



NIRB Application for Screening #125585

Turquetil-Esker Drilling Program

Application Type: New

Project Type: Mineral Exploration

Application Date: 2/23/2021 1:06:50 PM

Period of operation: from 0001-01-01 to 0001-01-01

Proposed Authorization: from 0001-01-01 to 0001-01-01

Project Proponent: MPH Consulting, Paul Sobie
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DETAILS

Non-technical project proposal description

English: Summary Description of 2021-2022 Turquetil – Esker Drilling Program 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, 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. 2021-2022 Operations Areas (See Detailed Location Map for Drilling Operations): Mr. John Tugak of Arviat has a Mineral Exploration Agreement (“MEA”) with the Nunavut Tunngavik Inc. (“NTI”) on the Turquetil Lake Gold Property (Agreement Huckleberry-0002) which is located 138km northwest of Arviat, and 84 km to the northeast of the Henik Lake Camp within IOL parcel AR-16. Mr. Paul Sobie, President of MPH Consulting Limited, has a pending mining claim (F46702) on the eastern shore of South Henik Lake, which covers the Esker Gold Prospect, located 10 kms southeast of the Henik Camp within IOL parcel AR-27. Existing Land Use Licence: Both of these areas are within KIA Land Use Licence KVL120B03 granted for airborne geophysical surveying, prospecting and staking, and current until September 29, 2021. Application to amend KVL120B03 to include this drilling program will be submitted. Operational Base: Drilling and camp equipment, supplies and fuel will be transported to the Henik Camp from Churchill and Thompson. All environmental, fuel storage and caribou protection conditions of KVL120B03 will be in force at all times. MPH, and John Tugak, will ensure that the maximum number of local Inuit workers are employed, and that local Inuit businesses are used for support, during the fieldwork. The 2021-22 program will be supported out of the communities of Churchill and Thompson, Manitoba, and the Henik Lake Camp – thereby avoiding Nunavut communities with the exception of weekly supply flights from Arviat, which will use local Nunavut-based fixed-wing charter company Oopik Aviation Inc out of Baker Lake. Should Arviat become open post-Covid 19, then more support will be directed there. 2021 Summer Operations (See Turquetil and Esker Location and Detailed Operations Maps): A temporary fuel cache and a mobile emergency overnight shelter in case of inclement weather, will be established at each drilling site during operations. The 2021 exploration program is expected to commence at Turquetil for approximately one month from July 15th to August 15th, then at Esker between August 15th and September 15th 2021. 2022 Spring/Summer Operations: It is anticipated that 2022 operations would include additional drilling with up to 2 drill rigs and ground geophysical surveying within the designated operational areas. Operations at both sites would be a continuation of the work accomplished during the summer of 2021. Operations would not recommence before March 1st, 2022 and would shut down for the caribou calving season where operations are within calving areas as per KVL120B03 on May 1st. Longer-Term: The results of the 2021-22 program will guide on-going drilling work at both sites. Success would justify establishing a winterized camp at Turquetil, and more drilling, evaluation and environmental work in subsequent years to ultimately establish whether a potentially viable gold deposit(s) exists.

French: 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’Esker. 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 Esker. 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’Esker, 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 jalonnement, 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

[illegible]

Personnel on site: 12

Days on site: 120

Total Person days: 1440

Operations Phase: from 2021-07-01 to 2021-07-02

Operations Phase: from 2021-07-01 to 2023-07-01

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

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

Activities

Location	Activity Type	Land Status	Site history	Site archaeological or paleontological value	Proximity to the nearest communities and any protected areas
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.

Community Involvement & Regional Benefits

Community	Name	Organization	Date Contacted
Arviat	Steve England	Hamlet of Arviat	2021-01-25

Authorizations

Indicate the areas in which the project is located:

Kivalliq

Authorizations

Regulatory Authority	Authorization Description	Current Status	Date Issued / Applied	Expiry Date
Kivalliq Inuit Association	KIA Land Use Licence KVL120B03	Active	2020-07-17	2021-09-29

Project transportation types

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

Project accomodation types

Other,

Material Use

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

Equipment Type	Quantity	Size - Dimensions	Proposed Use
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

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	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

Water Consumption

Daily amount (m3)	Proposed water retrieval methods	Proposed water retrieval location
40	temporary water pump	un-named lakes - see detailed operations figures for Turquetil and Esker

Waste

Waste Management

Project Activity	Type of Waste	Projected Amount Generated	Method of Disposal	Additional treatment procedures
Drilling	Combustible wastes	1 cubic metre per week	back hauled to Henik Lake Camp	incineration
Drilling	Greywater	<40 cubic metres per day	sump where particulate matter will settle	none
Drilling	Non-Combustible wastes	1 cubic meter per week	back-hauled to Arviat or Churchill/Thompson Mb.	commercial disposal

Environmental Impacts:

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 (Appendix 3 - Fuel Spill Contingency Plan). 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 of Existing Environment: Physical Environment

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 of Existing Environment: Biological Environment

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 of Existing Environment: Socio-economic Environment

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 of Impacts and Proposed Mitigation Measures

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. Environmental, Wildlife and Fuel Spill Contingency Plans are attached. 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 m³/ 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.

Cumulative Effects

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.

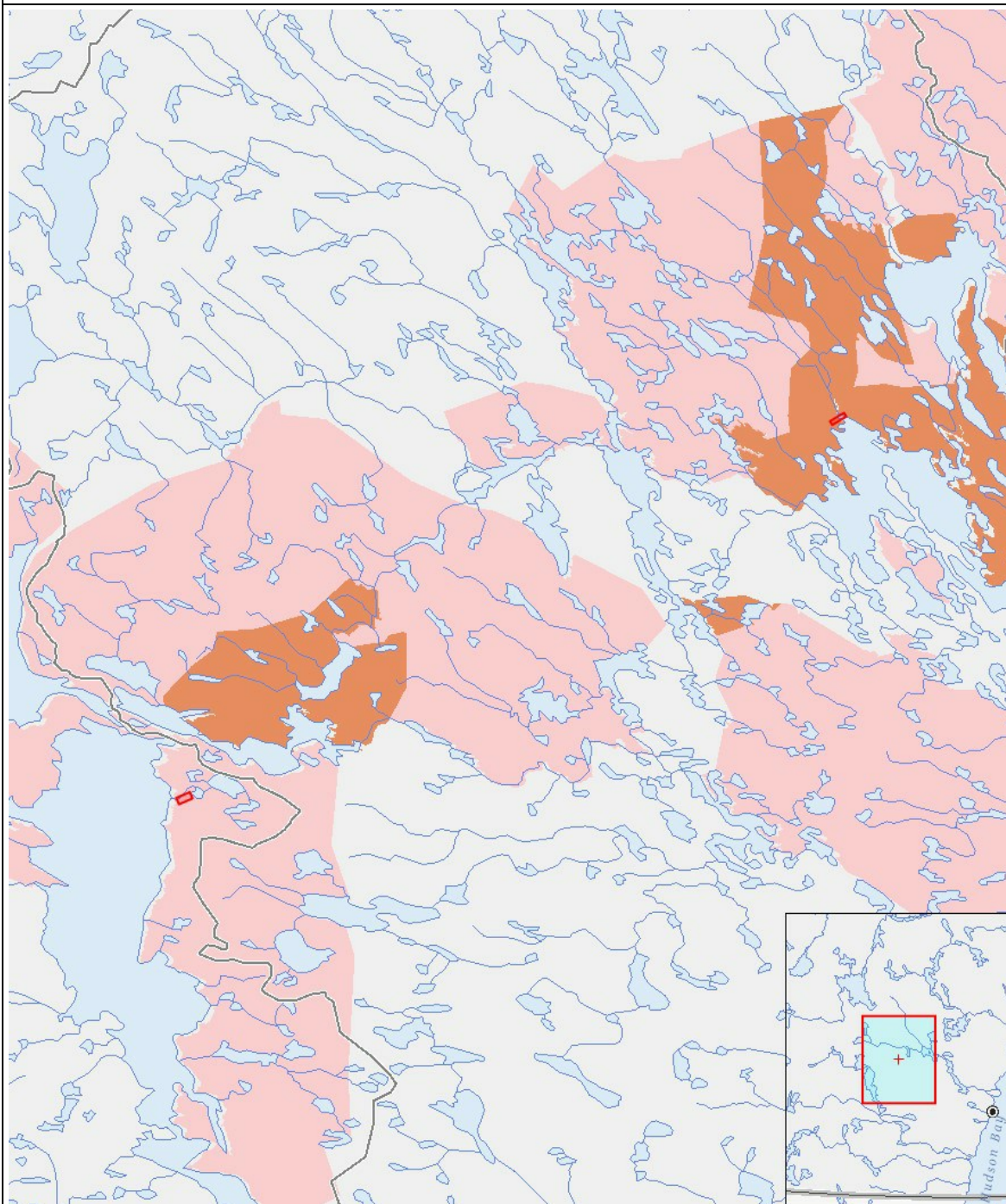
Impacts

Identification 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																										
Drilling		-	-	-	-	M	-	M	M	M	-	M	M		M	M	M	M	M		M	P	P	-	-	-
Decommissioning																										
-		-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-

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

Project Location



List of Project Geometries

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