



## **NIRB Application for Screening #125133**

### **Baffin Gold Property**

<b>Application Type:</b>	New
<b>Project Type:</b>	Exploration
<b>Application Date:</b>	5/9/2017 7:34:31 PM
<b>Period of Operation:</b>	From 2017-06-01 to 2037-09-30
<b>Proposed Authorization:</b>	From 2017-06-01 to 2037-09-30
<b>Project proponent:</b>	Andrew Berry Kivalliq Energy Corporation 1020-800 West Pender Street Vancouver British Columbia V6C 2V6 Canada Tel: 6047651892, fax:

## **DETAILS**

### **Non-technical project proposal description**

English:	Refer to the attached Non-Technical Project Summary in English.
French:	Refer to the attached Non-Technical Project Summary in French.
Inuktitut:	Refer to the attached Non-Technical Project Summary in Inuktitut.

### **Personnel**

Personnel on site:	20
Days on site:	122
Total Person days:	2440
Period of operation:	from 2017-06-01 to 2017-09-30
Proposed term of operation:	from 2017-06-01 to 2037-09-30

## ACTIVITIES

### Project Activities

Location	Activity Type	Land Status	Site History	Site Archaeological or Palentological Value	Proximity to the nearest communities and any protected areas
Tuktu Fly Camp-proposed	Camp	Crown	This is the site of the proposed Tuktu Fly Camp located near Nadluardjuk Lake and proximal to the Fox-B North Warning System Airstrip.	There are no known archaeological sites at the camp site.	It is 275km southwest of Clyde River and 400km northwest of Qikiqtarjuaq.
Malrok Fly Camp-proposed	Camp	Inuit Owned Sub-Surface Lands	This is the site of the proposed Malrok Fly Camp located beside Malrok Lake. It is the site of a Commander Resources Ltd. camp that was decommissioned and reclaimed in 2011.	There are no known archaeological sites at the camp site.	It is 265km southwest of Clyde River and 370km northwest of Qikiqtarjuaq.
Exploration Work Area-Durette	Mineral Exploration	Crown	This is the location of the Durette Target Area where Commander Resources Ltd conducted mineral exploration between 2001 and 2011. Exploration activities are proposed at this location for the 2017 program.	There are no known archaeological sites at this work site.	It is approximately 215km southwest of Clyde River and 310km northwest of Qikiqtarjuaq.
Dewar Lakes Camp-active	Camp	Crown	This is the site of Commander Resources Ltd.'s active Dewar Lakes Camp. Kivalliq intends to utilize Commander's camp to facilitate exploration work on the Baffin Gold Property.	There are no known archaeological sites at the Dewar Lakes Camp.	The camp is approximately 225km southwest of Clyder River and 320km northwest of Qikiqtarjuaq.
Exploration Work Area-Kanosak/Central Belt	Mineral Exploration	Inuit Owned Sub-Surface Lands	This is the location of the Kanosak and Central Belt Target Areas where Commander Resources Ltd conducted mineral exploration between 2001 and 2011. Exploration activities are proposed at this location for the 2017 program.	There are no known archaeological sites on this work area.	The work area is approximately 260km southwest of Clyde River and 360km northwest of Qikiqtarjuaq.
Exploration Work Area-Tuktu	Mineral Exploration	Crown	This is the location of the Tuktu Target Area where Commander Resources Ltd conducted mineral exploration between 2001 and 2011. Exploration activities are proposed at this location for the 2017 program.	There are no known archaeological sites on this work site.	The work area is approximately 275km southwest of Clyde River and 400km northwest of Qikiqtarjuaq.
Exploration Work Area-Malrok	Mineral Exploration	Inuit Owned Sub-Surface Lands	This is the location of the Malrok Target Area where Commander Resources Ltd conducted mineral exploration between 2001 and 2011. Exploration activities are proposed at this location for the 2017 program.	There are no known archaeological sites on this work area.	The work area is approximately 265km southwest of Clyde River and 370km northwest of Qikiqtarjuaq.
Geophysical Survey Area-Tuktu	Aerial surveys	Crown	This is the location of the Tuktu Target Area where Commander Resources Ltd conducted mineral exploration between 2001 and 2011. An airborne geophysical survey grid is proposed at this location for the 2017 program.	There are no known archaeological sites in this area.	The work area is 275km SW of Clyde River and 400km NW of Qikiqtarjuaq.
Geophysical Survey Area-Durette	Aerial surveys	Crown	This is the location of the Durette Target Area where Commander Resources Ltd conducted mineral exploration between 2001 and 2011. An airborne geophysical survey grid is proposed at this location for the 2017 program.	There are no known archaeological sites in this area.	The area is 215km SW of Clyde River and 310km NW of Qikiqtarjuaq.
Drone Survey Area-Ridge	Aerial surveys	Inuit Owned Surface Lands	This is the location of the Ridge Target Area where Commander Resources Ltd	There are no known archaeological sites in the area.	The are is 270km SW of Clyde River and 360km NW of Qikiqtarjuaq.

			conducted mineral exploration between 2001 and 2011. An aerial drone survey grid is proposed at this location for the 2017 program.		
Drone Survey Area-Kanosak	Aerial surveys	Inuit Owned Surface Lands	This is the location of the Kanosak Target Area where Commander Resources Ltd conducted mineral exploration between 2001 and 2011. An aerial drone survey grid is proposed at this location for the 2017 program.	There are no known archaeological sites in the area.	The work area is 260km SW of Clyde River and 360km NW of Qikiqtarjuaq.
Environmental Monitoring Study Area	Baseline data	Inuit Owned Surface Lands	This is the proposed environmental monitoring study area for the 2017 exploration program. The study area covers multiple exploration target areas where work was conducted by Commander Resources Ltd. between 2001 and 2011.	There are no known archaeological sites in the area.	The study area is approximately 260km SW of Clyde River and 360km NW of Qikiqtarjuaq.
Proposed Water Sample Sites	Baseline data	Crown	These are the proposed water sampling sites for the 2017 exploration program. They are distributed over multiple target areas where work was conducted by Commander Resources Ltd between 2001 and 2011.	There are no known archaeological sites in the area.	The area is approximately 260km SW of Clyde River and 360km NW of Qikiqtarjuaq.
Fox-3 Airstrip	Airstrip use or construction	Crown	This is the site of the preexisting North Warning System Fox-3 Airstrip. Biogenie Ltd. maintains the airstrip on behalf of the Department of Defence. Kivalliq will receive permission to use the airstrip during the exploration program.	There are no archaeological sites on the airstrip.	The airstrip is located 225km SW of Clyde River and 320km NW of Qikiqtarjuaq.
Fox-B Airstrip	Airstrip use or construction	Crown	This is the site of the preexisting North Warning System Fox-B Airstrip proximal to Nadluardjuk Lake and the proposed Tuktu Fly Camp. Kivalliq will receive permission to use the airstrip during the exploration program.	There are no archaeological sites on the airstrip.	The airstrip is 275km SW of Clyde River and 400km NW of Qikiqtarjuaq.
Tuktu Fly Camp-proposed	Fuel and chemical storage	Crown	This is the site of the proposed Tuktu Fly Camp located near Nadluardjuk Lake and proximal to the Fox-B North Warning System Airstrip.	There are no known archaeological sites at this site.	It is 275km SW of Clyde River and 400km NW of Qikiqtarjuaq.
Malrok Fly Camp-proposed	Fuel and chemical storage	Crown	This is the site of the proposed Malrok Fly Camp located beside Malrok Lake. It is the site of a Commander Resources Ltd. camp that was decommissioned and reclaimed in 2011.	There are no known archaeological sites at the camp site.	It is 265km SW of Clyde River and 370km NW of Qikiqtarjuaq.

#### Community Involvement and Regional Benefits

Community	Name	Organization	Date Contacted
Information is not available			

#### AUTHORIZATIONS

##### Project Locations

South Baffin

##### Project Authorization

Authorizing Agency	Authorization Description	Current Status	Date Issued / Applied	Expiry Date
Aboriginal Affairs and Northern Development Canada	Awaiting NIRB screening decision before submitting Land Use Permit Application to INAC.	Applied, Decision Pending		
Nunavut Water Board	Awaiting NIRB screening decision before submitting Water	Applied, Decision Pending		

	Licence Application to NWB			
Qikiqtani Inuit Association	Awaiting NIRB screening decision before submitting Land Use Licence Application to QIA.	Applied, Decision Pending		

Please indicate the mineral of interest that is being extracted. Include a brief description.

Mineral Type	Description
Base Metals (zinc, copper, gold, silver, etc)	Gold

## MATERIAL USE

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

Equipment Type	Quantity	Size - Dimensions	Proposed Use
Helicopter-Bell Long Ranger	1	12.91m x 3.14m	Transportation
Generator	2	70cm x 70cm x 120cm	Power generation for temporary fly camps
Water pumps	2	50cm x 30cm x 30cm	Provide water for temporary fly camps
Rock Saw	1	50cm x 20cm x 40cm	Cutting rock channel samples
Snowmobile	4	3m x 1m x 1m	Transportation

## Detail Fuel and Hazardous Material Use

Fuel / Material	Type	Number of Containers	Container Capacity	Total Amount	Units	Proposed Use
Diesel	fuel	23	205	4715	Liters	Power generators and heating
Aviation fuel	fuel	25	205	5125	Liters	Fuel helicopters
Gasoline	fuel	2	205	410	Liters	Fuel for water pumps and snowmobiles
Propane	fuel	10	100	1000	Lbs	Fuel for kitchen stoves
Hydraulic/Motor Oil	hazardous	5	4	20	Liters	Lubricant for generators, helicopters, etc.
Cleaning Solvent	hazardous	5	1	5	Liters	Cleaning

## Project Water Consumption

Daily Amount (m3)	Proposed Water Retrieval Methods	Proposed Water Retrieval Location
3	Portable gasoline-powered water pump equipped with mesh screen	Malrok Lake: 68°30'06" N, 72°27'08" W (IOL BI-35) Nadluardjuk Lake: 68°37'10" N, 73°12'45" W

## WASTE

### Waste Management

Project Activity	Type of Waste	Projected Amount Generated	Method of Disposal	Additional Treatment Procedures
Camp	Combustible wastes	~0.05m3/day	Duel-walled fuel-fired incinerator	Collect ash and removed from site for authorized disposal.
Camp	Greywater	<3m3/day	greywater sump	Sump backfilled upon final closure.
Camp	Hazardous waste	0.005m3/day	Collected in sealed and labelled drums.	Removed from site to a registered hazardous waste receiver.
Camp	Non-Combustible wastes	Unknown	Collection	Transported off site for authorized recycling/disposal.
Camp	Sewage (human waste)	0.05m3/day	Incinerated and ash collected,	Ash transported off site for authorized disposal.

## Environmental Impacts

Please refer to the "Environmental and Wildlife Management Plan" for predicted environmental impacts of undertaking and the proposed mitigation measures.

## DETAILS PART 2

### Project General Information

The following information is also available in the attached NIRB Part 2 PSIR document. 5. Discuss the need and purpose of the proposed project. The need and purpose of the project is to evaluate the mineral potential for gold on the claim area in the central Baffin Island area. 6. Discuss alternatives to the project and alternative methods of carrying out the project, including the no-go alternative. Provide justification for the chosen option(s). There are no alternatives to the proposed project activities that have been described. A compilation of the exploration work conducted in the region has defined the areas of interest which dictated boundaries staked and justifies further exploration for mineral potential. The proposed 2017 exploration program includes low-impact activities that are consistent with grassroots exploration such as prospecting, geological mapping, rock and channel sampling, soil/till sampling, airborne geophysics, ground geophysics, drone surveying and baseline environmental monitoring. Every effort will be made to minimize any impacts to the environment. Activities will be conducted in such a manner to avoid disturbance to wildlife. Any archaeological sites that are discovered will be designated off limits to all workers, their location will be recorded and submitted to the Chief Archaeologist at the Department of Culture, Language, Elders and Youth (CLEY), and the Qikiqtani Inuit Association. 7. Provide a schedule for all project activities. The 2017 program will commence in June with the mobilization of crews to assist Commander in the rehabilitation of the Dewar Lakes Camp. Exploration activities will operate from June through the end of September. Annual explorations in future years may commence as early as March to utilize winter conditions during which snowmobiles may be used to assist exploration and camp activities. All exploration activities will be concluded by the end of September annually. The airborne geophysical survey will commence after July 15th and weather dependent, the program will run for an estimated 16 to 21 day period. 8. List the acts, regulations and guidelines that apply to project activities. ARTICLE 13 – NCLA -Nunavut Land Claims Agreement The Nunavut Waters and Nunavut Surface Rights Tribunal Act, 2002 Northwest Territories Waters Regulations, 1993 NWB - Water Licensing in Nunavut - Interim Procedures and Information Guide for Applicants NWB - Interim Rules of Practice and Procedure for Public Hearings RWED – Environmental Protection Act, R-068-93- Spill Contingency Planning and Reporting Regulations, 1993 RWED A Guide to the Spill Contingency Planning and Reporting Regulations, 2002 NWTWB - Guidelines for Contingency Planning Canadian Environmental Protection Act, 1999 (CEPA) Fisheries Act, RS 1985 - s.34, 35, 36 and 37 DFO - Freshwater Intake End of Pipe Fish Screen Guideline NWTWB - Guidelines for the Discharge of Treated Municipal Wastewater in the NWT Canadian Council for Ministers of the Environment (CCME); Canadian Drinking Water Quality Guidelines, 1987 Public Health Act - Camp Sanitation Regulations Public Health Act - Water Supply Regulations Nunavut Archaeological and Paleontological Sites Regulations Territorial Lands Act and Territorial Land Use Regulations, 2000 Transport Canada – Transportation of Dangerous Goods Regulations 9. List the approvals, permits and licenses required to conduct the project. Applications for the following permits and licences have been prepared by Kivalliq Energy Corp. for the Baffin Gold Property and are attached in the appendices. Applications will be sent to INAC, NWB and the QIA once NPC has reached a determination of conformity and NIRB has reached a screening decision. Class A - Indigenous and Northern Affairs Canada (INAC) Land Use Permit - Appendix C Class B - Nunavut Water Board (NWB) Water Licence - Appendix D Class I - Qikiqtani Inuit Association (QIA) Land Use Licence – Appendix E

### DFO Operational Statement of Conformity

None of the DFO Operational Statement (OS) activities apply to the project proposal.

### Transportation

12. Describe how the project site will be accessed and how supplies will be brought to site. Provide a map showing access route(s). Access to the Baffin Gold Property is facilitated by fixed wing aircraft and helicopter flights. Fixed wing flights will bring personnel and supplies onto the Property via the Fox-3 Airstrip, located 350 metres southwest of the Dewar Lakes Camp. During the exploration program, access to various work sites across the property will be primarily facilitated by helicopter. Snow machines may be utilized during winter months. The centre of property is located 260 kilometres southwest of Clyde River and 360 kilometres northwest of Qikiqtarjuaq. Both communities are serviced by commercial flights from Iqaluit multiple times per week. Iqaluit is located 550 kilometres from the property and has daily commercial flights to Ottawa, Ontario and commercial flights three times weekly servicing Yellowknife, Northwest Territories. Yellowknife has daily flights to major centres in the south and hosts a well-developed infrastructure of mineral exploration related companies including fixed wing and helicopter charter companies and expeditors. Please refer to the “Project Description and Work Plan” attached as Appendix A for a map showing access routes. 13. If a previous airstrip is being used, provide a description of the type of airstrip (ice-strip/all-weather), including its location. Describe dust management procedures (if applicable) and provide a map showing location of airstrip. The Fox-3 Airstrip is a 1,200 metre (4,000 ft.) gravel airstrip at the Dewar Lakes North Warning System radar station. The airstrip is located at 68°37'36"N 71°7'35"W and use of the airstrip requires consents from Biogenie Ltd. who maintains it on behalf of the Department of National Defense. The Fox-B Airstrip is located at 68°37'10" N, 73°12'45" W near Nadluardjuk Lake. If the Tuktut Fly Camp is established near this location, personnel, equipment and supplies will be flown to the Fox-B airstrip via fixed wing aircraft. Please refer to the “Project Description and Work Plan” attached as Appendix A for a property map showing the location of the airstrip. 14. If an airstrip is being constructed, provide the following information: N/A 15. Describe expected flight altitudes, frequency of flights and anticipated flight routes. Weekly fixed wing flights will bring personnel and supplies to the property from Iqaluit. Daily helicopter flights will transport personnel between the Dewar Lakes Camp or temporary fly camps and exploration areas. Approximately 2 to 4 helicopter flights will be required each day, depending on the number of crews going out. Additional flights may be needed to ferry in heavy samples at the end of the day. Helicopter flights maintain a >300 metre altitude whenever possible. In areas where wildlife is observed helicopters are to maintain a minimum of altitude of 610 metres.

### Camp Site

16. Describe all existing and proposed camp structures and infrastructure Kivalliq Energy’s proposed temporary fly camps will accommodate up to 15 people and consist of a combination of WeatherPort vinyl tents, canvas prospectors’ tents and small plywood structures. • 1- Kitchen Tent • 1- Office Tent • 1- Dry Tent • 1- Utility Tent • 1- Toilet Facility (Pactos or Latrines) • 5- Crew Accommodations (1 tent will house the First Aid Attendant and First Aid Equipment) • 1- Generator Shack • 1- portable fuel-fired incinerator 17. Describe the type of camp: b. Temporary The proposed fly camps are temporary. The field camps will be fully closed and dismantled completely once exploration activities cease. The sites will then be reclaimed and restored to their original state. 18. Describe the maximum number of personnel expected on site, including the timing for those personnel involved with the project. The 2017 exploration program will have up to 20 personnel on site and is scheduled from June through to the end of September. Mobilization of crews and equipment will commence in June 2017. A seasonal shutdown will take place at the completion of exploration activities for the year, September 2017. If temporary fly camps are constructed, they may accommodate up to 15 personnel.

### Equipment

19. Provide a list of equipment required for the project and discuss the uses for the equipment. Type Size/Details Purpose Helicopter -1 Bell Long Ranger Transportation-crews/equipment Generator -2 20 kW Power generation for fly camps Water Pumps - 2 Gasoline powered Provide water for fly camps Snowmobiles - 4 Small to mid-size Transportation-crews/equipment Rock Saw - 1 Hand-held, gas powered Cutting channel samples 20. If possible, provide digital photos of equipment. This is the first year Kivalliq Energy is proposing to do an exploration program on the Baffin Gold Property. As such, equipment has not been purchased.

### Water

21. Describe the location of water source(s), the water intake methods, and all methods employed to prevent fish entrapment. Provide a map showing the water intake locations. For temporary fly camp operations, water will be drawn from a nearby lake. Coordinates of the lakes near the proposed fly camp locations are: Malrok Fly Camp: 68°30'06" N, 72°27'08" W - Will intake water from Malrok Lake on IOL BI-35. Tuktut Fly Camp: 68°37'10" N, 73°12'45" W - Will intake water from Nadluardjuk Lake. The fly camp is adjacent to the Fox-B North Warning System Site. The temporary fly camps will use a portable gasoline powered supply pump to intake water. Water intake hoses will be equipped with a screen of appropriate mesh size to ensure that there is no entrapment of fish. Small lakes or streams will not be used for water intake. The supply pump will be placed in a secondary containment structure, of sufficient height and depth to hold any potential spill. Please refer to the “Project Description and Work Plan” attached as Appendix A for a map showing the water intake locations. 22. Describe the estimated rate of water consumption (m³/day). Camp Water Use: Camp water use will be 3m³/day or less. Only one temporary fly camp will be operating at a time. No water will be required for exploration activities. 23. Describe how waste water will be managed. If relevant, provide detail regarding location of sumps, including capacity of sumps and monitoring. Waste water from fly camps will be discharged through a grease trap to a grey water sump. The discharge outlet will be inaccessible to wildlife. The grey water sump will be located at least 31 metres away from a water body. No contamination of the water supply is predicted. 24. If applicable, discuss how surface water and underground water will be managed and monitored. Waste water will be returned to a grey water sump and no waste water will be allowed to flow directly into a water source. Due to the short field season and minimal water consumption, no impacts upon underground water are predicted.

### Waste Water (Grey water, Sewage, Other)

25. Describe the quantities, treatment, storage, transportation, and disposal methods for the following (where relevant): Sewage Pacto toilets or an outhouse latrine facility will be used for the temporary fly camps. Pacto bags containing waste will be incinerated. Ash generated from sewage incineration will be stored in designated, sealed metal 45-gallon drums and removed from site for proper disposal. If outhouse latrine facilities are used at the proposed temporary field camps, they will be located at least 31 metres away from a water body. When full, the pits will be treated with lime and covered with at least 30 cm of compacted soil. Camp grey water. No water will be returned directly to the source. Waste water will be discharged to a grey water sump for slow infiltration into the surrounding soils. The waste water sump will be located at least 31 metres away from any water body. A grease trap and screens will be installed on kitchen drains to ensure grease and food solids do not enter the waste water sump. The discharge pipe into the sump will be inaccessible to wildlife. Combustible solid waste All combustible waste will be incinerated according to the “Environmental Guidelines for the Burning and Incineration of Solid Waste” and the “Canada-Wide Standards for Dioxins and Furans” by the Canadian Council of Ministers of the Environment. Untreated wood and large pieces of cardboard will be burned in a controlled open burn in compliance with the “Municipal Solid Wastes Suitable for Open Burning Guidelines”. Ash generated from the on-going incineration will be stored in sealed metal 45-gallon drums and removed from site via regularly scheduled backhaul. Non-combustible solid waste, including bulky items/scrap metal All non-combustible and recyclable wastes will be packaged in the appropriate containers and backhauled to Iqaluit for recycling or proper disposal. Hazardous waste or oil Hazardous wastes will be sealed in the appropriate containers, labeled and documented in accordance with the “Transportation of Dangerous Goods Act” and removed from site for proper disposal at an accredited facility. Contaminated soils/snow Any soil/snow that has become contaminated will be treated as per the Baffin Gold Property “Spill Contingency Plan”. Contaminated snow/soil will be scraped/shoveled into labelled containers and shipped from site to an appropriate and approved facility for disposal. A Waste Manifest will accompany all movements of contaminated soils/snow. At the advice, discretion and approval of land use inspectors and permitting or licensing authorities’ bioremediation, or land farming, may be implemented to treat certain contaminated soils temporarily contained in sealed drums on the property. Bioremediation is performed in biotreatment cells or the upper soil zone. Contaminated soils or sediments are incorporated into non contaminated soils and periodically turned over or tilled to aerate the mixture. Empty barrels/ fuel drums Empty fuel drums will be removed from site regularly on backhaul flights and returned to the vendor for recycling or sent to an approved facility for disposal. Any other waste produced N/A Refer to the “Waste Management Plan” for additional information pertaining to waste management. 26. If the project proposal includes a landfill or landfarm, indicate the locations on a map, provide the conceptual design parameters, and discuss waste management and contact-water management procedures. N/A

## Fuel

27. Describe the types of fuel, quantities (number of containers, type of containers and capacity of containers), method of storage and containment. Indicate the location on a map where fuel is to be stored, and method of transportation of fuel to project site. Kivalliq Energy is applying to store up to 60 drums of fuel on the Baffin Gold Property. This will include up to: Material Container Max Quantity On-Site Location Diesel 205 litre drum 23 Temporary Fly Camp Jet Fuel (A/B) 205 litre drum 25 Temporary Fly Camp Propane 100 lb. cylinder 10 Temporary Fly Camp Gasoline 205 litre drum 2 Temporary Fly Camp A main cache will be established at the temporary fly camp location. Temporary supply caches of less than nine drums may be located as required to service the airborne geophysical surveying or remote exploration activities. Please refer to the “Project Description and Work Plan” attached as Appendix A for a map showing fuel storage locations. All fuel is to be stored in secondary containment berms equipped with Spillfyter RailMat 3 ply hydrocarbon absorbent fabric and Rain Drain hydrocarbon filters for water drainage. Fuel drums will be transported to camp via fixed wing aircraft. All drums, secondary containment berms and fuel caches will be located a minimum 31 meters from any water body and will be inspected regularly. All storage, fueling and staging areas have easily visible and readily available spill kits. Refer to the “Fuel Management Plan” attached as Appendix G for detailed description of the storage, handling and transfer of fuel. Drummed fuel will be transported to site via fixed-wing aircraft to the Fox-3 Airstrip or the Fox-B Airstrip on the property. 28. Describe any secondary containment measures to be employed, including the type of material or system used. If no secondary containment is to be employed, please provide justification. All fuels and other hazardous materials will be stored in Arctic grade secondary containment berms from Raymac Environmental Services Inc. or similar. All secondary containment berms will be equipped with Spillfyter RailMat 3 ply hydrocarbon absorbent fabric, Rain Drain hydrocarbon filters for water drainage and a spill kit. All secondary containment berms will be capable of holding 110 percent of the volume of the largest fuel reservoir that is housed within the secondary containment. 29. Describe the method of fuel transfer and the method of refuelling. Manual or automatic pumps will be used for the transfer of all petroleum products. Spill kits will be available and drip trays will be underlay all areas where refueling or the transfer of fuels is undertaken. Please refer to the Baffin Gold Property’s “Fuel Management Plan” attached as Appendix G for detailed description of the storage, handling and transfer of fuel. 30. Describe spill control measures in place. Please refer to the Baffin Gold Property’s “Spill Contingency Plan” attached as Appendix F for detailed spill control measures in place.

## Chemical and Hazardous Material

31. Describe the types, quantities (number of containers, the type of container and capacity of containers), method of storage and containment. Indicate the location on a map where material is to be stored, and method of transportation of materials to project site. Chemicals and hazardous materials that may be located on the Baffin Gold Property include small amounts of hydrochloric acid, cleaners, batteries, electronics, fluorescent light bulbs/tubes, motor oil and hydraulic oil. Materials will be stored in their original containers. Refer to the “Waste Management Plan” for the types, quantities and method of storage. Please refer to the “Spill Contingency Plan” attached as Appendix F for MSDS sheets that accompany these materials. 32. Describe any secondary containment measures to be employed, including the type of material or system used. The small supply of motor oil and hydraulic oil will be located in the utility tent at the temporary field camp. They will be kept in a drip tray with a spill kit nearby. Hydrochloric acid is used for core logging in very small amounts (<0.5 litre) and will be kept in a sealed container in the core shack. Cleaners (solvents) will be kept on drip trays in a designated area in their original containers. 33. Describe the method of chemical transfer. Chemical transfer will be completed within designated areas, ideally in secondary containment. When secondary containment is not practical (e.g. adding hydraulic oil to the helicopter), absorbent pads will be used to protect from drips and spills. Funnels will be used to reduce the potential for spillage. 34. Describe spill control measures in place. Please refer to the Baffin Gold Property’s “Spill Contingency Plan” attached as Appendix F for detailed spill control measures in place.

## Workforce and Human Resources / Socio-Economic Impacts

35. Discuss opportunities for training and employment of local Inuit beneficiaries. Kivalliq Energy will hire Inuit whenever possible and plans to hire locals from Qikiqtaaluaq on short term employment for the 2017 program. Kivalliq Energy will utilize northern businesses and services wherever available. 36. Discuss workforce mobilization and schedule, including the duration of work and rotation length, and the transportation of workers to site. The 2017 exploration program will operate from June through to September, pending funding. Personnel will be transported to the Baffin Gold Property via fixed-wing aircraft from Qikiqtaaluaq or Iqaluit. Field crews will be flown to the exploration targets each day via helicopters. As per the Worker’s Safety and Compensation Commission, no personnel will remain onsite for more than 42 days. Duration of work and rotation length will be determined upon hiring. 37. Discuss, where relevant, any specific hiring policies for Inuit beneficiaries. Kivalliq Energy is committed to hiring qualified local Inuit whenever possible. The company has had multiple long term employees and has employed up to ten Nunavummiut during seasonal programs at their Angilak Property in the Kivalliq Region.

## Public Involvement / Traditional Knowledge

38. Indicate which communities, groups, or organizations would be affected by this project proposal. The closest communities to the Property are Qikiqtaaluaq, Clyde River and Pangnirtung. Other groups or organizations that may be affected by this project include: the Qikiqtani Inuit Association, the Nangmoutaq Hunters and Trappers Organization (HTO) and the Naativak HTO. 39. Describe any consultation with interested Parties which has occurred regarding the development of the project proposal. Kivalliq has planned visits to communities adjacent to the property (Clyde River, Qikiqtaaluaq, Pangnirtung, Iqaluit) prior to the start of the exploration program to discuss available Inuit Qaujimajatuqangit (IQ), the exploration program and any potential concerns the communities may have. 40. Provide a summary of public involvement measures, a summary of concerns expressed, and strategies employed to address any concerns. See section 39 above. Public consultations are scheduled for the coming months. Appendix L summarizes the consultation to date. Once the community visits have taken place, the community consultation log will be updated that includes a summary of public involvement and concerns expressed. 41. Describe how traditional knowledge was obtained, and how it has been integrated into the project. Inuit Qaujimajatuqangit/Traditional knowledge will be integrated into the project once it is obtained at the planned community visits. 42. Discuss future consultation plans. Kivalliq has planned visits to communities adjacent to the property (Clyde River, Qikiqtaaluaq, Pangnirtung, Iqaluit) prior to the start of the exploration program to discuss available Inuit Qaujimajatuqangit, the exploration program and any potential concerns the communities may have.

## SECTION B: Mineral Exploration: Project Information

1. Describe the type of mineral resource under exploration. Gold

## SECTION B: Mineral Exploration: Exploration Activity

2. Indicate the type of exploration activity: Airborne Geophysical Electromagnetic (EM) Survey Drone Survey Ground Magnetic/EM Surveys Prospecting and Geological Mapping Enzyme Leach or Conventional Soil Geochemistry Soil /Till Sampling Rock/Channel Sampling 3. Describe the exploration activities associated with this project: Refer to the “Project Description and Work Plan” attached as Appendix A for details on the exploration activities.

## **SECTION B: Mineral Exploration: Geosciences**

4. Indicate the geophysical operation type: • Magnetic – ground geophysical survey • Electromagnetic – airborne and ground surveys 5. Indicate the geological operation type: • Geological Mapping – during Prospecting • Aerial Photography – Drone survey 6. Indicate on a map the boundary subject to air and/or ground geophysical work. Please refer to the “Project Description and Work Plan” attached as Appendix A for maps of the proposed air and ground geophysical survey grids. 7. Provide flight altitudes and locations where flight altitudes will be below 610m. Please refer to the “Project Description and Work Plan” attached as Appendix A for the details of the proposed airborne and ground geophysical surveys and maps showing survey grid locations.

## **SECTION B: Mineral Exploration: Drilling**

B-4. Drilling – N/A

## **SECTION B: Mineral Exploration: Stripping / Trenching / Pit Excavation**

## **SECTION B: Mineral Exploration: Underground Activities**

## **SECTION B: Mineral Exploration: Waste Rock Storage and Tailings Disposal**

## **SECTION B: Mineral Exploration: Stockpiles**

## **SECTION B: Mineral Exploration: Mine Development Activities**

## **SECTION B: Mineral Exploration: Geology and Mineralogy**

## **SECTION B: Mineral Exploration: Mine**

## **SECTION B: Mineral Exploration: Mill**

## **Description of Existing Environment: Physical Environment**

To our knowledge there are no protected areas within the Baffin Gold Property. The regional terrain is glaciated with the topography varying from coastal plains and glacial outwash (a.s.l) on the western side of the property to rolling hills with elevations up to 350 metres on the eastern side. This region is underlain by continuous permafrost. The Baffin Gold Property is centered on the Bravo Lake Formation (BLF), an east-west trending metavolcanic-sedimentary belt located along the southern edge of Piling Group rocks within the Foxe Fold Belt (FFB). The Foxe Fold Belt (FFB) is a Proterozoic aged supra-crustal sequence developed on Archean basement. The belt is characterized by upper greenschist to amphibolite facies metamorphism and complex poly-phase deformation. The property is covered by a thin glacial till blanket with occasional southwest trending eskers, significant bedrock exposure and boulder float. Due to the remote location of the property, water, soil and air quality are expected to be pristine and only effected by global factors.

## **Description of Existing Environment: Biological Environment**

The Baffin Gold Property is located on the border of the Melville Peninsula Plateau Ecoregion (MPPE) and the Baffin Island Uplands Ecoregion (BIUE) within the Northern Arctic Ecozone (NAE) (Environment Canada). These ecoregions are described as having a mid to high-arctic ecoclimate with temperatures ranging from a summer mean of 0.5°C and a winter mean of -25°C with a mean temperature of -13°C. The Baffin Island Uplands Ecoregion received more precipitation than the adjacent MPPE to the southwest. Mean annual precipitation ranges from 100-300mm and snow covers the ground from roughly September through June. The Northern Arctic Ecozone is above the tree line; therefore, no full size tree species are present. Vegetation is generally sparse and stunted and mainly consists of mosses, sedges, grasses and lichen. The project activities are not located within Caribou Protection Areas or Schedule 1 Species at Risk known locations. There are no designated caribou calving grounds or caribou protection areas on the Baffin Gold Property or on the surrounding area. Kivalliq Energy plans to implement wildlife monitoring designed to describe wildlife use of the study area and produce coarse-scale population estimates for valued ecosystem components (VECs) occurring in the study area. The 2017 wildlife program will consist of logging incidental observations of all wildlife encountered by field staff and noting any listed species or high priority VEC known to occur in the study area. The wildlife incidental observations will be included in the Annual Report to QIA, INAC and NIRB. Wildlife is rare around the project area. Species that may be present include: polar bear, muskox, caribou, arctic wolf, arctic fox, arctic hare and snowy owl. While the listed wildlife are characteristic of the Ecozone, historic exploration in the area has recorded minimal wildlife sightings. Please refer to the Baffin Gold Property’s “Environmental and Wildlife Management Plan” attached as Appendix H for Kivalliq Energy’s wildlife policy and a complete description of wildlife mitigation measures.

## **Description of Existing Environment: Socioeconomic Environment**

The centre of the property is located 260 kilometres southwest of Clyde River and 360 kilometres northwest of Qikiqtarjuaq. Due to the properties isolation and a lack of road access it is predicted that there will be little to no local or regional traffic in the area. There are no known archaeological or culturally sensitive sites on the property. Any archaeological sites identified during the course of exploration activities will be handled with the utmost care. Site coordinates will be recorded and designated off limits to all workers. Disturbance will be prohibited. The Naativak and Nangmautauq Hunters and Trappers Organizations will be contacted to determine whether the project area coincides with hunting grounds and to discuss their potential concerns.

## **Identification of Impacts and Proposed Mitigation Measures**

1. Please complete the attached Table 1 – Identification of Environmental Impacts, taking into consideration the components/activities and project phase(s) identified in Section 4 of this document. Identify impacts in Table 1 as either positive (P), negative and mitigable (M), negative and non- mitigable (N), or unknown (U). Please see Table 1: Identification of Environmental Impacts at the end of this document. 2. Discuss the impacts identified in the above table. Temporary field camps will be constructed quickly and with minimal impact to the environment. Permafrost disturbance due to sump digging will be mitigated with backfilling upon final closure of the camp. Limited noise will be associated with the construction of camp including mobilizing equipment and personnel to site which cannot be mitigated. All activities associated with operations are considered low-impact and mitigatable except for noise levels related to aircraft and generators for camp operations. Aircraft are necessary due to the location of the property and lack of roads. Temporary field camps will be completely removed upon final closure according to the “Abandonment and Restoration Plan” (Appendix I). No buildings, equipment or waste will remain once the project is complete. Please refer to the “Abandonment and Restoration Plan” which outlines reclamation procedures for the potential impacts identified on the property and the “Environmental and Wildlife Management Plan” and “Fuel Management Plan” for mitigate measures in place on the Baffin Gold Property. 3. Discuss potential socioeconomic impacts, including human health. Kivalliq Energy predicts positive socioeconomic impacts for the nearby communities including job creation for local Inuit and increased business for northern companies and services. All employees and contractors will be required to be familiar with all of the Baffin Gold

Property management plans. 4. Discuss potential for transboundary effects related to the project. N/A 5. Identify any potentially adverse effects of the project proposal on species listed under the Species at Risk Act (SARA) and their critical habitats or residences, what measures will be taken to avoid or lessen those effects and how the effects will be monitored. Please refer to the “Environmental and Wildlife Management Plan” in Appendix H. Every effort will be made to avoid all wildlife contact. 6. Discuss proposed measures to mitigate all identified negative impacts. Please refer to the Baffin Gold Property “Environmental and Wildlife Management Plan” for mitigation measures related to the environment and wildlife, the “Fuel Management Plan” and “Spill Contingency Plan” for fuel mitigation measures.

### **Cumulative Effects**

Early stage grassroots exploration programs are low-impact and occur over a short period of time. The effects of these programs are expected to be minor and mitigable. Please refer to the “Environmental and Wildlife Management Plan” which outlines mitigation measures employed by Kivalliq Energy. All Baffin Gold Property management plans will be used in combination to minimize effects to environment and wildlife. Predicted positive cumulative effects include job opportunities for locals and increased business in the communities.

## IMPACTS

### TABLE 1 - IDENTIFICATION OF ENVIRONMENTAL IMPACTS

	P H Y S I C A L																								
	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																								
	B I O L O G I C A L																								
	Vegetation																								
	Wildlife, including habitat and migration patterns																								
	Birds, including habitat and migration patterns																								
	Aquatic species, incl. habitat and migration/spawning																								
	Wildlife protected areas																								
	S O C I O - E C O N O M I C																								
	Archaeological and cultural historic sites																								
	Employment																								
	Community wellness																								
	Community infrastructure																								
	Human health																								
CONSTRUCTION																									
Camp		-	-	M	-	-	-	-	-	M	-	-	N		M	M	-	-	-		P	-	-	-	-
OPERATION																									
Aerial surveys		-	-	-	-	-	-	-	-	-	-	-	N		-	M	M	-	-		-	-	-	-	-
Airstrip use or construction		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-
Camp		-	-	M	-	-	-	-	-	M	-	-	N		M	M	M	-	-		P	-	-	-	-
Fuel and chemical storage		-	-	-	-	-	-	-	-	M	-	-	-		M	M	-	-	-		-	-	-	-	-
Mineral Exploration		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-
DECOMMISSIONING																									
Camp		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-

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

[illegible]

