Advanced Explorations Inc.
2012 Project Summary
2013 Project Plans
Tuktu Project

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AANDC Permit: N2010C0011
QIA License: Q12L3C009
NWB License: 2BE-TUK1015

Revised January 2013

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ᓴᕕᒃᓴᖅᓯᐅᑎᑦ (“AEI” ᐅᕙᘓᓘᓐᓃᑦ “ᑲᑐᔾᔨᕐᑲᑭᒌᑦ”)ᐱᓕᕆᐊᒃᓴᖅ ᓇᐃᒃᓕᑎᓯᒪᔪᖅ ᓇᓗᓇᐃᖅᓯᓯᒪᔪᖅ ᐱᓕᕆᐊᕐᒍᓯᒪᔪᓂᑦ ᑐᒃᑐᑯᓐᓂᑦ, ᐅᖓᓯᖕᓂᖁᓪᓗᐊᖅᑐᖅ 70 km ᓴᓂᕋᔭᐅᑉ ᐊᑭᓐᓇᖅᐸᓯᖕᒐᓐᓂᑦ, ᓄᓇᕗᑦᒥᑦ ᐊᕐᕿᓘᑉ ᓅᒍᐊᓂᑦ. ᑲᑐᔾᔨᕐᑲᑎᒌᑦ ᐱᓚᐅᖅᑐᑦ ᓈᒻᒪᒃᑐᓂᑦ ᐱᔪᓐᓇᐅᑎᓂᒃ/ᓚᐃᓴᓐᓯᓂᒃ ᐃᓂᐅᔪᒧᑦ ᑎᑎᕋᐅᓯᐅᓯᒪᑦᑎᐊᖅᑐᖅ ᓯᕗᓪᓕᖅᐹᒥᑦ ᐅᓂᒃᑳᓕᐅᖅᓯᒪᔪᒥᑦ ᑖᕙᓂ.

ᐱᓕᕆᐊᖑᔪᖅ ᐱᕐᑲᖅᑐᖅ 16 ᓴᕕᒃᓴᓂᑦ (HABS 1-ᒥᑦ 11–ᒧᑦ, ᓇᓗᓇᐃᒃᑯᑦᑎᖅᑕᐅᓚᐅᖅᑐᑦ ᓯᑎᐱᕆᐅᓚᐅᖅᑐᒥᑦ ᐊᒻᒪ ᐅᑐᐱᕆᐅᓚᐅᖅᑐᒥᑦ ᐊᕐᕌᒍ 2009; HABS 12–ᒥᑦ 15–ᒧᑦ ᓇᓗᓴᐃᒃᑯᑦᑎᖅᑕᐅᔪᑦ ᓯᑎᐱᕆ 2011 ᐊᒻᒪ JP ᕿᑐᕐᓴᖅᑕᐅᓯᒪᔪᑦ ᓇᓗᓇᐃᒃᑯᑦᑎᖅᑕᐅᓪᓗᑎᒃ ᐊᒌᓯ 2010.) ᐊᒻᒪ ᐅᐸᒃᑕᐅᔪᓐᓇᖅᑐᖅ QIA HB-06. ᕿᑐᕐᓴᖅᑕᐅᓯᒪᔪᑦ ᓇᖏᓂᕆᔭᐅᔪᑦ ᓴᕕᒃᓴᖅᓯᐅᖅᑎᒃᑯᓐᓂᑦ (75%) ᐊᒻᒪ ᐃᕐᑲᓗᒆᕐᔪᒃ (25%)(ᓅᑕᐅᓂᖅ ᐱᓕᕆᐊᖑᕙᓪᓕᐊᔪᖅ), ᐊᒻᒪ ᐃᓚᒋᔭᐅᓪᓗᓂ ᐃᕐᑲᓗᒆᕐᔪᓕᕆᔾᔭᒃᑯᓐᓂᑦ.

ᐅᐸᒃᑕᐅᓪᓗᐊᑕᒃᐸᒃᑐᖅ ᓴᓂᕋᔭᒃ ᐋᖅᑭᒃᓯᒪᔪᒃᑯᑦ ᕿᖕᒐᑕᓱᒃᑯᑦ ᐃᕐᑲᓗᓐᓂᖕᒐᖅᐸᒃᑐᖅ, ᐊᒻᒪ ᐊᑭᓪᓕᒋᐊᖅᓯᒪᔪᒃᑯᑦ ᔭᓗᓇᐃᒥᑦ, ᐊᒻᒪ ᐊᔾᔨᒌᖕᒋᑦᑐᓂᑦ ᓄᓇᓕᐅᔪᓂᑦ ᑲᓇᑕᐅᐸ ᓂᒋᖅᐸᓯᖕᒐᓐᓂᑦ, ᖁᓕᒥᒨᒃᑯᑦ ᐅᕙᘓᓘᓐᓃᑦ ᖃᖕᒐᑕᓱᒃᑯᑦ ᓇᔪᖅᑕᐅᔪᒧᑦ. ᓄᓇᓯᐅᑎᑦ ᐅᐱᖕᖒᒃᓵᒃᑯᑦ. ᐊᐅᔭᒃᑯᑦ ᐊᒻᒪ ᐅᑭᐊᒃᓵᒃᑯᑦ ᐊᑐᖅᑕᐅᔪᓐᓇᖅᑐᑦ ᐊᑐᕆᐊᕐᑲᓕᕌᖓᑕ, ᐊᒻᒪ ᐊᑐᖅᑕᐅᔪᓐᓇᖅᐸᒃᓘᑎᒃ ᐃᖏᕋᕙᐅᔪᓐᓇᕌᖓᑦ ᓄᓇ ᐊᒻᒪ ᐊᐳᑎ ᐃᖏᕋᔾᔪᑎᑦ ᐊᑐᕆᐊᕐᑲᕌᖓᑕ ᐊᒻᒪ ᓯᓚ ᓈᒻᒪᖏᑦᑕᕌᖓᑦ ᖁᓕᒥᒎᕐᑲᕈᓐᓇᖅᐸᖕᒋᕐᓘᓂ. ᐅᑭᐅᒃᑯᑦ, ᓯᑭᑑᑦ ᐊᒻᒪ ᐅᓯᑦ ᐊᑐᖅᑕᐅᔪᑐᐊᖑᙵᒃᓘᑎᑦ ᓄᓇᒃᑯᑦ ᓄᓇᒃᑯᕐᓇᕌᖓᑦ.

ᐱᓕᕆᐊᖑᔪᖅ ᐱᕐᑲᖅᑐᖅ ᓴᕕᒃᓴᓕᕆᓂᕐᒥᑦ ᐱᓕᕆᐊᖑᔪᖅ ᐱᔭᐅᓵᖅᑫᒥᑦ ᓵᕕᒃᓴᑦ, ᐃᕐᑲᓗᒆᕐᔫᑉ ᐸᕐᓇᐅᑎᒪᕆᖕᒋᓐᓂᑦ ᐃᓚᓕᐅᑎᓯᒪᔪᖅ. ᓴᕕᒃᓴᖅᓯᐅᕐᓂᖅ ᐱᒋᐊᖅᑕᐅᓚᐅᖅᑐᖅ ᐊᒻᒪ ᓴᕕᒃᓴᓕᕆᕙᒃ ᐋᖅᑭᒃᑕᐅᓪᓗᓂ ᐊᕐᕌᒍ 2011-ᖑᓚᐅᖅᑐᒥᑦ. ᐱᓕᕆᐊᕐᓴᓄᑦ ᑲᔪᓰᓐᓇᕐᓂᐊᖅᑐᖅ ᐊᒻᒪ ᐋᖅᑭᒃᓯᒪᓂᐊᕐᓂᖓ ᐊᕐᕌᒍ 2013–ᒧᑦ ᐱᓕᕆᐊᖑᔪᓐᓇᕐᓂᐊᖅᑐᑦ ᑮᓇᐅᔭᐃᑦ ᐱᔭᐅᔪᓐᓇᕐᓂᐊᖅᐸᑦ

ᑖᓐᓇ ᐸᕐᓇᐃᓂᕐᒧᑦ ᓇᐃᒃᓕᒋᐊᖅᓯᒪᔪᖅ ᐊᒻᒪ ᓇᓚᐅᑦᑖᖅᑕᐅᓯᒪᔪᖅ ᐸᕐᓇᐅᑎᑦ ᑐᓂᔭᐅᓯᒪᔪᑦ ᐃᓚᒋᔭᐅᓪᓗᓂ ᓴᕕᒃᓴᖅᓯᐅᖅᑎᒃᑯᑦ ᐊᕐᕌᒍᑕᖢᖅ ᐅᓂᒃᑳᓕᐊᕆᔭᕆᐊᖅᑲᖅᐸᒃᑕᕆᓐᓂᑦ.

EXECUTIVE SUMMARY

Advanced Explorations Inc.'s ("AEI" or the "Company") Project Summary outlines activities undertaken at the Tuktu Project, approximately 70 km west of Hall Beach, Nunavut during the latest calendar year. The Company has received the appropriate permits/licenses for the area, as detailed on the cover page of this report.

The project consists of 16 mineral claims (HABS 1 to 11, staked in September and October 2009; HABS 12 to 15 staked in September 2011 and the JP claim staked August 2010.) and access to the QIA HB-06. The claims are beneficially owned by Advanced Explorations Inc. (75%) and Roche Bay plc (25%)(transfer in progress), and are part of the Roche Bay joint venture with Roche Bay plc.

Primary access to Hall Beach is typically by scheduled flights from Iqaluit, and charter flights from Yellowknife and various other cities in southern Canada, with helicopter or fixed wing aircraft transport to the site. Ground transportation in the spring, summer and fall is limited to the minimum required, and is only considered on durable land and tundra when necessary travel has to be undertaken and the weather does not permit helicopter flights. In the winter, snowmobiles and skidded equipment are only used on ground with adequate snow cover.

The project consists of a mineral exploration program undertaken on recently acquired iron mineralization, as part of the larger Roche Bay exploration initiative. The exploration program was initiated and camp established in 2011. The program continuation and timelines for 2013 will be contingent on the level of financing that can be achieved.

This project summary and projected work plan is submitted as part of AEI's required annual reporting.

Table of Contents

1.0 2012 PROJECT SUMMARY

The following report gives a summary of the activities that occurred at the project area during 2012. An exploration camp was reopened and program initiated on Crown lands only, and permitted under the AANDC Land Use Permit and NWB Water Use License documented on the cover page of this report. Project maps are provided in Appendix A, including an updated land disposition map showing both the existing and new mineral claims making up the current project lands.

1.1 Camp Facilities

The camp consisted of temporary Weatherhaven tents and could hold up to 42 people. All infrastructure is temporary in nature, and removable upon completion of the exploration program. Personnel used the camp during the months of August to October.

At the end of the field season, all camp facilities were closed and secured for the winter months. The camp layout schematic is shown in Appendix A.

The Job Safety Plan was used for prevention and mitigation of all safety issues at the project. A site orientation for new workers arriving at camp was given promptly upon arrival. Safety points were addressed as well as general procedures in camp during the orientation. Maps of the camp layout were posted. Helicopter safety orientation was done by the pilots prior to new workers boarding the helicopter. Weekly safety meetings were held to address wildlife sightings, hunting/fishing, archaeological site identification, reporting and avoidance, helicopter safety, as well as general safety and training as required.

Daily activities were documented by the Project Manager and Environmental Specialist, which included daily operations at the camp, drilling operations, fuel inspections, waste monitoring, wildlife sightings, water usage monitoring, flight reports, archaeology site monitoring, ground disturbance monitoring and personnel safety.

All appropriate permits/licenses were displayed on-site and available at the camp.

1.2 Drilling

There were a total of 11 drill holes in the program this season. All drill sites for the program were located a minimum of 31 metres from all waterbodies, and 50 metres from archaeological sites.

A common problem encountered during Arctic drilling programs occurs as a result of drilling through a layer of permafrost. Equipment can become frozen in the ground if proper procedures are not followed. The normal approach to overcome this is to use heated drill water for the first 200 metres of drilling and then begin to add salt (CaCl) and create a brine solution that suppresses the freezing point of water to well below zero. Salt was the only drill additive used during the program, and salt use was minimized as much as practical.

Inspections were conducted at the drill sites before, during and after drilling and documented. Any problems found were addressed immediately with the drill contractor. As part of the drilling operations, the footprint was kept as minimal as possible, salt was kept on tarps, fuel on drip pans lined with petroleum absorbent material and waste separated (scrap metal and burnable waste) and kept in empty barrels. The drill return was filtered through a polydrill system where possible or the flow of cuttings was directed into natural depressions and further contained using sand bags where necessary. Cuttings from the polydrill system were recycled wherever possible and used to rehabilitate the sites once drilling was complete. The remainder of the drill cuttings were disposed of into natural depressions greater than 31 metres from any waterbody.

1.3 Equipment

Personnel, supplies and equipment were flown into site via helicopter. Most of the equipment was safely stored on-site for future use at the end of the season. An inventory of the equipment and materials that remain on-site is listed in Appendix B.

1.4 Water Use

All locations (Lat-long co-ordinates) where sources of water were utilized are listed in Appendix B. Camp water use was a permitted maximum of 10 cubic meters per day.

The camp water source was a large lake located adjacent to the camp. This proved to be adequate for all needs. The camp water was filtered through a UV filtration system for kitchen use and all drinking water use. Bottled water was utilized during the early stages of camp opening. Once the camp was fully operational, no drinking water needed to be flown into camp in the form of commercial bottled water. Camp drinking water quality was tested periodically throughout operations, and no water quality issues were noted.

The daily quantities of water utilized for camp were measured and recorded for the duration of the field season. A single water tank provided all the water required for camp use. This tank was refilled as necessary by the Tuktu Camp Manager, wherein the date, time and quantity of refills were documented. These records are summarized in Appendix B.

Drilling water use was permitted at a maximum of 173 cubic meters per day. Water for drilling operations was taken from the nearest lake of sufficient size without impact to the environment or any fish in the lake. All water intakes were properly screened to prevent the entrapment, entrainment or impingement of fish. Efforts were made to reuse water through the use of a recirculation system. . Only lakes and ponds large enough to provide the necessary water without a reduction in water levels were chosen.

The daily quantities of water utilized for drilling was recorded for the duration of the field season. There was one water pump per drill. The water pump was inspected to determine a maximum pump rate of 8 Gallons per minute. The daily quantities of water utilized for drilling were calculated and documented. These records are summarized in Appendix B.

1.5 Waste

Greywater produced in the camp ran into a natural depression adjacent to the kitchen, greater than 31 metres from any waterbody. The greywater was further contained by using sand bags around the area. Peat moss was applied to help with natural re-vegetation of the area.

All combustible waste and sewage was incinerated daily in a dual chamber, forced-air incinerator, with the ash stored in empty drums. Drums of ash and unburnable materials were secured in drums, and removed to the project storage area to await later removal to an approved disposal facility. The incinerator was sealed and secured on-site for the winter.

Waste oil was stored in drums in the berm on-site. These drums were removed to the project storage area to await shipment to an approved disposal facility.

Empty barrels/fuel drums were reused where possible. The remainder have been secured in the project storage area and are awaiting shipment to an approved disposal facility.

All drill cores were stored a minimum of 31 metres from all waterbodies.

The Company is registered with the Government of Nunavut, Department of Environment. Waste manifests will accompany all shipments as required.

All waste deposition locations were recorded and listed in Appendix B.

1.6 Fuel Storage

Drip trays were placed under drums used for heating tents, and absorbent material wrapped around connection points. Portable hand pumps were used to pump rain/melt water out of the drip trays and into empty fuel drums. These were stored in the berm on-site.

Visual inspections of all fuel drums were conducted at every refueling event. A more formal inspection was done by one of the site managers on a regular basis.

All fuel containers were marked with "AEI". Fuel storage areas were a minimum of 31 metres from all waterbodies.

Spill kits were on-site and accessible at all times. There were spill kits available at the camp, berm, drill sites and during all refuelling activities. Drip pans were used for all refuelling activities.

At the end of the season, all fuel was stored in the berm on-site and a list of its contents is in the equipment inventory list in Appendix B.

1.7 Wildlife/Fisheries

Operational activities were managed to avoid impacts on wildlife. During breeding bird season, if nests and eggs of birds were observed they were avoided until nesting was completed and the young had left the nest. A perimeter of a minimum 2 km area around the camp and drill sites was surveyed on a regular basis for caribou activities, within which all operations were to be suspended if caribou were sighted there. There were no caribou migrations or calving activities observed in the project area.

Flights were maintained at a minimum altitude of 610 metres above ground level unless there was a specific requirement for low-level flying, which does not disturb wildlife and migratory birds. No colonies of migratory birds were observed in the project area.

All wildlife sightings/encounters were brought to the attention of the local Bear Monitor and the Environmental Specialist on-site. The "Safety in Bear Country Manual" was followed and discussed at the weekly safety meetings. The "Polar Bears: A Guide to Safety" video was made available to all camp staff; who were required to watch it. All wildlife sightings were documented including locations, time of sightings, species, number of animals, animal activity, and gender and age (if possible). These are summarized in Appendix C.
No hunting was permitted on-site as per the regulations. Fishing was permitted after work hours only if proper authorizations were obtained.

1.8 Ground Disturbance

The use of overland vehicles was closely monitored to minimize ground rutting or gouging. People were advised to stay on the snow and avoid any patches of vegetation. Use of overland vehicles was not permitted until sufficient snow had fallen to protect the tundra from damage. Areas of use were inspected by site managers over the summer and remediated as necessary.

1.9 Archaeological Sites

All drill sites and work areas were inspected for potential archaeological sites prior to work being undertaken. Archaeological/paleontological/burial sites were avoided by a minimum of 50 metres. All observations were properly recorded and notification procedures implemented.

1.10 Discharges/Spills

The *Oil and Hazardous Material Spill Contingency Plan* was followed throughout the project in response to a discharge or spill incident.

1.11 Inspections/Site Visits

The Company conducted inspections as necessary to ensure compliance with all of the permits/licenses terms and conditions for the duration of the project. No inspections by regulators or stakeholders took place this season.

1.12 Flights

Flight altitudes as presented in the permits/licenses terms and conditions were abided by to avoid disturbance to wildlife. The number of flight take-offs and landings were estimated for the season based on the helicopter flight tickets submitted. The dates, locations and reasons for flights were also summarized. No airborne gravity flights were conducted this season. These records are summarized in Appendix D.

1.13 Environmental Baseline Studies

Due to financial constraints, Environmental Baseline Studies were limited. Wildlife reconnaissance was conducted in June, August, September and October. Scheduled maintenance also took place on the Meteorological station in June and October. Archaeologists conducted site visits in September to observe and document sites within the Roche Bay and Tuktu project areas. During all project activities, Archaeological sites were noted and avoided when seen. Water quality sampling occurred in September for both Roche Bay and Tuktu projects.

Table 1: 2012 Environmental Baseline Studies for the Tuktu Project.

Date	Environmental Baseline Study	Purpose
Ongoing all year	Climate	A record of short and long-term weather patterns in the project area
June, August-October 2012	Wildlife reconnaissance	Presence/absence of species within the project area
September 2012	Water Quality Sampling	Baseline standards of water conditions in the project area.
September 2012	Archaeology	Documenting locations and inventorying the importance of Archaeological sites in the project area.

Reports from these baseline studies have been submitted according to the associated permits. The baseline studies will continue in subsequent years.

A summary of the water quality monitoring program is in Appendix E.

1.14 Reclamation

All reclamation work at the camp and drill sites was completed according to the seasonal reclamation plans outlined in the *Abandonment & Restoration Plan.*

A complete inspection of all disturbed areas (camp and drill sites) was conducted prior to seasonal closure with a full inventory taken at all of the sites. The camp site was closed and secured for the winter. All tent structures were locked and sealed shut. Minimal non-perishable foods were secured on-site.

Remediation of drill sites began as soon as practical after drilling. Drill cuttings were contained in bags and used to return the site to its natural contours if required, as well as for other restoration work that may have been required. The drill sites were then inspected and assessments were made on whether further remediation was required by the application of peat moss to help with natural re-vegetation of the sites.

1.15 Community Consultations and Local Employment

Open dialogue is ongoing between AEI and the communities of Hall Beach and Igloolik, with the Hamlet Councils, the Hunters & Trappers Associations, CLARC, local QIA representative, the Mayors, the public, the schools and other community members.

During the field season, the Project Manager was living on-site at the camp and the Site Supervisor was living in the Company house in Hall Beach. Both of them were available to receive and address any concerns.

The camp always kept its doors open to the communities to accommodate hunters and other members of the community as they passed through the area. AEI was also available to assist with local emergencies including search and rescue as needed. During the 2012 season, AEI's helicopters assisted in the rescue of a stranded hunter in the Roche Bay area as well as the evacuation of nine persons (six adults, three infants) requiring medical assistance from a hunting camp on Gifford Fjord, Baffin Island. Once the persons were safely evacuated to Igloolik, a return trip to the hunting camp carried fuel and fresh supplies to those still at the camp.

Local employment opportunities during this season are listed below:

- Core Cutters
- Camp Support Staff
- Bear Monitors
- Drill Helpers
- Kitchen Support Staff
- Ground Support for the Helicopters
- Laboratory Technicians
- Assistant Cook
- Labourers

Local economic benefits are summarized in Appendix F.

1.16 Conclusion

Future plans for the project are underway and we hope to continue to work effectively and amicably with the communities in the region. We are eager to see the communities benefit further from AEI's activities.

2.0 2013 PROJECT PLANS

The Company continues to hold its land and water permits/licenses from the previous season to allow for drilling, camp operations, environmental baseline studies and geological modeling. The Company intends to use results from its previous season of drilling to refine its resource definition. An environmental program and geological mapping program are also planned. The camp will re-open and drilling operations continue for the season from April to October. Inuit workers will be employed and supplies and services purchased locally as part of the program. All activities for the season will be contingent on the level of financing acquired for the project.

See paper copy

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John Gingerich **Date**
Chief Executive Officer
Advanced Explorations Inc.

See paper copy

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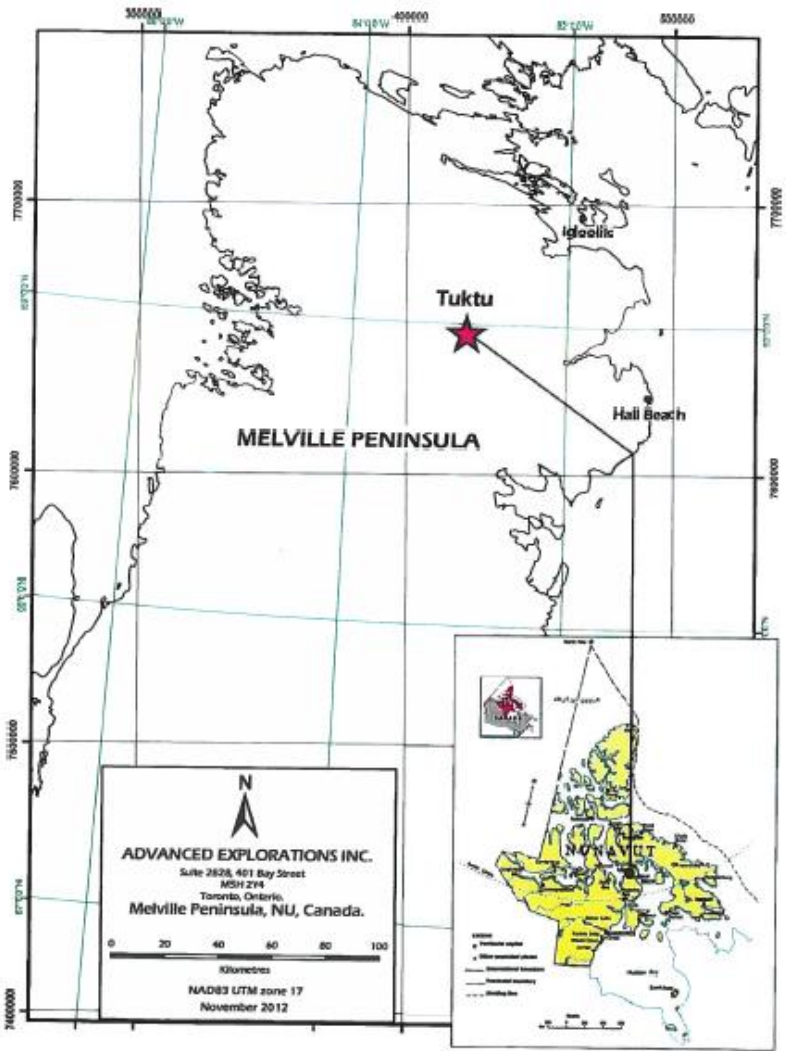
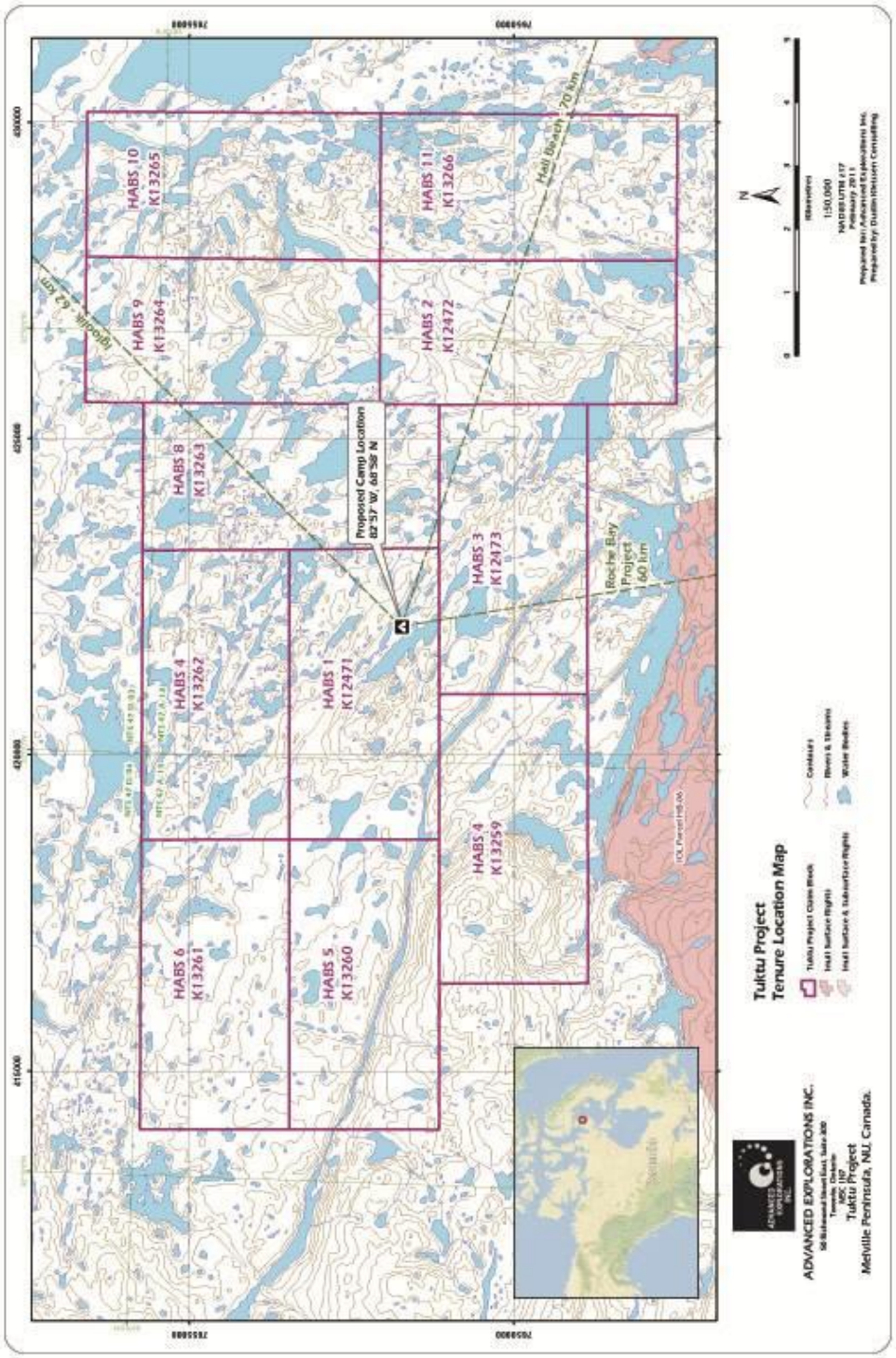
Bernie Swarbrick **Date**
VP Capital Projects and Studies
Advanced Explorations Incorporated

3.0 Appendix A: Maps

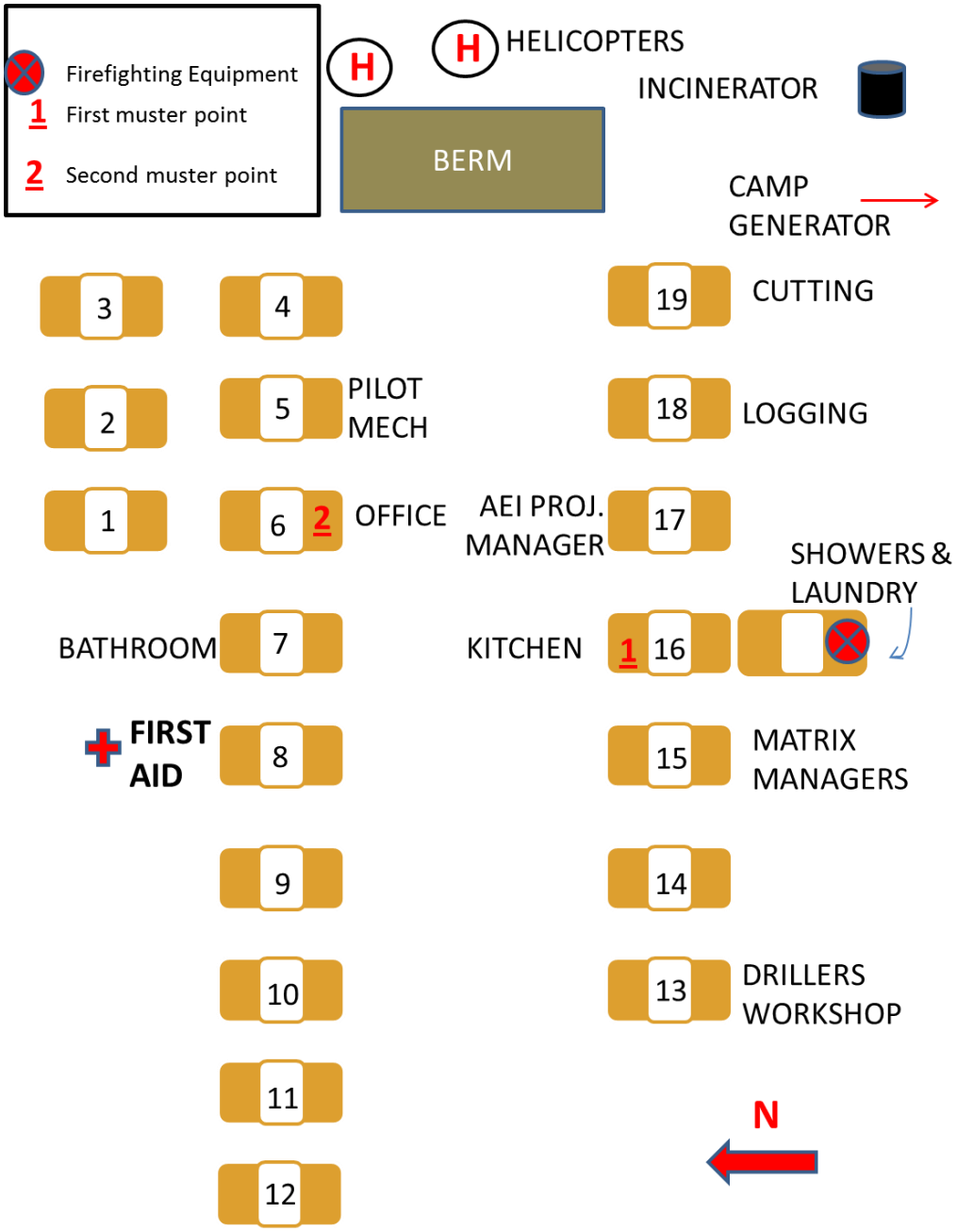
3.1 Location Map



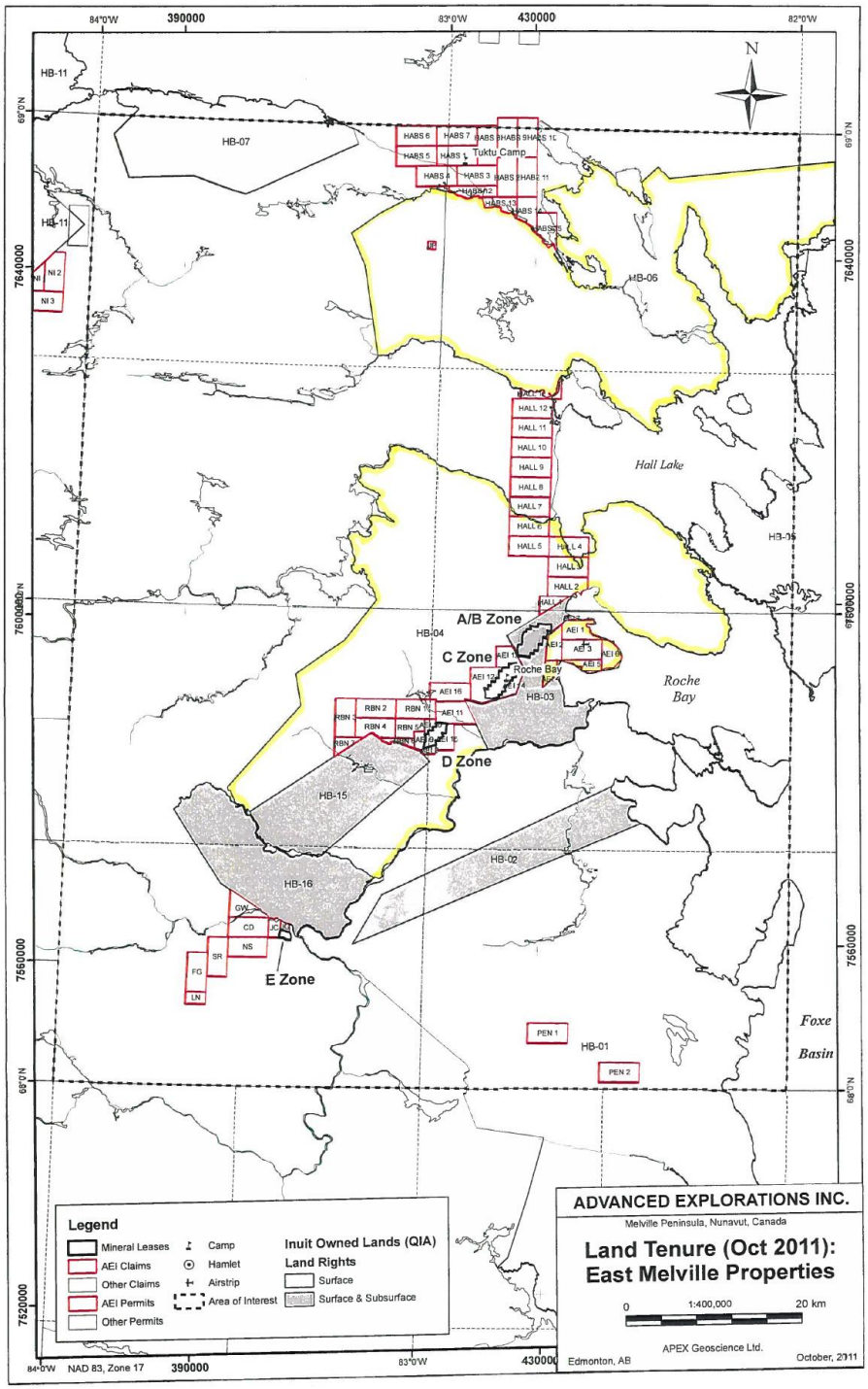
3.2 Site Map


HABS 10
K13265
HABS 11
K13266
HABS 9
K13264
HABS 2
K12472
HABS 8
K13263
HABS 3
K12473
HABS 4
K13262
HABS 1
K12471
HABS 4
K13259
HABS 6
K13261
HABS 5
K13260
Hall Beach 70 km
Iqaluit 42 km
Proposed Camp Location
82°57' W, 68°58' N
Rocke Bay
Project
160 km
Tuktu Project
Tenure Location Map
ADVANCED EXPLORATIONS INC.
Tuktu Project
Melville Peninsula, NU, Canada.

3.3 Camp Layout Schematic (not to scale)



3.4 Land Tenure Map



4.0 Appendix B: Inventories

4.1 Equipment Inventory List (as of September, 2011)

- Tuktu Camp
  - 20 Weatherhaven tents
  - 1 dual chamber, forced-air Incinerator
  - 1 generator shack and 1 industrial diesel generator
  - General workshop equipment
  - Safety gear
  - Kitchen equipment, 2 freezers
  - Office supplies
  - 23 fire extinguishers, 20 smoke alarms, 3 CO detectors
  - 2 geostoves, 12 oil miser toyotomi stoves, 19 laser 73 toyostoves
  - 1 snowblower
  - Core and core boxes
  - 1 sled
  - 1 drill on high ground
- 1 berm containing:
  - Partially full bags of Salt
  - 15 drums of Jet B
  - 40 drums of Diesel
  - Five 100 lb tanks of Propane

4.2 Camp Water Use & Source

Camp Water Source	Location	
	Latitude	Longitude
Tuktu Camp	68°57'44.06"N	82°57'1.69"W
Camp Water Use	**Amount of Water (m³)***	
Total Water Used	103.47	
Total Water Permitted (10m^3 per day x 49 days)	490.00	
Average Water Used/Day	2.03	
Maximum water used (single day)	3.40	

*Note: Values are for camp water used from when the camp opened in late August until October 15th, shortly before camp closure on October 19th.

4.3 Drill Water Use & Sources

	Location	
Drill hole Designation	**Latitude**	**Longitude**
12TK001	68°57’35.915" N	82°49'48.609" W
12TK002	68°57'35.915" N	82°49'48.609" W
12TK003	68°57'35.915" N	82 49'48.609" W
12TK004	68°57'35.915" N	82°49'48.609" W
12TK005	68°56'41.450" N	82°48'52.175" W
12TK006	68°56'41.450" N	82°48'52.175" W
12TK007	68°56'41.450" N	82°48'52.175" W
12TK008	68°56'41.450" N	82°48'52.175" W
12TK009	68°56'41.450" N	82°48'52.175" W
12TK010	68°56'41.450" N	82°48'52.175" W
12TK011	68°56'41.450" N	82°48'52.175" W
Drill Water Use	**Amount of Water (m³)**	
Total Water Used	1,022.06	
Total Water Permitted (173m3 per day x 43 days)	7,093.00	
Average Water Used/shift	12.17	

4.4 Waste

Waste	Location	
	Latitude	Longitude
Greywater	68°57’54.6”N	82°56’56.6”W
Core Cuttings	68°57’54.3”N	82°56’53.4”W

5.0 Appendix C: Wildlife

5.1 Wildlife Table

APPENDIX C: BIRDS AND MAMMALS OBSERVED AT TUKTU, 2012			
Location: North-west Corner (*69° 6'23.19"N, 83°27'45.92"W*), **North-east Corner** (*69° 6'42.95"N, 81°36'56.63"W*), **South-west Corner** (*68°38'18.14"N, 83°24'43.68"W*), **South-east Corner** (*68°39'2.70"N, 81°36'38.42"W*)			
Common Name	**Latin Name**	**Number of Observations[1]**	**Number of Individuals**
Birds			
Loon sp.	---	*1*	0
Lesser Snow Goose	*Chen caerulescens*	*23*	594
Canada Goose[3]	*Branta canadensis*	*2*	17
Eider sp.	---	*2*	2
Rough-legged Hawk	*Buteo lagopus*	*1*	1
Ptarmigan sp.	---	*2*	10
Tundra Swan	*Cygnus columbianus*	*2*	5
Shorebird sp.	---	*1*	1
Pomarine Jaeger	*Stercorarius pomarinus*	*1*	1
Glaucous Gull	*Larus hyperboreus*	*2*	2
Gull sp.	---	*1*	6
Snowy Owl	*Nyctea scandiaca*	*2*	2
Horned Lark	*Eremophila alpestris*	*1*	1
Common Raven	*Corvus corax*	*5*	5
Lapland Longspur	*Calcarius lapponicus*	*2*	2
Snow Bunting	*Plectrophenax nivalis*	*4*	8
	Totals	*52*	657
Mammals			
Arctic Hare	*Lepus arcticus*	*1*	1
Arctic Fox	*Alopex lagopus*	*24*	13
Polar Bear	*Ursus maritimus*	*1*	0
Ermine	*Mustela nivalis*	*4*	1
Barren-ground Caribou[2]	*Rangifer tarandus*	*6*	3
	Totals	*36*	18

[1] The number of observations is the total number of times an animal sign (track, scat) or an animal or animal group was spotted. An individual sighting is the total number of individual animals seen (including within a group). These numbers do not account for possible recounts of individual animals.
[2] Two adults and one juvenile Caribou represent an unconfirmed sighting reported on the shores of Hall Lake, far from drilling operations
[3] "Canada Geese" in this case includes the Ricardson's (or Hutchins's) Cackling Goose (*B.h.hutchinsii*), and the Lesser Canada Goose (*B. c. parvipes*)

5.2 Wildlife Summary

Advanced Explorations Inc. (AEI) has begun exploration activities at the Tuktu magnetite project, a developing subsidiary to the AEI Roche Bay project. The Tuktu project is located at 68°57'56.81" north latitude and 82°56'58.78" west longitude, approximately 70 km west of Hall Beach on the Melville Peninsula, and within 45 km of the ocean.

Wildlife surveys began at Tuktu in the spring of 2011. Wildlife reconnaissance took place the following year in June, August, September and October of 2012 with no official wildlife surveys taking place. 2011 surveys included breeding bird surveys, raptor surveys, waterfowl surveys and caribou surveys. In 2011, all Tuktu surveys were conducted in June, July and August, with the exception of the Breeding Bird Surveys, which were carried out in late June, and early July. These surveys yielded a total of 79 wildlife observations consisting of 14 species. Of these, there were five observations of animal sign.

Breeding bird surveys (BBS) were conducted from the 24th of June to 2nd of July, 2011. A total of 10 BBS stations were surveyed. The BBS yielded a total of 54 bird observations), of which 23 were recorded as incidental (either outside the survey plot or outside the survey time). The Horned Lark (30%) followed by the Lapland Longspur (22%) were the most common passerines species recorded during the BBS. The initial Tuktu breeding bird surveys were conducted in three habitats; sedge meadow - wet, sedge meadow - dry and heath tundra. Sedge meadow – wet and heath tundra habitat types were the most common habitat types near the Tuktu camp and, consequently, contained the greatest number of survey plots.

Aerial raptor surveys were completed in the Tuktu wildlife study area in 2011. A total of 47 raptor observations consisting of five species were documented within the Tuktu study area during a raptor survey, and opportunistically during others. Seven raptors comprising three species were observed as incidental sightings during the 2012 season. Species observed during surveys and as incidentals included: Common Raven[1], Gyrfalcon, Peregrine Falcon, Rough-legged Hawk and Snowy Owl. Twenty raptor nests were documented in the study area as either occupied or had been occupied, by Rough-legged Hawks, Peregrine Falcons, and a Snowy Owl in 2011. Thirteen of the nests were occupied and included unfledged young at the time of the raptor survey, and seven were empty or abandoned. No nests were found during the 2012 season.

Two partial aerial caribou surveys were flown on June 26 and July 27. Caribou were not observed during the systematic aerial ungulate surveys. However, a total of three caribou were observed incidentally from daily observations from March to September in 2011. Three Caribou, and five instances of Caribou sign were noted as incidental sightings in September 2012

Incidental observations of miscellaneous wildlife were also documented during the wildlife surveys, as well as by AEI staff during daily exploration activities. In 2012, all wildlife results were categorized as incidental as no wildlife surveys took place. Mammals observed incidentally (either as visuals or as sign) within the study area included Arctic Fox, Arctic Ground Squirrel, Arctic Hare, Caribou, Weasel, lemming and Polar Bear.

[1] Common Ravens' are not raptors, but are considered functional raptors for the purpose of our surveys due to their tendency to use the same nesting sites and habitats as true raptors. Ravens have also been known to reuse old raptor nests (Poole and Bromley 1988*a*).

6.0 Appendix D: Flights[1]

Date (Month)	Locations	Total Hours	Estimated Take-offs & Landings[2]	Reasons
April	Hall Beach, West Melville,	30.6	24	Staking, refueling, cache establishment, passenger transport
May	Hall Beach, Tuktu Camp, Roche Bay Camp, Roche Bay Airstrip	3.6	5	Passenger transport, Equipment transport
June	Hall Beach, West Melville, Tuktu, Roche Bay, Roche Bay Camp, Roche Bay Cache	87	56	Staking, moving equipment and passengers, field crew support, wildlife reconnaissance & other baseline data collection
August	Hall Beach, Tuktu, Roche Bay, Roche Bay Cache, Roche Bay Camp	108	58	Move passengers, sling equipment, drill moves, sling fuel, medevac, camp support, drill support, groceries, crew changes, field crew support, wildlife reconnaissance & other baseline data collection
September	Hall Beach, Tuktu, Roche Bay, Roche Bay Cache, Roche Bay Camp, Mackar Inlet, West Mellville	280	274	Move passengers, sling equipment, drill moves, sling fuel, medevac, camp support, drill support, groceries, crew changes, field crew support, wildlife reconnaissance, water quality & other baseline data collection
October	Hall Beach, Tuktu, Roche Bay, Roche Bay Cache, Roche Bay Camp,	132	182	Move passengers, sling equipment, drill moves, sling fuel, camp support, drill support, groceries, crew changes, field crew support, wildlife reconnaissance & other baseline data collection

[1]Chart includes records of flight activity from all three projects (Roche Bay, Tuktu and Anik) during the 2012 season

[2] All numbers of take-offs and landings are estimates only based on the helicopter flight tickets. Two helicopters were in operation from August until mid-October. In all other instances, only one helicopter was used.

7.0 Appendix E: Water Quality Summary

Advanced Explorations Inc. (AEI) is planning the development of the Tuktu magnetite project, a satellite program to the AEI flagship Roche Bay Project. The Tuktu project is located at 68°57'56.81" north latitude and 82°56'58.78" west longitude, approximately 70 km northwest of Hall Beach on the Melville Peninsula, NU.

In 2011 EBA Engineering Consultants Ltd. (EBA) expanded its work for AEI by taking on the Tuktu project in addition to their work on the near-by Roche Bay project. The 2011 program included baseline water quality studies at the Tuktu Magnetite Project. A reduced sampling program took place in 2012.

Two sampling events occurred in 2011; July 31 and August 28. A total of six water quality stations were sampled in the 2011 program. A reduced sampling program was implemented in 2012 which occurred on September 16. Three water quality stations were sampled; one which was established in 2011, and two new water quality stations established in 2012. Samples were submitted to SGS Environmental Services, a laboratory accredited by the Canadian Association for Environmental Analytical Laboratories (CAEAL).

In general, the water quality of the Tuktu environment is pristine. The physical and chemical water quality parameters of the waters in this region are typical of Canadian arctic freshwater systems, characterized as having a pH slightly above neutral with low electrical conductivity. Nutrient parameters such as nitrate and phosphorus were either below the detection limits or very low. Levels of ammonia were elevated above the Canadian Council of Ministers of the Environment (CCME) guidelines for the Protection of Freshwater Aquatic Life (FAL) across a number of water stations during both sampling events in 2011 and can be attributed to a number of natural causes (based on similar patterns observed within the Roche Bay Magnetite Project area) such as ammonification (the gradual accumulation of ammonia from decomposition) and low water levels. Ammonia levels were below detection level or very low in 2012. Fluoride was marginally elevated on isolated occasions during the July and August sampling events in 2011 and the September sampling event in 2012. Levels of total iron were also slightly elevated above CCME in July 2011 at two water quality sites. Both fluoride and iron elevations can be attributed to a combination of local geology and potential contaminants introduced through laboratory or sampling error.

Additional sampling in future seasons will allow for more in-depth analysis of the natural state of water quality in the Tuktu region.

For more information regarding the initial sampling at the Tuktu Magnetite project; the 2011 Tuktu Water Quality Report is available upon request.

8.0 Appendix F: Local Economic Benefits

Item	Estimated local impact for all Melville Peninsula projects	Comments
Food	$72,470.25	
Travel and Accommodation (local suppliers)	$385,868.06	*Travel expenses include all travel for the season, regardless of the community.*
Hall Beach Housing, Communications & Utilities	$62,164.76	
Fuel	$250,171.29	
Local Consultants, Associations, Community Meetings & Donations	*$26,461.71*	
Nunavut Permitting & Payments (including QIA)	$97,546.97	
Wages to Local Employees	$99,979.07	
Camp Supplies & Freight	$129,382.48	
Total	**$1,124,044.59**	