NIRB Application for Screening #125742
South Kitikmeot Gold Project

Application Type:	New
Project Type:	Mineral Exploration
Application Date:	10/21/2022 7:27:35 PM
Period of operation:	from 0001-01-01 to 0001-01-01
Proposed Authorization:	from 0001-01-01 to 0001-01-01
Project Proponent:	Agha Shahzad Pervez Viridis Mining & Minerals Level 50, 108 St. Georges Terrace Perth Western Australia 6000 Australia Phone Number:: 61 3 9071 1847, Fax Number::

DETAILS

Non-technical project proposal description

English: See attached document

French: Not required

Inuktitut: See attached document

Inuinnaqtun: See attached document

Personnel

Personnel on site: 60
Days on site: 1680
Total Person days: 100800
Operations Phase: from 2022-12-27 to 2029-12-26
Operations Phase: from 2022-12-27 to 2029-12-26
Closure Phase: from 2022-12-27 to 2029-12-26
Post-Closure Phase: from to

Activities

Location	Activity Type	Land Status	Site history	Site archaeological or paleontological value	Proximity to the nearest communities and any protected areas
Exploration area	Aerial surveys	Crown	Previously explored intermittently since the 1980's	Unknown	Approx 200 km to each Kugluktuk and Yellowknife
Exploration area	Aerial surveys	Inuit Owned Surface Lands	Previously explored intermittently since the 1980's	Unknown	Approx 200 km to each Kugluktuk and Yellowknife
Exploration area	Baseline data	Crown	Previously explored intermittently since the 1980's	Unknown	Approx 200 km to each Kugluktuk and Yellowknife
Exploration area	Baseline data	Inuit Owned Surface Lands	Previously explored intermittently since the 1980's	Unknown	Approx 200 km to each Kugluktuk and Yellowknife
Exploration area	Camp	Crown	Previously explored intermittently since the 1980's	Unknown	Approx 200 km to each Kugluktuk and Yellowknife
Exploration area	Camp	Inuit Owned Surface Lands	Previously explored intermittently since the 1980's	Unknown	Approx 200 km to each Kugluktuk and Yellowknife
Exploration area	Drilling	Crown	Previously explored intermittently since the 1980's	Inuit Owned Surface Lands	Approx 200 km to each Kugluktuk and Yellowknife
Exploration area	Drilling	Inuit Owned Surface Lands	Previously explored intermittently since the 1980's	Unknown	Approx 200 km to each Kugluktuk and Yellowknife
Exploration area	Fuel and chemical storage	Crown	Previously explored intermittently since the 1980's	Unknown	Approx 200 km to each Kugluktuk and Yellowknife
Exploration area	Fuel and chemical storage	Inuit Owned Surface Lands	Previously explored intermittently since the 1980's	Unknown	Approx 200 km to each Kugluktuk and Yellowknife
Exploration area	Mineral Exploration	Crown	Previously explored intermittently since the 1980's	Unknown	Approx 200 km to each Kugluktuk and Yellowknife
Exploration area	Mineral Exploration	Inuit Owned Surface Lands	Previously explored intermittently since the 1980's	Unknown	Approx 200 km to each Kugluktuk and Yellowknife
Exploration area	Waste disposal	Crown	Previously explored intermittently since	Unknown	Approx 200 km to each Kugluktuk and Yellowknife

			the 1980's		
Exploration area	Waste disposal	Inuit Owned Surface Lands	Previously explored intermittently since the 1980's	Unknown	Approx 200 km to each Kugluktuk and Yellowknife
Historic exploration camp area	Camp	Crown	Historical camp location supporting drilling in 1980s and 1990s	Unknown	Approx 200 km to each Kugluktuk and Yellowknife
Historic esker landing strip	Airstrip use or construction	Crown	Landing area on esker adjacent to historic exploration camp used for fixed wing access	Unknown	Approx 200 km to each Kugluktuk and Yellowknife

Community Involvement & Regional Benefits

Community	Name	Organization	Date Contacted
Kugluktuk	Wynter Kuliktana, Tannis Bolt	KIA Lands	2022-09-22
Kugluktuk	Wynter Kuliktana, Tannis Bolt	KIA Lands	2022-11-01
Kugluktuk	Baba Pedersen	CIRNAC	2022-10-26
Iqaluit	Tracey McCaie, Andrew Keim	CIRNAC	2022-10-26
Kugluktuk	Baba Pedersen	CIRNAC	2022-10-31
Iqaluit	Tracey McCaie, Andrew Keim	CIRNAC	2022-10-31
Kugluktuk	Baba Pedersen	CIRNAC	2022-11-08
Iqaluit	Tracey McCaie, Andrew Keim	CIRNAC	2022-11-08
Kugluktuk	Kevin Methuen, Lisa LeClerc	GN-DOE	2022-11-10
Kugluktuk	Kevin Methuen, Lisa LeClerc	GN-DOE	2022-11-10
Cambridge Bay	Hugh MacIssac	GN-EDT	2022-11-02
Cambridge Bay	Hugh MacIssac	GN-EDT	2022-11-03
Iqaluit	Paul Budkewitch	GN-EDT	2022-10-27
Kugluktuk	Amanda Dumond	Kugluktuk Angoniatit Association	2022-09-22
Kugluktuk	Kimberley Young	Hamlet of Kugluktuk	2022-11-01
Gjoa Haven	Karen Kharatyan	Nunavut Water Board	2022-11-01
Kugluktuk	John and Mercie Kaodloak	Landusers	2022-11-01
Iqaluit	Paul Budkewitsch	GN-EDT	2022-11-03
Kugluktuk	Amanada Dumond	Kugluktuk Angoniatit	2022-11-01

Authorizations

Indicate the areas in which the project is located:

Kitikmeot

Authorizations

Regulatory Authority	Authorization Description	Current Status	Date Issued / Applied	Expiry Date
Aboriginal Affairs and Northern Development Canada	Land Use Permit	Not Yet Applied		
Kitikmeot Inuit Association	Land Use Licence	Not Yet Applied		
Nunavut Water Board	Water Licence	Not Yet Applied		
Government of Nunavut, Nunavut Research Institute	Research licence	Not Yet Applied		
Government of Nunavut, Department of Environment	Research licence	Not Yet Applied		
Government of Nunavut, Department of Culture, Language, Elders, and Youth	Archaeology Permit	Not Yet Applied		

Project transportation types

Transportation Type	Proposed Use	Length of Use
Air	Worker access and resupply by fixed wing, local work are access by helicess site and work areas. Planned use of lakes (summer and winter) and adjacent historical esker strip for aircraft landing. Nearby regional airstrips (Lupin) may be used if available.	
Land	Possibly resupply by overland cat train from Tibbitt To Contwoyto Winter Road (if it is built) to main camp area	

Project accomodation types

Temporary Camp

Material Use

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

Equipment Type	Quantity	Size - Dimensions	Proposed Use
Fixed wing aircraft	tbd	tbd	Access, camp and drill support
Drills	tbd	tbd	Exploration drilling
Helicopters	tbd	tbd	Access, drill support, airborne geophysics
Generators	tbd	tbd	power for camp and drills
Drone	tbd	tbd	Airborne geophysics, mapping
Water pump	tbd	tbd	Pump water for domestic and industrial use
Snowmobiles	tbd	tbd	Access
Snowcat	tbd	tbd	Camp and drill support
Watercraft	tbd	tbd	Access
Compressors	tbd	tbd	Camp and drill support
ATV	tbd	tbd	Access, camp support
Skidsteer	tbd	tbd	Camp support
Temporary tent camp	1	up to 60 persons	Main camp with hard floors, soft walls
Sloop or equivalent	various	tbd	Exploration support
Kubota	1	small	Winter access support
UTV	various	tbd	Winter access support
Ground geophysics instrumentation	various	tbd	Exploration
Temporary tent camp (Arctic oven style)	multiple	up to 6 persons	Small temporary camp for remote crews

Detail Fuel and Hazardous Material Use

Detail fuel material use:	Fuel Type	Number of containers	Container Capacity	Total Amount	Units	Proposed Use
Propane	fuel	20	100	2000	Lbs	Camp and drill fuel
Propane	fuel	10	50	500	Lbs	Camp fuel
Lubricants, greases	hazardous	36	5	180	Gallons	Equipment and drill maintenance
Drilling additives	hazardous	36	5	180	Gallons	Drill support
Salt	hazardous	500	50	25000	Lbs	Drill support
Owygen	hazardous	6	100	600	Lbs	Welding for equipment repair, first aid
Acetylene	hazardous	4	100	400	Lbs	Welding for equipment repair
Aviation fuel	fuel	200	205	41000	Liters	Aircraft fuel
Diesel	fuel	225	205	46125	Liters	Camp and equipment fuel

Gasoline	fuel	25	205	5125	Liters	Equipment fuel
Cement	hazardous	500	50	25000	Lbs	Drill support

Water Consumption

Daily amount (m3)	Proposed water retrieval methods	Proposed water retrieval location
299	Pump with screened intake	Various lakes proximal to camp locations(s) and drills

Waste

Waste Management

Project Activity	Type of Waste	Projected Amount Generated	Method of Disposal	Additional treatment procedures
Camp	Combustible wastes	Various	Incinerate, open burn (large clean wood and paper) and/or backhaul	Backhaul ash for offsite disposal
Drilling	Combustible wastes	Various	Incinerate, open burn (large clean wood and paper) and/or backhaul	Backhaul ash for offsite disposal
Camp	Greywater	Up to 8 m3/day	Discharge to sump	Grease trap in kitchen, possible french box filter or similar may be used
Camp	Hazardous waste	Various	Backhaul all for offsite treatment, recycling and/or disposal	-
Drilling	Hazardous waste	Various	Backhaul all for offsite treatment, recycling and/or disposal	
Fuel and chemical storage	Hazardous waste	Various	Water that has accumulated in secondary containment will be discharged to tundra following treatment if needed.	Activated carbon filter and/or oil/water separator
Camp	Non-Combustible wastes	Various	Backhaul for offsite treatment, recycling and/or disposal	
Drilling	Non-Combustible wastes	Various	Backhaul for offsite treatment, recycling and/or disposal	
Drilling	Other, Drill cuttings	Various	Discharge to upland sump or depression	Settling tanks and/or flocculants to support water reuse where possible
Mineral Exploration	Other, Cuttings and water from core saw	various	Discharge to upland sump or depression	Settling tanks and/or flocculants to support water reuse where possible
Camp	Sewage (human waste)	approx 0.1 m3/day/person	collect in pacto style toilet. Either incinerate on site or backhaul for offsite disposal	Backhaul incinerator ash for offsite disposal

Environmental Impacts:

See attached document

Additional Information

SECTION A1: Project Info

SECTION A2: Allweather Road

SECTION A3: Winter Road

SECTION B1: Project Info

Gold

SECTION B2: Exploration Activity

The following exploration activity may occur over the life of the project: trenching; exploration drilling on land or over ice (diamond and/or rotary air-blast/reverse circulation); geophysical work (ground and air); soil sampling; core logging.

SECTION B3: Geosciences

Geophysical (ground and air) operations may include the following, or similar/related methodologies: magnetic; gravimetric; electromagnetic.Geological operations may include geological mapping.Activity locations, timing and flying are to be determined. Activities may occur throughout the study area.

SECTION B4: Drilling

Drill hole locations and depths are to be determined based on ongoing analysis of historic exploration activities, and results of new exploration activities. It is expected that drilling will be limited to the existing claim areas. Based on future prospecting results, claim boundaries may change in the future, however, it is reasonable to expect that drilling will occur in an area contiguous with that already delineated. Drill additives will be used where required, to the minimum extent possible. Additives vary depending on the nature of the ground encountered. Salt may be used, along with other non-toxic materials. Cuttings will be dewatered to the greatest extent possible and deposited in an adjacent upland sump. Drill water will be recirculated and reused to the greatest extent possible. Excess drill water will be deposited in an adjacent upland sump. Drill equipment will be mobilized by helicopter. Drill holes will be abandoned by cutting the drill stems off at ground level and backfilling any areas of subsidence around drill stems in such a manner as to prevent water accumulation.

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 property is centred south of the informally named Esker Lake and includes a small lake in the eastern portion of the claim informally named Sheit Lake in past reports. Elevations on the property range from 390 m at Esker Lake to 430 m at the top of Brandon Hill. The Project is located within the Southern Arctic Ecozone and the Takijuq Lake Upland Ecoregion. Much of this region is composed of unvegetated rock outcrops. Organic Cryosols are the dominant soils in the lowlands and permafrost is deep and continuous. The area is characterized by very cold winters, brief cool summers and short fall and spring seasons. Climate data from the nearest weather station at the Lupin Mine, 145 km NE of the property, indicate that mean daily temperatures in the area vary from -30o C in January to +12o C in July and that average annual rainfall is 16.0 cm. The topography is gently undulating with sparse bedrock exposures. Lakes and some swamps cover much of the low lying areas.

Description of Existing Environment: Biological Environment

The Project is located within the Southern Arctic Ecozone and the Takijuq Lake Upland Ecoregion. Vegetative cover is characterized by shrub tundra, consisting of dwarf birch, willow, northern Labrador tea, avens species and blueberry species. Characteristic wildlife includes caribou (barren ground caribou of the Bathurst, Beverly and Ahiak herds), muskoxen, grizzly bear, wolverine, Arctic hare, Arctic fox, red fox and wolf. Small mammals (e.g., Arctic ground squirrel, voles, and lemmings) are distributed throughout the region and provide an important food source for predators. Many species of migratory birds are present in the area during the summer season, including waterfowl, raptors, songbirds, and shorebirds, while some bird species are present year-round (e.g., ptarmigan, gyrfalcon, and common raven). The Project is located within the Southern Arctic Ecozone and the Takijuq Lake Upland Ecoregion. The Project

also occurs within Area 1 of the Bathurst Caribou Range Planning Area, within the centre of habitation. Bathurst caribou may use the Project area all year, with highest use occurring for summer range.

Description of Existing Environment: Socio-economic Environment

The Project occurs within the Kitikmeot Region of Nunavut, predominantly on Crown Land; activities on and adjacent to one of the clam blocks occurs on an Inuit Owned Land (IOL) parcel. The Project also occurs within the Akaitcho Dene First Nations asserted territory, and is also situated within the boundary of the Môwhì Gogha De Nîîtlèè. The Project is located 424 km southeast of Kugluktuk, NU, 400 km northeast of Yellowknife, NT and 145 km east - southeast of the Lupin Mine on Contwoyto Lake and south-south west of the Back River Project. Hunting and traditional land use are understood to occur in the area .

Miscellaneous Project Information

Included with this application are the following:Project Description; Engagement Plan; Spill Response Plan; Closure and Reclamation Plan; Waste Management Plan; Environment and Heritage and Heritage Resources Protection Plan (including wildlife); photos of typical work planned.

Identification of Impacts and Proposed Mitigation Measures

See attached impact assessment

Cumulative Effects

Potential effects have been assessed and are considered to be either Negative and Mitigable, or Positive, and as a result, there are no residual effects to be carried forward into a cumulative effects assessment. Further, it is understood that effects such as those to wildlife including sensory disturbance, habituation or attraction, and unintentional interactions may occur through execution of project activities or in combination with other activities that may have a spatial or temporal overlap with the project, such as non-project overflights or traditional land use. However, given the robust mitigation measures proposed and the temporary seasonal nature of the project activities, any cumulative effects that may arise are considered immeasurable and small, intermittent and short term.

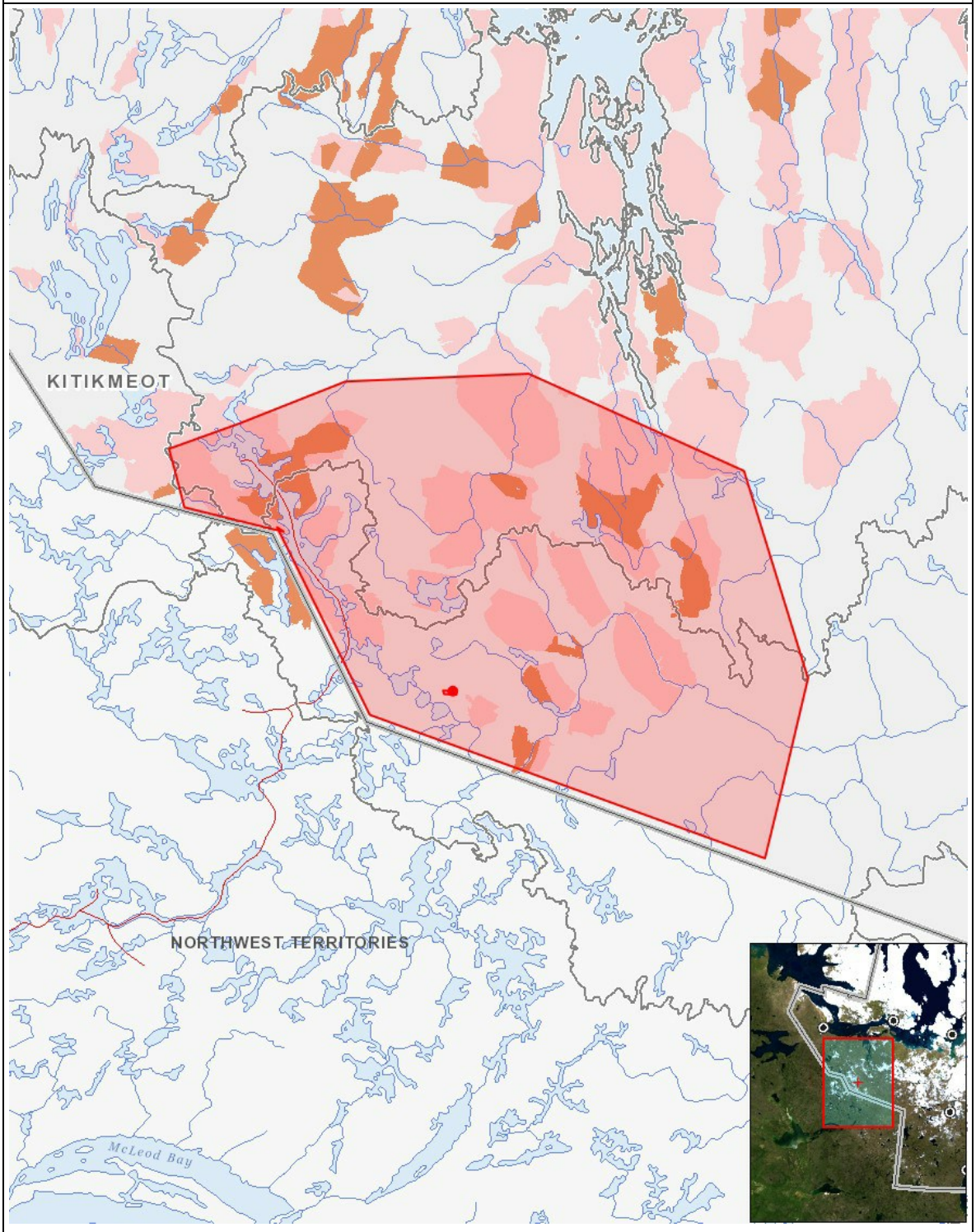
Impacts

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																									
Airstrip use or construction		-	M	-	-	-	-	M	-	-	-	-	-		-	-	-	-	-		-	P	-	-	-
Camp		-	M	-	-	-	-	M	-	-	-	-	-		M	M	M	M	-		M	P	P	P	-
Fuel and chemical storage		-	-	-	-	-	-	-	-	-	-	-	-		-	M	M	-	-		M	P	P	-	-
Operation																									
Aerial surveys		-	-	-	-	-	-	-	-	-	-	M	M		-	M	M	-	-		-	P	P	-	-
Airstrip use or construction		-	M	-	-	-	-	-	-	-	-	M	M		-	M	M	-	-		-	P	-	-	-
Baseline data		-	P	P	-	P	P	P	P	P	P	P	P		P	P	P	P	-		P	-	-	-	-
Camp		-	M	M	-	M	-	-	-	M	-	M	M		-	M	M	M	-		-	P	P	-	-
Drilling		-	M	M	-	M	-	-	-	M	-	M	M		M	-	-	M	-		M	P	P	-	-
Fuel and chemical storage		-	-	-	-	M	-	-	-	M	-	-	-		-	-	-	-	-		-	P	P	-	-
Waste disposal		-	M	M	-	M	-	-	-	M	-	M	-		-	M	-	M	-		-	P	P	-	-
Mineral Exploration		-	-	-	-	-	-	-	P	-	-	-	-		-	-	-	-	-		-	P	P	-	-
Decommissioning																									
Camp		-	M	M	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-
Drilling		-	M	M	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-
Fuel and chemical storage		-	M	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-

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

Project Location



List of Project Geometries

1	polygon	Exploration area
2	polygon	Historic exploration camp area
3	point	Historic esker landing strip