaita laisitik uvalu laisit uvalu qiniqhialutik uqaudjinirmik uvalu atuqhimajamingnik nunamingni ilihimanikkut tigumidjutiqaqtut. 6106 Resources Ltd. Upalungairutikharnik aulatitijaangat naunaitumik nunalaani katimadjutikharnik katimaqatigijaangatlu Anguniaqtuqijitkut Havagviangit (HTO) unalu KIA Nunalaani Nunaliqijitunalu Hanaqidjutikhangit Katimajiit (CLARC) Ukiakhami 2025. Havaakhat manikhaqhiurutulu atuqtakhat mikijut uvani atulihaalirnigani ujarakhiuqtut nalvaaqhiuqtut kihiani tamaita akhuurutit pijauniaqtut atuqaariagani nakurutaujut Arvianut.

## **Personnel**

Personnel on site: 30

Days on site: 150

Total Person days: 4500

Operations Phase: from 2026-01-23 to 2026-05-23

Operations Phase: from 2026-07-24 to 2026-10-23

Post-Closure Phase: from to

## Activités

Emplacement	Type d'activité	Statut des terres	Historique du site	Site à valeur archéologique ou paléontologique	Proximité des collectivités les plus proches et de toute zone protégée
Arviat-Hook Lake Project Potential Winter Access Route	Access Road	Crown	The area highlighted for possible use as a winter track crosses Crown, Inuit owned surface, and Inuit owned subsurface lands between the Hook Lake Project and the settlement of Arviat.	No known archaeological sites. If sites are encountered work will cease at that location and an archaeologist will be consulted.	Area of potential winter track does not cross any protected areas. The zone covers approximately 135km from Arviat to the Mineral Claims and Exploration Agreements of 6106 Resources.
Hook Lake Project Exploration Agreement	Drilling	Inuit Owned Sub-Surface Lands	Exploration has been conducted in this area in the 1940s-1990s in search for gold, silver, copper and zinc. Companies such as Dejour Mining, Inco, Placer Dome, Noble Peak Resources were active on this ground. Historic Exploration involved geological mapping, ground and airborne geophysical surveying, rock and soil sampling, diamond drilling.	No known archaeological sites. If sites are encountered work will cease at that location and an archaeologist will be consulted. Location of palaeontological sites is not expected due to Archean aged rocks and lack thereof significant macrofossils.	Area of exploration agreements does not cover any protected areas. Arviat is the nearest community.
Hook Lake Project Mineral Claims	Mineral Exploration	Crown	Exploration has been conducted in this area in the 1940s-1990s in search for gold, silver, copper and zinc.	No known archaeological sites. If sites are encountered work will cease at that location and an archaeologist will be consulted. Location of palaeontological	Mineral Claims do not cover any protected areas. Arviat is the nearest community.

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### Engagement de la collectivité et avantages pour la région

Collectivité	Nom	Organisme	Date de la prise de contact
Arviat	Nicole Issakiark	Arviat Hunters and Trappers Organization	2024-10-24
Arviat	Mayor	Hamlet of Arviat	2024-10-30
Arviat	Nicole Issakiark	Arviat Hunters and Trappers Organization	2025-05-12
Arviat	Nicole Issakiark	Arviat Hunters and Trappers Organization	2025-10-07
Arviat	Mayor	Hamlet of Arviat	2025-10-07
Arviat	Director and CLO	Kivalliq Inuit Association	2025-10-07
Rankin Inlet	Luis Manzo	Kivalliq Inuit Association	2025-10-07
Rankin Inlet	Land Use Inspector	Crown Indigenous Relations and Northern Affairs Canada	2025-10-07
Gjoa Haven	Director of Licensing	Nunavut Water Board	2025-10-07
Cambridge Bay	Info	Nunavut Impact Review Board	2025-10-07
Arviat	Nicole Issakiark	Arviat Hunters and Trappers Organization	2025-11-14
Arviat	Luis Manzo	Kivalliq Inuit Association	2025-11-14
Arviat	John Main	Nunavut Legislative Assembly	2025-11-14
Arviat	SAO	Hamlet of Arviat	2025-11-14
Arviat	Nicole Issakiark	Arviat Hunters and Trappers Organization	2025-12-09
Arviat	Nicole Issakiark	Arviat Hunters and Trappers Organization	2025-12-10
Arviat	SAO	Hamlet of Arviat	2025-12-09

# Autorisations

Indiquez les zones dans lesquelles le projet est situé:

Kivalliq

## Autorisations

Organisme de régulation	Description des autorisations	État actuel	Date de l'émission/de la demande	Date d'échéance
Crown-Indigenous Relations and Northern Affairs Canada	Type A Land Use Permit for exploration camp and drilling	Not Yet Applied		
Nunavut Planning Commission	conformity determination	Active	2025-06-20	
Nunavut Planning Commission	conformity determination	Active	2025-11-17	
Kivalliq Inuit Association	Land Use License	Active	2025-07-25	2027-08-31
Kivalliq Inuit Association	amended land use license to encompass possible camp and drilling	Not Yet Applied		
Office des eaux du Nunavut	Type B water license for camp domestic purposes and drilling	Not Yet Applied		
Crown-Indigenous Relations and Northern Affairs Canada	Type B Land Use Permit for winter trail access	Not Yet Applied		
Kivalliq Inuit Association	Land Use License for winter trail access	Not Yet Applied		

## Project transportation types

Transportation Type	Utilisation proposée	Length of Use
Air	delivery of goods and fuel, transport crew from small temporary camp to exploration areas/drill sites	

## Project accommodation types

Temporary Camp

# Utilisation de matériel

Équipement à utiliser (y compris les perceuses, les pompes, les aéronefs, les véhicules, etc.)

Type d'équipement	Quantité	Taille – Dimensions	Utilisation proposée
helicopter	1	Bell 407 or similar	Drill moves, crew transport
twin otter	1	16 m long	Resupply and equipment
snowmachines	1-8	200 kg	Transport to/from drills, geophysics, camp support
snowmachines	1-8	200 kg	Transport to/from drills, geophysics, camp support
ATV and trailer	1-4	500 kg	Transport equipment and supplies
inflatable boat	1-2	zodiac or equivalent	Lake bathymetry
diesel generator	1-2	20 kw diesel generator or similar	camp power
water pumps	1-2	10 kg	generator; Drill Rig/camp support
freezer	1	standard	domestic purposes
stove	1	30	domestic purposes
fridge	1	standard	domestic purposes
generator	2	20 kw	Camp/ water pumps
water pump	2	Honda WT20XK4C or equivalent	camp water
incinerator	1	dual chamber	incinerate combustible waste
Pacto toilets	4	standard	human waste disposal
clothes washer	1	standard	domestic clothes washing
clothes dryer	1	standard	domestic clothes drying
Toyo stove	13	L731/732 or equivalent	tent heat
RC Hornet or equivalent reverse circulation drill	1-3	4,400 (all components)	rock chip sampling
Boyles 25A/37 or equivalent diamond drill	1-2	8,600 including rods and casings	rock core sampling
solids removal equipment	1-2	3000 kg each	remove solids from drill water
Frost Fighter Heaters	1-4	150 kg	heat drill shacks
generators	1-4	5 kw Gasoline generator or equivalent	power for water pumps for drilling

## Décrivez l'utilisation du carburant et des marchandises dangereuses

Décrivez l'utilisation de carburant :	Type de carburant	Nombre de conteneurs	Capacité du conteneur	Quantité totale	Unités	Utilisation proposée
Diesel	fuel	200	205	41000	Liters	Generator/heating/drill support
Aviation	fuel	200	205	41000	Liters	helicopter / twin otter refueling

fuel						
Propane	fuel	30	100	3000	Lbs	cooking
Gasoline	fuel	10	205	2050	Liters	camp support/Snowmachine/ATV/generator
Other	fuel	50	20	1000	Liters	oil for generator; Drill Rig/camp support
Other	fuel	50	20	1000	Liters	drill lubricants
Other	fuel	50	20	1000	Liters	drill mud additives
diesel	hazardous	200	205	41000	Liters	Generator/heating/drill support
Aviation Fuel	hazardous	200	205	41000	Liters	helicopter and twin otter fuel
gasoline	hazardous	10	205	2050	Liters	camp support/Snowmachine/ATV/generator
propane	hazardous	30	100	3000	Lbs	cooking
oil	hazardous	50	20	1000	Liters	oil for generator; Drill Rig/camp support

### Consommation d'eau

Quantité quotidienne (m3)	Méthodes de récupération de l'eau proposées	Emplacement de récupération de l'eau proposé
299	pump from nearby water source	nearby water source

# Déchets

## Gestion des déchets

Activités du projet	Type des déchets	Quantité prévue	Méthode d'élimination	Procédures de traitement supplémentaires
Mineral Exploration	Déchets combustibles	unknown but expected to be minimal	waste from lunches and paper waste, incinerated in a dual chambered incinerator	ash collected and stored in sealed 45 gallon drums and transported to an approved facility
Camp	Déchets combustibles	unknown but expected to be minimal	incinerate in dual chambered incinerator	ash collected and stored in sealed 45 gallon drums and transported to an approved facility
Camp	Eaux grises	unknown but expected to be minimal	depression on the tundra located at least 31 metres above the ordinary high water mark of any water body	buried at the end of the season
Fuel and chemical storage	Déchet dangereux	unknown but expected to be minimal	stored separately in secondary containment.	collected in sealed 45 gallon drums and transported to an approved facility for disposal
Drilling	Déchet dangereux	unknown but expected to be minimal	stored separately in secondary containment.	collected and stored in a sealed 45 gallon drum and transported to an approved facility for disposal
Camp	Eaux usées (matières de vidange)	unknown but expected to be minimal	pacto toilets	incinerate in dual chambered incinerator. ash collected and stored in sealed 45 gallon drums and transported to an approved facility for disposal.

### Répercussions environnementales :

The imposed mitigation measures described in the "Additional Information" are set out to ensure the exploration area is in the same or better condition than prior to exploration activities. Further to the mitigation, the company will abide by the terms set out in any licenses and permits granted to allow exploration activities. Further mitigation measures will be implemented as required to address any arising issues.

# **Additional Information**

## **SECTION A1: Project Info**

## **SECTION A2: Allweather Road**

## **SECTION A3: Winter Road**

## **SECTION B1: Project Info**

6106 Resources plans to conduct an initial drill program in 2026 to verify historic results and find areas of high gold and silver potential. If promising the project would continue seasonally in spring/summer and/or winter over following years.

## **SECTION B2: Exploration Activity**

Satellite remote sensing may be used to acquire high resolution satellite imagery or hyperspectral data. This would be undertaken completely remotely by a 3rd party expert contractor. The area of investigation would be limited to 6106 mineral claims/exploration agreements. Samples of soil and other sediments may be completed. This would involve the collection of a small bag of soil from a 10x10cm hole, dug by hand. The tundra vegetation on top would be carefully removed and replaced after sampling. On land drilling will be completed using primarily a diamond drilling rig, such as the Zinex A5 or similar, to recover drill core for geological logging, cutting and sampling for shipment to a laboratory for preparation, digestion and analysis. Reverse Circulation drilling may also be used, for example a Super Hornet heli portable rig. Reverse Circulation drilling produces "chip" samples which will be collected at the drill site through a cyclone and "riffle-splitter" or similar into composite samples, usually spanning a 5ft interval. On ice drilling (typically diamond drilling) Drilling as described above will primarily be completed on land, however if required to demonstrate continuity within the mineralisation drilling may be conducted in a similar manner on ice. On site sample processing will be limited to the geological logging of rock type, alteration and mineralisation, along with basic measurements using a portable X-Ray Fluorescence device (pXRF) and magnetic susceptibility tool (KT-10). After logging, the drillcore will be cut over specific intervals using a diamond saw, with half of the drillcore being assigned a sample ID and bagged for shipping to a laboratory off-site. Off site sample processing. All samples prepared on site from drilling and rock chip sampling activities will be shipped off-site to a certified laboratory, for example ALS Laboratories, Yellowknife. The samples will then undergo crushing, pulverising, splitting, digestion in acids and then analysis. This will quantify the concentration of elements of interest within the samples.

## **SECTION B3: Geosciences**

Geophysical surveys may be conducted to gain information about the subsurface without intrusive methods. Magnetic data can be acquired either by ground surveys, which involves walking a number of straight lines across the target area carrying a magnetometer device, or airborne methods. Airborne methods involve a similar line based approach, but with a fixed wing or helicopter to cover the distance. Electromagnetic (EM) surveys may also be used, which can be completed by ground or airborne means. Ground EM surveys involve laying cables in a set configuration and the creation of a current through the cables via battery power or generators. Measurements are then taken on foot within the loop of cable and the response recorded, indicating the conductivity/resistivity of the subsurface. Aerial photography will be conducted, this will likely be completed via helicopter and is an alternative/supplement to satellite data collection. Ground penetrating radar may be used to confirm lake depths. Geological maps already exist for the project area. Detailed geological mapping may be completed over certain target areas in conjunction with rock chip sampling. All drillcore or chips generated from diamond drilling or reverse circulation drilling will be logged for geology. This will form a 3D geological model of the target areas. Geophysical surveys completed via fixed wing or helicopter may require periods of lower altitude flying. No aerial surveys will be undertaken during times of increased wildlife sensitivity when herds of caribou are observed in the project area.

## **SECTION B4: Drilling**

The number of drillholes is highly dependent on the results of the first phase of results. However, a maiden drilling program may be expected to consist of up to 25 drillholes to approximately 80 in a year where promising results have been found. Primarily diamond drills will be used, however reverse circulation drilling may be used where suitable. Reverse circulation drills do not require water usage. Drillhole depth will vary depending on the target area, however initial diamond drillholes may average 250-300m depth with deeper holes extending to 400-500m depth to test extensions of mineralisation. Reverse circulation drillholes will likely average 200m. No additives to be used with reverse circulation drilling, diamond drilling may use calcium chloride as an additive to water to assist when drilling through permafrost. Drill cuttings from diamond drilling will be directed to a nearby natural depression/sump with the drilling water being re-circulated downhole. Drilling equipment will be moved via helicopter. During winter, with sufficient snow coverage drilling equipment may be dragged on skids.

## **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 de l'environnement existant : Environnement physique**

The Hook Lake Project is located within the Kivalliq Region of Nunavut. The main study area, covered by mineral claims and exploration agreements is located 135km northwest of Arviat, the nearest settlement. The area has a history of mineral exploration. The Project, consisting of mineral claims on Crown Lands and Surface Inuit Owned Lands and Exploration Agreements on Inuit Owned Lands Surface and Subsurface. There is no known overlap with protected areas. The wider project area encapsulates a route to Arviat, to maintain the possibility of a winter trail between the exploration areas and the settlement. Geology is dominated by volcano-sedimentary rocks of Archean age, They trend east-west to northeast-southwest within the Rankin-Ennadai Greenstone Belt. They have been deformed and metamorphosed to greenschist facies with local higher metamorphic grade in the vicinity of large igneous plutons. Gold mineralisation was discovered in the 1960s at Turqueil Lake with work programs extending into the 1980s, consisting of geological mapping, rock sampling, soil sampling, airborne and ground geophysics and substantial drilling programs. Copper, zinc and silver mineralisation is also present and has been subject to extensive previous mineral exploration. The project area has several eskers, which are trending NW/SE. There are also areas mapped as "Sand" and "Tundra Polygon" which are typical landforms for the tundra landscape. Topography is generally flat with small rocky outcrops which in places are rounded due to glaciation. Seasonal temperature variation across the project area is pronounced. Average winter daytime temperatures in the surrounding Kivalliq-Ennadai region reach approximately -24 °C, with nighttime lows near -32 °C, while summer daytime highs average around +15 °C. Broader Nunavut climate data indicate winter averages ranging between -26 °C and -12 °C, and summer averages from +2 °C to +9 °C. Strong prevailing westerly winds are typical. Lakes in the region generally remain frozen until early to mid-May, followed by a cool, rainy season beginning in late August. Air quality in the area is expected to generally be good due to the remote location and minimal industrial activity, although wildfires activity can impact air quality periodically. Noise levels are also expected to be low due to the remote location. The area is one of contiguous permafrost, which can extend to a depth of 160 m or more and reach temperatures as low as -15°C. Although waterbodies in the region are generally pristine in nature, natural geology and environmental inputs and flow processes can cause water quality to vary by waterbody and season. The project area encapsulates several large waterbodies of note, including Heninga Lake, Carr Lake, Turquetil Lake, Kaminak Lake and Maguse Lake towards Arviat.

### **Description de l'environnement existant : Environnement biologique**

The Project area is in a predominantly treeless Southern Arctic Tundra. Vegetation is comprised of grasses, lichens, low shrubs, mosses, and various arctic flowering plants. A limited abundance of spruce, willows, alders, and ground birch can be found in sheltered niches along lake edges or watercourses. The Aquatic life in the freshwater environments include species such as Arctic char, lake trout, northern pike and Arctic grayling. Project lies within the range of the Qamanirjuaq barren ground caribou herd. The calving period of June 9 to June 22 is a particularly sensitive time for the caribou herd, which currently is predominantly located NW of Whale Cove, which is further NE than the project area. Other mammals include moose, muskox, grizzly bears, wolverines, arctic ground squirrels, wolves and arctic fox. Polar bears are present along the coast of Hudson Bay but rarely move far enough in land to be present within the project area. Within the Kivalliq region there are favourable habitats for birds such as waterfowl-geese and ducks, shorebirds such as sandpipers, and raptors like falcons and hawks. Notable examples include the Ross's goose, snow goose, peregrine falcon and rough-legged hawk. Many of these species utilise the Kuugaarjuk Migratory Bird Sanctuary which is south of Arviat, outside of the Project area. There are no known official species at risk within the project area. There are also no known National Wildlife Areas, Migratory Bird Sanctuaries or Other Conserved Areas in the Project area as per the National Protected and Conserved

## **Description de l'environnement existant : Environnement socio-économique**

The project is located 135km northwest of Arviat, in the Kivalliq Region of Nunavut. The project covers Crown land and Inuit owned surface and subsurface land. Exploration Agreements with the NTI are in place on Inuit owned land with subsurface rights. 6106 Resources are not aware of any archaeological or culturally significant sites in the Project Area but will avoid any sites that are identified over time. The bedrock geology is dominated by Archean aged rocks, which would be host to only microfossils, and so the palaeontological aspect is limited. The project will significantly add to the subsurface geological knowledge of the Rankin-Ennadai Greenstone Belt, an important source of gold for Nunavut. The project, due to its remote location is not expected to effect human health, local or regional traffic patterns. 6106 Resource acknowledges the traditional land use in the Kivalliq Region, with importance of harvesting practices. The project location is 135km inland from Arviat, and is not expected to interrupt harvesting practices. 6106 Resources is committed to working with the Arviat HTO, Kivalliq Inuit Association and the Hamlet of Arviat, over the life of the project. 6106 Resources will also preferentially use Arviat, Kivalliq, and Nunavut-based businesses, maximizing local employment, providing on-the-job and other training opportunities, and supporting community initiatives as requested and feasible.

## **Miscellaneous Project Information**

### **Identification des répercussions et mesures d'atténuation proposées**

Physical Impacts  
1. Designated environmental areas: No designated environmental areas occur within the Project footprint. A winter trail may be used by low-pressure vehicles (e.g., tracked or skid-mounted) to connect Arviat with the Hook Lake Camp (final location TBD).  
2. Ground stability: Effects on ground stability will be minimized by avoiding areas highly sensitive to exploration, directing runoff into sumps to prevent land scouring, and protecting permafrost (as described below). Given these measures, along with the small scale and limited extent of activities, no significant effects on ground stability are expected.  
3. Permafrost: Permafrost could be affected by heated structures, drilling operations, and unfilled sumps. To reduce potential impacts, the camp will be placed on dry, stable terrain, avoiding wetlands. Heated tents and drill shacks will be elevated on cribbing to promote air flow and limit ground warming. Any excavated sumps or depressions near drill collars will be backfilled at closure to prevent water ponding and subsequent permafrost degradation. With these measures and the modest scale of the program, no significant permafrost impacts are anticipated.  
4. Hydrology / limnology: Water may be drawn from lakes, streams, ponds, or rivers near the camp and drill sites. Although 6106 Resources is requesting a cumulative withdrawal limit of up to 299 m<sup>3</sup>/day (Type B Water Licence threshold), typical use is expected to remain below 100 m<sup>3</sup>/day and occur on fewer than 100 days per year on average. Drill water use will be minimized by recycling and reusing drill water, settling and removing cuttings, and/or using a freshwater tank to eliminate repeated intake from lakes. Together, these practices can reduce water demand by up to 90%. Under-ice withdrawals will not exceed 10% of available water volume, determined in accordance with DFO's Protocol for Winter Water Withdrawal or the Mackenzie Valley Land and Water Boards' Technical Reference Document. No significant impacts on hydrology or limnology are expected.  
5. Water quality: Water quality could be influenced by spills, sump releases, or drilling effluent. Biodegradable drilling additives will be used where possible, and drilling on ice will avoid the use of salt and operate with a closed fluid loop. Sumps will be located at least 31 m from the ordinary high water mark and managed according to best practices. All chemicals will be stored at least 31 m from water and handled in accordance with the Spill Contingency Plan. With these mitigation measures in place, no significant impacts on water quality are anticipated.  
6. Climate conditions: Given the limited scale and nature of the proposed work, no impacts on climate are anticipated.  
7. Eskers and other unique/fragile landscapes: Eskers are present within the exploration area. Impacts will be minimized by avoiding sensitive terrain, managing runoff through sumps to reduce land scouring, and protecting permafrost as described earlier. No significant effects on these landforms are predicted.  
8. Surface and bedrock geology: The nature and scale of the Project are not expected to cause significant effects on surface or bedrock geology. Geological knowledge of the area will be enhanced through exploration.  
9. Sediment and soil quality: Sediment and soil may be affected by spills, sump discharges, or drilling activities. Biodegradable drilling additives will be used where possible, drilling on ice will avoid salt and use closed circuits, and sumps will be placed at least 31 m from the ordinary high-water mark and managed in accordance with best practices. Chemicals will be stored at least 31 m from water, and spill response measures outlined in the Spill Contingency Plan will be followed. No significant impacts on sediment or soil quality are expected.  
10. Air quality: Air quality may be influenced by emissions

from fuel combustion or waste incineration. 6106 Resources will reduce emissions by limiting helicopter use and equipment run-times, performing preventative maintenance, minimizing open burning, burning only appropriate waste streams (e.g., untreated wood, paper, cardboard), and using a dual-chamber, forced-air incinerator designed for the waste types generated. Given these measures and the scale of the Project, no significant impacts on air quality are expected.<sup>11</sup> Noise levels: Noise from camp operations, drilling, and helicopter use may disturb wildlife. Noise will be localized, intermittent, and short-term. Work will cease if wildlife approaches any site. Additional measures include reducing idling and unnecessary flights, maintaining equipment to reduce noise, and following the Wildlife Management and Monitoring Plan. No significant noise impacts are anticipated.

**Biological Impacts**

**1. Vegetation:** Vegetation effects from the Project footprint will be reduced by:

- Minimizing overall footprint through consolidation of structures and materials
- Locating the camp on dry, durable ground to reduce erosion and ground disturbance
- Using previously disturbed areas (e.g., airstrips) where feasible
- Elevating heated tents and drills on cribbing to reduce vegetation disturbance and permafrost thaw
- Avoiding off-road vehicle use when rutting or gouging could occur
- Reducing winter trail and winter road size by minimizing corridor length and width and using existing trails where possible
- Using natural depressions or sumps for liquid waste, and backfilling any dug sumps after use to support revegetation
- Minimizing salt use during drilling by substituting calcium chloride for sodium chloride, which is more harmful to plants
- Preventing non-native species introduction by cleaning equipment prior to mobilization
- V-notching winter stream crossings before melt to prevent unnatural ponding
- Locating sumps, fuel storage, and infrastructure more than 31 m from waterbodies
- Avoiding areas with identified sensitive features
- Progressively closing drill sites and fly camps to limit cumulative disturbance
- Stabilizing areas susceptible to erosion or sediment loss at closure

With these measures and the small scale of the Project, no significant vegetation impacts are predicted.

**2. Wildlife, birds, wildlife habitat, and migration patterns:** Project activities may affect wildlife habitat or cause disturbance. In addition to the habitat-protection measures above, 6106 Resources will implement mitigation to:

A) reduce disturbance to wildlife, dens, and nests  
B) minimize wildlife attraction  
C) limit helicopter-related disturbance  
D) reduce direct wildlife impacts

**Reducing disturbance to wildlife, dens, and nests:**

- Closely monitor activities during Qamanirjuaq caribou calving and post-calving (June 9–22 and June 23–July 3) and halt work if caribou approach. Abide by the KIA's Mobile Mitigation Measures
- Avoid habitat disturbance during the bird nesting season when possible
- Maintain a 300 m buffer from bird concentrations (e.g., colonies, molting sites)
- If active nests are located, stop disruptive work until nesting is complete and establish species-appropriate buffers
- Avoid drilling near active carnivore dens
- Skirt camp tents to deter wildlife denning

**Reducing wildlife attraction:**

- Enforce a strict no-feeding-wildlife policy
- Store food waste and attractants securely and in ways that reduce odours
- Require crews to return all food scraps to camp for proper management
- Dispose of attractant wastes promptly via backhaul or approved onsite incineration
- Do not establish a landfill, as it may attract wildlife
- Screen kitchen greywater to remove food particles and treat sumps with lime or lye as needed
- Train personnel in waste-management procedures designed to reduce attraction
- Install a bear fence if necessary
- Conduct routine inspections to verify that attractants are controlled and food waste is managed appropriately

**Minimizing helicopter disturbance:**

- Halt exploration, including flights, if Qamanirjuaq caribou approach during calving/post-calving
- Avoid unnecessary low-level flights or landings near wildlife
- Fly above 610 m altitude whenever possible and not below 300 m except for operational needs
- Adjust flight paths to avoid wildlife when low flying is required
- Maintain a 1,100 m vertical buffer over bird concentrations
- Maintain a 1.5 km lateral buffer from bird colonies and molting areas
- Detour flights around wildlife
- Conduct wildlife scans before landing and avoid landing near animals

**Minimizing direct wildlife impacts:**

- Enforce a strict no-hunting policy
- Permit fishing only with proper licences
- Provide bear-awareness and deterrence training
- Equip crews with deterrence gear (e.g., air horns, bear bangers, spray) and train them
- Use bear fences where required
- Use wildlife monitors when appropriate
- Avoid deliberate approach to wildlife
- Train all workers on wildlife-related policies and waste-management practices

Check active work areas for signs of wildlife access or new nesting

With these measures and the limited scale of activities, no significant impacts to wildlife, birds, habitat, or migration patterns are expected.

**3. Aquatic species, habitat, and migration/spawning:** All water intake lines will be screened to avoid entraining or impinging fish, and DFO-recommended mitigation measures will be followed or guidance sought as needed. No in-water construction is planned. With these actions, no significant impacts on aquatic species or habitat are anticipated.

**4. Wildlife protected areas:** The exploration program does not overlap any wildlife protected areas.

**Socioeconomic Impacts**

**1. Archaeological and cultural historic sites:** Ground disturbance from the camp and drill sites could affect archaeological or cultural sites. If areas of potential significance are identified, an archaeologist will be engaged to assess possible camp and drill locations. Archaeological assessments will continue as required over the life of the Project. Although no known archaeological or cultural sites occur within the mineral claims, any discovered sites will be avoided. With these measures and the small scale of the Project, no significant impacts are anticipated. If any areas are discovered, exploration activities will cease in that area and cordoned off. The site will then be reported to the Government of Nunavut, chief archaeologist.

**2. Employment:** The Project is expected to provide positive employment

benefits. 6106 Resources will prioritize contracting with Arviat, Kivalliq, and Nunavut businesses, maximize local hiring, and offer on-the-job and other training opportunities. With established mining operations already present in the region, an experienced workforce is available. Overall, the Project is expected to contribute positively to regional employment.3. Community wellness:Community wellness is expected to benefit from increased employment, local business participation, and 6106 Resources' support for community initiatives. Overall impacts on community wellness are anticipated to be positive.4. Human health:Due to the remote location, small scale, and the mitigation measures described throughout the application, no impacts on human health are expected.

### **Répercussions cumulatives**

Exploration activities by 6106 resources are all anticipated to be of limited scale and impact and will be mitigated to avoid significant residual impacts. However, residual impacts must be considered in combination with those of other projects undertaken in the past, present, or future, to confirm that even individually-limited impacts are unlikely to result in significant cumulative impacts. Exploration activities have been considerable in the Rankin-Ennadai Greenstone Belt (geological province) which now hosts world class gold deposits and mining operations, such as the Meliadine and Meadowbank Complex mines of Agnico Eagle. This gold mining activity is a considerable, long term positive socio-economic impact with a very limited surface footprint. 6106 Resources exploration activity would add to this. 6106 mineral claims and exploration agreements are in areas of previous exploration activity. Cumulative effects of exploration are expected to have mitigatable negative impacts. In this area, the highest potential for negative cumulative effect, should there be one, is on the Qamanirjuaq barren-ground caribou herd, who utilise the area as habitat. Care is to be taken during the calving and post calving periods, which sees the herd to the NE of the Project area. To mitigate during this time of the year winter access is considered, making use of significant snow cover to drag resupplies and equipment to the camp, reducing the number of helicopter and/or float plane flights required during more sensitive periods of the year. With significant mitigation measures in place, no significant cumulative negative impacts are anticipated.

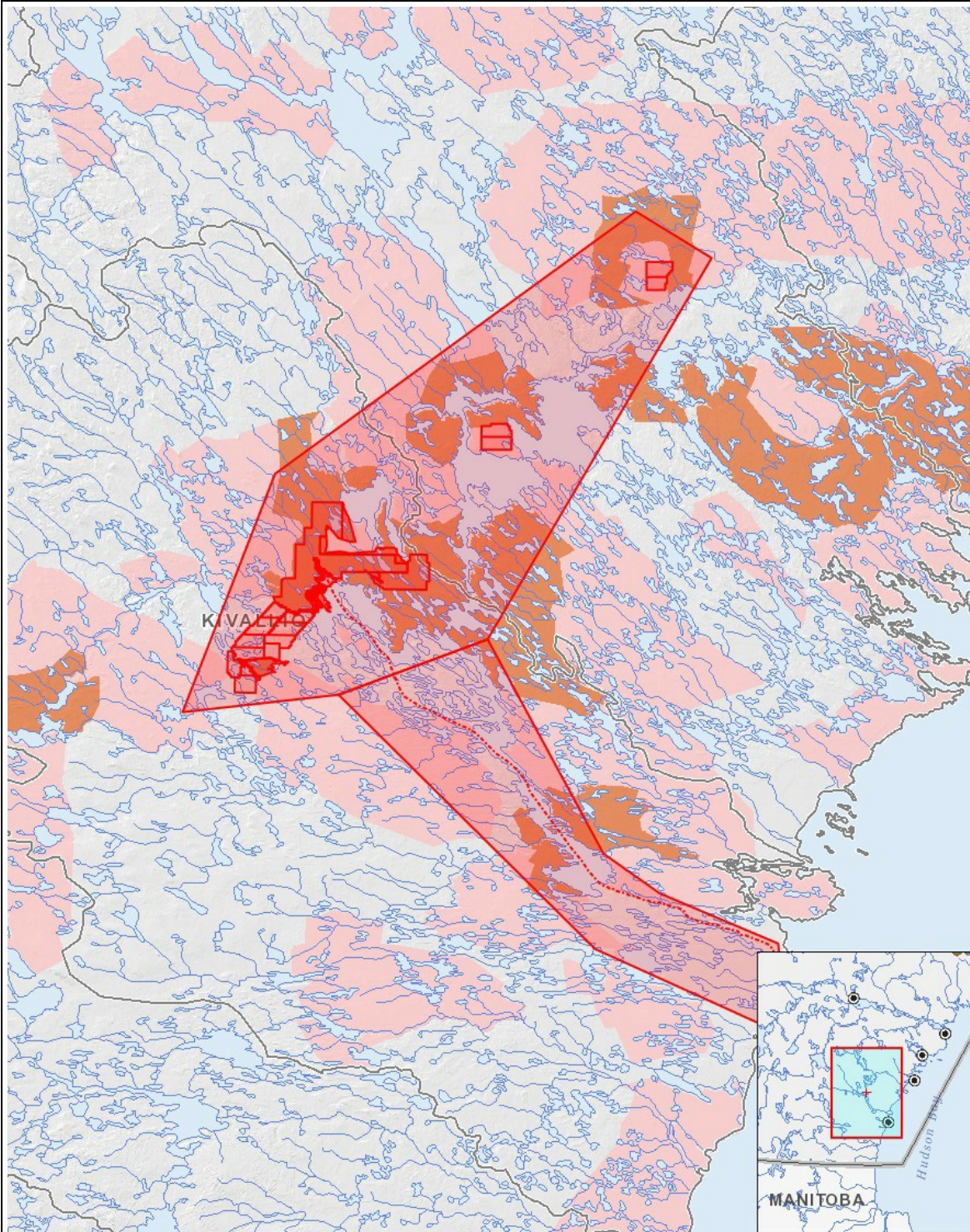
# Impacts

## Identification des répercussions environnementales

	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
<b>Construction</b>																									
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Exploitation</b>																									
Drilling	-	-	M	-	M	-	-	P	M	-	M	M	-	M	M	-	M	-	-	M	P	P	-	-	-
Access Road	-	-	-	-	M	-	-	-	-	-	M	M	-	M	M	-	M	-	-	M	P	-	-	-	-
Mineral Exploration	-	-	M	-	M	-	M	P	M	-	M	M	-	M	M	-	M	-	-	M	P	P	P	-	-
<b>Désaffectation</b>																									
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(P = Positive, N = Négative et non gérable, M = Négative et gérable, U = Inconnue)

## Site du projet



## Liste des géométries de projet

1	polygon	Hook Lake Project Mineral Claims
2	polygon	Arviat-Hook Lake Project Potential Winter Access Route
3	polygon	Hook Lake Project Wider Area
4	polygon	Hook Lake Project Exploration Agreement
5	polygon	Pending Application for Exploration Agreement
6	polygon	Hook Lake Project Mineral Claims
7	polyline	Proposed Winter Trail
8	point	Potential Camp Location
9	point	Potential Camp Location
10	point	Potential Camp Location

11 point

Potential Camp Location