

**Demande de la CNER faisant l'objet d'un examen préalable #125585**  
**Turquetil-Esker Drilling Program**

## DÉTAILS

## Description non technique de la proposition de projet

Anglais: This proposed work program is for helicopter-supported drilling operations to be carried by MPH Consulting Limited on the Huckleberry-002 MEA at the Turquetil Gold Deposit, and at pending claim F46702 at the Esker Gold Occurrence. The drilling program will be supported from the Henik Lake Camp of Eskimo Point Lumber Supply/Airport Services Ltd. with all personnel and one helicopter based there (See General Location Map). Both areas have received multiple drilling programs in the past, most recently in 1993 at Turquetil, and 2004 at Esker. Past work was successful in finding gold both at surface and at depth through drilling. The present proposed program is designed to confirm, and hopefully expand upon, those identified zones of gold mineralization.

Français: Description sommaire de la campagne de forage Turquetil — Esker 2021-2022 Ce programme de travail proposé consiste en des opérations de forage hélicoptérées menées par MPH Consulting Limited sur le territoire visé par l'AEM Huckleberry-0002 du gisement aurifère de Turquetil et de la concession existante F46702 de la venue aurifère d'Esger. Le programme de forage sera mené depuis le camp minier du lac Henik de la compagnie Eskimo Point Lumber Supply/Airport Services Ltd., où seront hébergés le personnel et un hélicoptère (voir la Carte de localisation générale). Les deux zones ont fait l'objet de plusieurs campagnes de forage dans le passé, notamment en 1993 à Turquetil et en 2004 à Esger. Des travaux antérieurs ont permis de trouver de l'or en surface et dans le sous-sol grâce à des forages. Le programme proposé vise à confirmer et à exploiter, si possible, les zones de minéralisation aurifère identifiées. Zones des opérations 2021-2022 (voir la Carte de localisation détaillée des opérations de forage) : M. John Tugak, résident d'Arviat, a conclu un accord d'exploration minérale (« AEM ») avec la Nunavut Tunngavik inc. (« NTI ») concernant la propriété aurifère de Turquetil Lake (accord Huckleberry-0002), située à 138 km au nord-ouest d'Arviat et à 84 km au nord-est du camp du lac Henik, dans la parcelle AR-16 des terres inuites (IOL). M. Paul Sobie, président de MPH Consulting Limited, possède une concession minière en suspens (F46702) sur la rive est du South Henik Lake, qui couvre le prospect aurifère d'Esger, situé à 10 km au sud-est du camp du lac Henik dans la parcelle AR-27 des terres inuites (IOL). Permis d'utilisation des terres en vigueur : Ces deux zones sont visées par le permis d'utilisation des terres KVL120B03 accordé par la KIA pour les levés géophysiques aériens, la prospection et le jalonement, et en vigueur jusqu'au 29 septembre 2021. Nous présenterons une demande de modification du permis KVL120B03 pour inclure la présente campagne de forage. Base d'exploitation : Le matériel de forage et de campement, les provisions et le carburant seront transportés au camp Henik depuis Churchill et Thompson. Toutes les exigences en matière d'environnement, d'entreposage de carburant et de protection des caribous du permis KVL120B03 seront respectées en tout temps. MPH et John Tugak veilleront à ce que le plus grand nombre possible de travailleurs inuits locaux soient employés et à ce que les entreprises inuites locales soient utilisées comme ressources pendant les travaux sur le terrain. La campagne 2021-22 sera soutenue depuis les municipalités de Churchill et de Thompson, au Manitoba, et du camp du lac Henik, évitant ainsi les communautés du Nunavut, à l'exception des vols de ravitaillement hebdomadaires depuis Arviat, qui feront appel à la compagnie locale d'affrètement par appareils à voilure fixe Ookpik Aviation Inc. de Baker Lake au Nunavut. Lorsque les mesures liées à la COVID-19 seront levées à Arviat, une plus grande partie des activités de soutien seront effectuées à partir de cette localité. Opérations prévues à l'été 2021 (voir les cartes de localisation et d'opérations détaillées de Turquetil et d'Esger) : Une cache à carburant temporaire et un refuge d'urgence mobile en cas de mauvais temps, seront aménagés sur chaque emplacement de forage pendant les opérations. La campagne de prospection de 2021 devrait commencer à Turquetil pendant environ un mois, du 15 juillet au 15 août, avant d'être réorientée au site d'Esger entre le 15 août et le 15 septembre 2021. Opérations au printemps et à l'été 2022 : Les activités de 2022 devraient comprendre des forages supplémentaires au moyen d'un maximum de deux appareils de forage et des levés géophysiques au sol dans les zones opérationnelles désignées. Les opérations sur les deux sites se veulent la suite du travail accompli durant l'été 2021. Les activités ne reprendront pas avant le 1er mars 2022 et seront interrompues le 1er mai pour la période de mise bas des caribous dans les aires de mise bas conformément au permis KVL120B03. Long terme : Les résultats de la campagne 2021-22 serviront à orienter les travaux de forage en cours sur les deux sites. Si les résultats sont concluants, il sera justifié d'établir un camp d'hiver à Turquetil et de poursuivre les travaux de forage, d'évaluation et de protection de l'environnement au cours des années suivantes afin de déterminer si un ou plusieurs gisements d'or potentiellement viables sont présents.

[illegible]

Post-Closure Phase: from 2023-06-30 to 2023-07-01

## 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
Turquetil Drilling Operations Area	Drilling	Inuit Owned Sub-Surface Lands	Site was drilled in 1976, 1978, 1988 and 1993.	unknown but will contact Prince of Wales Nunavut Archeological office for any information they have for the site.	Site is 140km northwest of Arviat. Site is approximately 30km from Qamanirjuaq CPMA.
Esker Drilling Operations Area	Drilling	Inuit Owned Surface Lands	Site was previously drilled in 1997, 2002 and 2004.	Unknown but will contact Prince of Wales Archeological office for any information they have for the site.	Site is 187km northwest of Arviat. Site is approximately 100km from Qamanirjuaq CPMA.

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

Collectivité	Nom	Organisme	Date de la prise de contact
Arviat	Steve England	Hamlet of Arviat	2021-01-25

## 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
Kivalliq Inuit Association	KIA Land Use Licence KVL120B03	Active	2020-07-17	2021-09-29

### Project transportation types

Transportation Type	Utilisation proposée	Length of Use
Air	helicopter for operations, fixed wing for support	

### Project accomodation types

Autre,

## 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
Drill	1	4799 lbs	One helicopter-portable Multi-Power Discovery 1 drill rig supplied and operated by Foraco International SA (Kelowna Branch)
AStar350 B2 Helicopter	1	11m	Will be used to move the drill from site to site, as well crew shifts from Henik Lake Camp

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
Aviation fuel	fuel	225	45	10125	Gallons	Helicopter Fuel
Diesel	fuel	90	45	4050	Gallons	Drilling fuel
none	hazardous	0	0	0	Kg	n/a
Propane	fuel	30	100	3000	Lbs	Drill rig use

Consommation d'eau

Quantité quotidienne (m3)	Méthodes de récupération de l'eau proposées	Emplacement de récupération de l'eau proposé
40	temporary water pump	un-named lakes - see detailed operations figures for Turquetil and Esker

# Déchets

## Gestion des déchets

Activités du projet	Type des déchets	Quantité prévue	Méthode d'élimination	Procédures de traitement supplémentaires
Drilling	Déchets combustibles	1 cubic metre per week	back hauled to Henik Lake Camp	incineration
Drilling	Eaux grises	<40 cubic metres per day	sump where particulate matter will settle	none
Drilling	Déchets non combustibles	1 cubic meter per week	back-hauled to Arviat or Churchill/Thompson Mb.	commercial disposal

## Répercussions environnementales :

Minimal environmental impacts from drilling

# **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**

Provide the number of drill holes and depths (provide estimates and maximums where possible). Approximately 10-20 diamond drill holes. Each hole to a maximum depth of 250 metres. Discuss any drill additives to be used. See MSDS sheets attached. Describe method for dealing with drill cuttings. All drill sludges will be collected in a hand dug collection sump or natural depression located no less than 31 metres from the ordinary high water mark of any water body. These sludges will be allowed to settle. All land based artesian holes (drill holes which produce water after completion) will be documented, plugged and sealed with grout. As virtually 95% of the rock cored is brought to the surface and transported to camp (and then to the laboratory), the volume of drill waste created for a 100 meter long hole is only 0.14 cubic meters. Describe method for dealing with drill water. As above. Describe how drill equipment will be mobilized. The drill will be moved by helicopter between hole locations. All crews will also be shuttled daily between camp and work areas by helicopter. The foot print of each drill pad will be kept to a minimum size of approximately 10 metres by 10 metres. Pad construction will involve the placement of two parallel wooden timbers (6" x 6" x 10-12') onto the ground on which the frame of the drill and shack will be placed. The only ground clearing needed for this type of drill set-up will involve the removal of any larger, protruding boulders by hand. Absorbant matting will be used to collect any oils and lubricants which may be sourced from operating the drill. Drip trays will be used at all fueling and refueling areas. Once drilling at a particular site is completed the timbers will be removed for use at the next drill site. All used absorbant matting, garbage and fuel drums will be backhauled off the property and transported to Arviat and/or Churchill or Thompson, MB to be disposed of in an approved disposal facility. Describe how drill holes will be abandoned. All drill cuttings, water return and sludge will be disposed of in a properly constructed sump or natural depression no closer than 31 metres from the ordinary high water mark of any waterbody. Any drill collars that cannot be removed will be cut to ground level. All garbage and equipment and empty drums will be removed and the area reclaimed to as near as possible its original state.

## **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 Turquetil-Esker project is situated in barren lands or tundra along the northern reaches of the tree line and is underlain by permafrost. Relief is moderate, less than 20 metres. Vegetation consists of black spruce, dwarf shrubs, heaths, sedges, grasses, moss and lichens. In areas of better drainage the ground is covered by dwarf birch and willow shrubs however the majority of the property is vegetated by cotton grass tussocks and wet sedge meadows. Overall bedrock exposure is less than 5%, restricted to higher elevations and/or on the edges of the larger lakes. Outcrop surfaces are often ice scoured and not uncommonly polished. Frost-heaved bedrock and shattered sub-crop are common. Flat to undulating muskeg and boulder fields are frequent throughout the property. Continental glaciation has affected the entire region. Glacial deposits vary in thickness and consist of reworked till veneer, ground moraines, and flattened eskers. Glacial transport is generally east-south-east. Landforms, relief and drainage have been strongly influenced by the effects of several periods of glaciation, post-glacial fluvial activity and freeze/thaw processes. The area is generally covered by ice and snow from late September to early July. Summer is brief, extending only from mid-July to late August. Temperatures range from highs of approximately 25°C in summer to lows that can exceed -45°C in the winter, with average temperatures of 10°C and -30°C, respectively. Daylight varies from virtually 24 hours in summer to less than a few hours in the winter.

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

The natural vegetation comprises muskeg with scattered sedges. An extensive cover comprising crowberry, Labrador tea, lichen and moss is present in nearly all areas. The local fauna includes ptarmigan, caribou, wolves, foxes, arctic hares, wolverines, grizzly and polar bears, ground squirrels and the occasional muskox. Most of the larger lakes contain fish and support bird life.

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

As the project area is located on remote sites northwest of Arviat all socio-economic impacts will be positive. MPH will continue its practice of purchasing all goods and services from local supplies whenever possible. The camp will be serviced weekly from the community of Arviat. MPH will also encourage all contractors operating on the project to hire locally.

### **Miscellaneous Project Information**

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

MPH is fully committed to implementing its proposed exploration project on the Esker/Turquetil property in an environmentally responsible manner to protect and sustain the environmental and cultural resources of the project area. The exploration program described will have no to very low impact to the environment and/or wildlife. The project activities will be short lived (2-3 months) and be of a very localized nature. The drilling component will be short lived as the drills will only be on each site for 3-5 days and all sites will be restored as near as possible to their original state. Noise levels of the drill, generator, water pump, helicopter and supply planes will be the only activities that will be non-mitigatable. Congregations of wildlife are not expected in the area but will be avoided should any be encountered. Permafrost will not be harmed due to the timing of the project. All temporary structures (drill and pumps) will be set on timbers to avoid damage to the permafrost. Eskers and fragile landscapes will be avoided. Water usage will be minimal (~40 cubic metres/day) and restricted to drill use. Drill operations will be conducted in an environmentally friendly manner and fuel caches will be checked daily for potential leakage. Helicopter usage for purposes of supporting drilling operations is and has been the standard practice of many exploration companies now and in the past with no impact to wildlife or the environment. Pilots will be instructed to avoid wildlife during operations. All potential environmental effects associated with this proposed program are minor, localized effects which can be mitigated. No long term impacts to the environment or wildlife are expected to occur as a result of the implementation of this program. Timing of the proposed drilling will be after caribou calving season ends. The small quantities of benign drill cuttings (0.14 m<sup>3</sup>/ 100 m drilled) generated at each drill site will be deposited in natural depressions or sumps (2 X 3 X 1 meter) and will affect small areas of sparsely vegetated tundra within the footprint of the disturbed area at each drill site. All garbage, fuel drums and equipment will be removed from each drill site. There will be no deleterious effects to water quality due to the protection measures outlined by DIAND and the NWB which includes restrictions as to how close to water bodies the drill, sumps and fuel caches are allowed. Additionally, the following mitigation measures will be undertaken to reduce, control and/or eliminate all together, potential environmental effects. 1. Adhering to the Caribou Protection Measures; specifically not working in any core calving areas. 2. Avoiding low level flights over areas known for waterfowl nesting. 3. Adhering to the Recommended Environmentally Acceptable Minimum Flight Altitudes. 4. Equipping all water intake hoses with an appropriate screen mesh size to ensure no entrapment of fish. 5. Provide necessary controls to prevent sedimentation and/or erosion of water bodies or adjacent land. 6. Using only lake water for drilling operations. 7. All drill cuttings will be disposed of and contained in natural depressions or hand dug sumps located at least 31 meters from any high water mark such that the cuttings do not enter any water bodies. As virtually 95% of the rock cored is brought to the surface and transported to camp (and then to the laboratory), the volume of drill waste created for a 100 meter long hole is only 0.14 cubic meters. 8. All sumps will be backfilled and contoured when operations are complete. 9. Only environmentally acceptable and approved muds and additives (as per DIAND regulations) are to be used during drilling operations. 10. Drill holes to be plugged and permanently sealed if artesian flow is encountered. 11. All fuel caches will be located a minimum of 30 meters from the normal high water mark. Spill kits will be present at all fuel caches and drilling operations. 12. MPH possesses and maintains a current Emergency Response Plan including a Fuel Spill Contingency Plan that all employees and contractors are required to adhere to. These policies also include safety, emergency, fire and medi-vac procedures and are described in detail in MPH's Safety Manual/Field Guide.

### **Répercussions cumulatives**

In total, the residual environmental effects of MPH's entire program on the Esker/Turquetil property are expected to be negligible. No other mineral exploration activities or other industrial development projects are currently known or planned for the area, which eliminates the potential for cumulative environmental effects. All potential environmental effects associated with this proposed program are minor, localized effects that can be mitigated. No significant residual impacts to the environment are expected to occur as a result of the implementation of this program. As a result there are no significant contributions resulting from the project that could be considered to be cumulative. However, while

individually no significant effects are anticipated, it is the role of the cumulative environmental effects assessment to consider the additive and synergistic effects of overall residual environmental effects, in combination with all existing or known planned activities within the vicinity of Turquetil-Esker project area. No other mineral exploration activities or other industrial development projects are currently known or planned for the area, which minimizes the potential for cumulative effects. No known environmental issues are known to exist in the project area from historic exploration campaigns. As a result, based on CEAA's premises, the proposed MPH's exploration program on the Turquetil-Esker project is not expected to result in a cumulative effect.

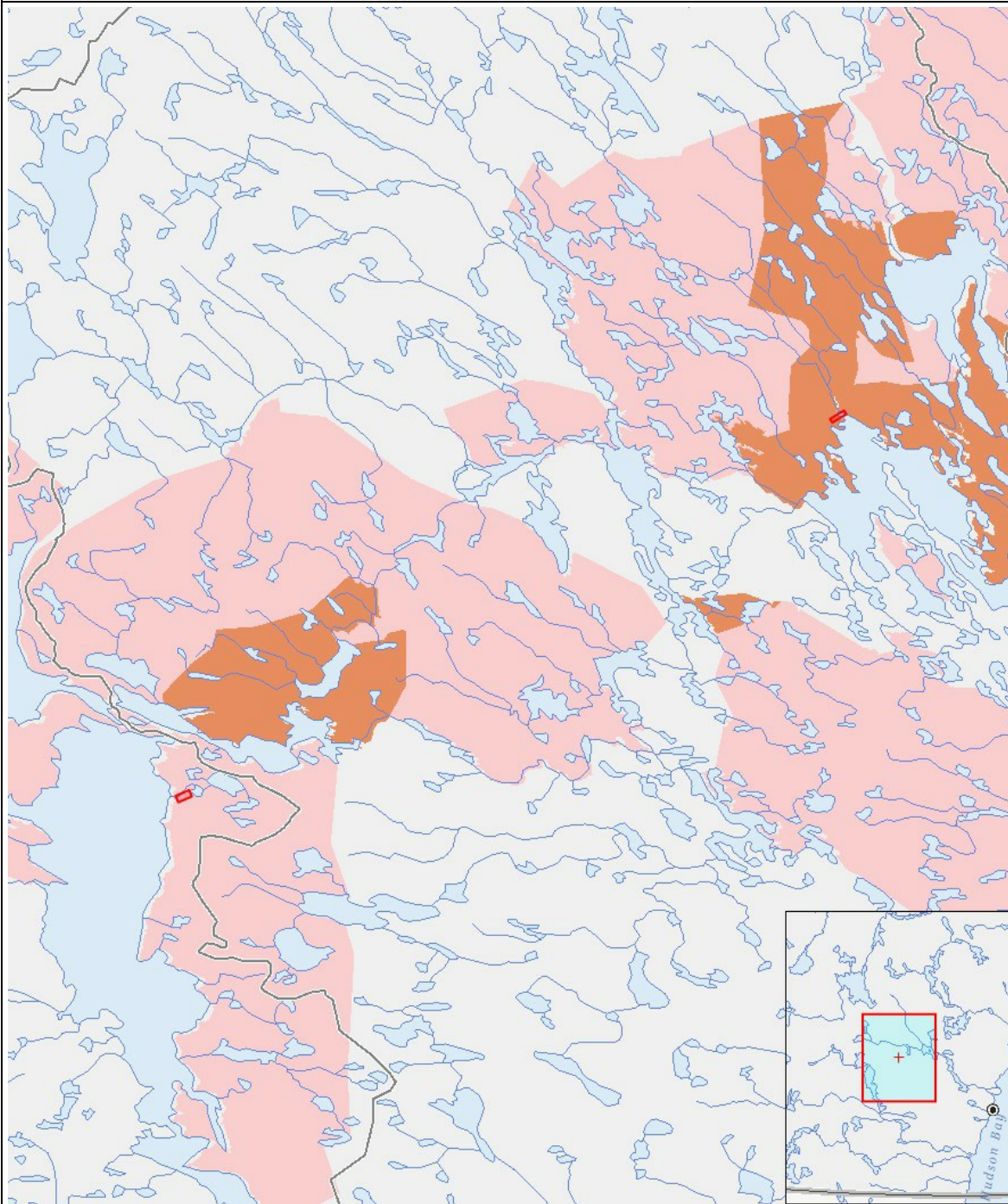
Impacts

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																								
Construction																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	
Exploitation																									
Drilling		-	-	-	-	M	-	M	M	M	-	M	M		M	M	M	M	M		M	P	P	-	-
Désaffectation																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-

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

## Site du projet



## Liste des géométries de projet

- |   |         |                                    |
|---|---------|------------------------------------|
| 1 | polygon | Esker Drilling Operations Area     |
| 2 | polygon | Turquetil Drilling Operations Area |