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## **APPENDIX 6**

**PEREGRINE DIAMONDS LTD.**

**GENERAL GUIDELINES: NANUQ PROPERTY,  
KIVALLIQ, NU,**

**ABANDONMENT AND RESTORATION  
OF CAMP FACILITIES AND WORKSITES**

**Revision 3: 11 September 2012**



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## **LIST OF REVISIONS: ADDENDUM PAGE**

Original Plan: 30 October 2007  
Revision 1: 09 June 2008  
Revision 2: 11 November 2009  
Revision 3: 11 September 2012

*(NOTE 1: Revisions are identified in the text with a superscript number at the end of the revised or added sentence, phrase or paragraph. Superscript numbers appear as <sup>1</sup>, <sup>2</sup>, <sup>3</sup>, etc.)*

*(NOTE 2: Revisions denote changes such as programme or date changes, change of phone number, change or addition of personnel, addition of equipment or products, new or adjusted maps and new appendices.)*

## INTRODUCTION

This Peregrine Diamonds Ltd. (Peregrine) Abandonment and Restoration Plan (the Plan) is in respect of the seasonal fly-in tent camp, “Nanuq camp”, located approximately 1.25 hours by air from the supply base of<sup>2</sup> Rankin Inlet and immediately southwest of the Nanuq mineral claims.<sup>3</sup> It is intended that the existing camp, moved in spring 2008 to the north end of the natural sand/gravel airstrip, will continue in force for future spring and summer field seasons. The camp will then be secured for reopening in 2013 and succeeding seasons<sup>3</sup>.

At seasonal closure of Nanuq camp in September,<sup>2</sup> usable items removed from the site may be flown to a Peregrine rental storage<sup>2</sup> facility, recycled and flown to another project, sold or returned to the supplier (if applicable). Unusable inventory which cannot be burned on-site, such as waste oil or filters, will be flown off site to Rankin Inlet<sup>2</sup> for disposal to the designated hydrocarbons-disposal<sup>3</sup> area at the landfill<sup>3</sup>, or sent to a waste-disposal contractor, in compliance with NU Transportation of Dangerous Goods regulations. If treatable hazardous waste should exist at the time of seasonal or permanent closure, such material will be transported to Yellowknife, then to Newalta Recycling Facility in Redwater, AB, or similar licensed facility for such waste at closer distance. In the remote possibility that non-treatable or difficult-to-treat<sup>2</sup> hazardous waste should exist at the time of closure, such material will be transported to Swan Hills Special Waste Treatment Centre<sup>2</sup> in Swan Hills, AB, or other suitable licensed facility for such waste at closer distance.

### Validity of Land-Use Authorisation

An Aboriginal Affairs and Northern Development Canada (AANDC or “INAC”)<sup>3</sup> permit is now in force, along with Nunavut Water Board (NWB) Type B Water Licence #2BE-NAN0813. Peregrine is seeking to renew its land permit and water licence prior to their expiry dates in June 2013, and is submitting applications to that purpose.<sup>3</sup> The camp and proposed work activities are described in the associated *Project Summary*<sup>2</sup> and *Project Description*<sup>3</sup>. Any final abandonment and restoration shall occur whilst valid land- and water-use authorisations still are in place, and in consultation and co-operation with the designated AANDC<sup>3</sup> field inspectors (land and water), NWB staff and local communities, principally the closest communities, Chesterfield Inlet (220km south)<sup>3</sup>, Rankin Inlet (275km south-southwest)<sup>3</sup> and Repulse Bay (230km northeast)<sup>3</sup>. If an archaeology permit is in place, notification also shall be provided to the Chief Archaeologist – Government of Nunavut. If a then-existing land- or water-use authorisation is due to lapse during the closure process, an extension or renewal will be sought, as appropriate.

### Waste Generator Registration

Peregrine is registered as Waste Generator #NUG-100030 with the Government of Nunavut – Department of the Environment (DOE). Any non-burnable waste transported off site which is not suitable for landfill disposal (dangerous goods)<sup>2</sup> will be accompanied by a DOE Waste Manifest Form and a Transportation of Dangerous Goods air-carrier form. The waste will be properly handled and conveyed to its final destination by Peregrine’s agent and Initial Waste Receiver, M&T Enterprises of Rankin Inlet<sup>2</sup>, in accordance with existing legislation and any directives. M&T will conduct disposal or proper onward shipment of waste.<sup>2</sup> Additional registered waste receivers (Ecocycle and BFI Canada, both in Lachenaie, PQ) are identified in Peregrine’s Waste Generator Form supplied to DOE. Peregrine recently has obtained permission from the Inuit-owned, Iqaluit-based environmental-response company, Nunatta Environmental Services, a Registered Waste Receiver, to list it as an emergency responder for Nanuq (cf. *Nanuq Spill Contingency Plan*). M&T will receive routine dangerous-goods waste outshipments from Nanuq Project, recycle where possible<sup>3</sup>, dispose to the designated area in the Rankin Inlet landfill or outship items to a Registered Waste Receiver such as one of the Québec firms listed above.<sup>3</sup>

## **BUILDINGS AND CONTENTS**

The current Nanuq Camp can accommodate up to 24 persons<sup>3</sup> and is comprised of 6 sleep tents<sup>3</sup>, a generator shed, core shack, first-aid tent (to accommodate a cook/first-aid attendant)<sup>2</sup>, 2 latrines, an office, kitchen, dry and a bear fence<sup>3</sup>, all of which can be disassembled, removed and, where feasible<sup>2</sup>, reused later. Use areas include fuel-drum storage areas for diesel, Jet-B or -A<sup>3</sup> and petrol (gasoline), a propane-cylinder storage area, an incinerator and a helicopter-landing area.

During the 2013<sup>3</sup> drill programme, a drill shack and pump shack (or shacks for each, if two drills are used),<sup>3</sup> may<sup>3</sup> be operational and moved from site to site, as required. (Since a provisional drill plan has not yet been developed for 2013, a copy of the locations of 2011 drill holes is attached here as *Figure 1*. A helicopter-supported ground geophysics programme and a helicopter-supported till-sampling programme also might<sup>3</sup> be conducted, with negligible ground impact requiring restoration. Sleep and work tents will be heated by oil stoves supplied with diesel fuel in 205L drums.

At final closure, all tent structures, any bear fencing<sup>2</sup> and contents deemed reusable will be dismantled and the components transported off-site by plane. Non-reusable items will be dismantled and clean, untreated wooden components burned on site on a gravel or sand area, *if* allowed (otherwise, transported off site)<sup>2</sup>, with all débris such as nails, bolts and screws raked up, bagged and removed off-site for disposal to the authorised<sup>2</sup> community waste disposal facility in Rankin Inlet. Should authorities permit on-site burning at the time of final closure, such burning<sup>2</sup> would involve only untreated timbers, construction scrapwood and plywood, in order to lessen the fuel burden of flying out such items, and only in compliance with the Canada-Wide Standards (CWS) for Dioxins and Furans, the CWS for Mercury Emissions and other governing legislation; items such as plastics and Styrofoam are non-burnable and will not be burned on site. (Also refer to the project *Waste Management Strategy*, which will continue to<sup>2</sup> be in effect during operations and at closure).

Any absorbent padding used where fuel is transferred, such as at the generator shed and at camp structures, will be bagged and removed to an<sup>3</sup> authorised Rankin Inlet disposal facility after burning has ceased at camp. The area around each diesel drum will be inspected and the soil beneath will be sampled, if necessary, for potential hydrocarbon contamination; sampling will be in accordance with accepted sampling protocol and analysed in an accredited environmental laboratory against CCME criteria. Any remediation will be in accordance with the Canadian Council of Ministers of the Environment (CCME) CWS for Petroleum Hydrocarbons (PHC) in Soil (latest revision), the CCME CWS for PHC in Soil – Technical Supplement (latest revision), the Nunavut Environment Department's Environmental Guideline for Site Remediation, and informed by the PHC in Soil CWS User Guidance Document (latest revision). Contaminated soil will be drummed, manifested and disposed of properly off-site with a Waste Receiver, or remediated on site. Used drip pans or pails will be flown out for disposal with other contaminated solid waste. With the concurrence of regulatory authorities, contaminated soil can be shovelled onto clean liner material<sup>3</sup> for aeration through turning. The advantages of this method is that it is faster than natural attenuation yet is non-invasive of permafrost regimes and appropriate for small, localised hydrocarbon leaks and spills, where time is available (e.g., aeration over at least several field seasons, until the excavated soil tests within Tier 1 CCME criteria for industrial soil, coarse-grained or fine-grained.) Should sufficient contaminated soils be identified prior to closure, an engineered land farm could be constructed to accommodate larger volumes of soil for longer-term remediation. Such remediation would be conducted in accordance with any plans then approved by regulatory authorities.

The drill shack, pump shack<sup>2</sup> and drilling equipment, any scrap, fuels, lubricants, additives and waste hydrocarbons will be flown off site at the end of the respective programme and prior to closure.

## INFRASTRUCTURE SUPPORT

### Freshwater Supply and Greywater System

Potable water for domestic camp use will be obtained from the area of the Lorillard River beside the camp. All lines associated with the water intake will be drained, dismantled and removed off-site for future re-use.

The greywater system consists of plastic piping<sup>2</sup> and greywater sumps<sup>2</sup> which receive<sup>2</sup> water from the camp kitchen and dry (showers, sinks). The greywater lines will be drained, dismantled and removed off-site for disposal or recycled to another project. The sump(s) and immediate environs will be examined, any remaining débris removed, the sump(s) backfilled/levelled/restored to prior condition, combustibles burned or bagged and remaining bagged materials transported off-site for disposal. If necessary, the sump pit will be treated with lime or Javex to kill odours which might attract animals.

Currently, two latrines are on site. Peregrine may choose to establish two Pacto toilets in camp for the 2013<sup>3</sup> programmes; Pactos do not require water use.

### Refuse Disposal Facilities

All combustible wastes will be burned on site in a CSA fuel-fired dual-chamber incinerator (*use of an Inciner8 dual-chamber incinerator is approved*)<sup>3</sup>. Particular care will be taken to secure and then burn all food wastes at least daily, to limit animal attraction. Non-combustibles will be flown off-site for disposal, as noted elsewhere in this Plan. These practices will remain in effect until the camp is closed. At the point where incineration is no longer required, *i.e.*, at the completion of cleanup, the incinerator itself will be removed off-site.

The wooden latrine will be dismantled and components burned (either incinerated or burned on a burn pile, as per Page 2, if allowed). The Pactos will be cleaned and recycled to another project. The ground in the vicinity of the shed will be levelled and raked, if necessary, so that the site is restored to prior condition.

### Generator Shed Area

The shed will be inspected for any remaining hazardous materials (such as oil for generators and snow machines), cleaned and dismantled for salvage or disposal, and the ground inspected. At Peregrine camps, used motor oil typically is collected in an empty drum and removed for recycling. Where practical, given the remote location, this practice will continue until final closure; where not practical, the waste oil will be flown out for proper disposal. Used materials such as floor-dry (vermiculite), drip pans and padding will be properly disposed of off-site. Any oil- or fuel-contaminated soil will be removed for proper disposal, or remediated as described on Page 2. If necessary, the ground in the vicinity of the shed will be sampled for contamination. The use areas will be raked clean and restored to prior condition.

### Transportation Facilities

It is expected that camp<sup>2</sup> transportation facilities will be minimal, consisting of an existing natural-sand airstrip and a helicopter landing pad (a level patch of sand in the large, natural-sand area where the camp is<sup>2</sup> located). The helipad area will be checked and any contaminated soil will be bagged and disposed of properly off-site, or remediated as described on Page 2. If necessary, ground in the vicinity of the pad will be sampled for hydrocarbon contamination. The use areas will be raked clean and restored to prior condition. Any temporary helicopter landing areas beside drillsites will be inspected at completion of drilling and restored in a similar manner, if necessary.<sup>2</sup>

### **FUEL STORAGE AREAS**

The camp fuel storage areas<sup>2</sup> will consist of segregated groups of drums in Insta-Berms<sup>2</sup> (manufactured, Arctic-rated berms)<sup>3</sup>, with empties separated from full drums. Waste fuel will be sent out as manifested Class 9 waste on backhauls. Propane, as standard 45kg cylinders, will be stored upright and secured beside the kitchen and dry areas. At programme closure, unneeded drums and cylinders will be removed; at final closure, all fuel containers will be removed and the berms themselves recycled to other projects<sup>2</sup>.

Should some drums be left in the camp cache at closure<sup>3</sup>, a fuel inventory will be completed to assess the quantity and type of fuel remaining, and the storage areas inspected as per the Nanuq “Inspection Log for Fuel-Storage Areas and Caches” (*cf. Nanuq Spill Contingency Plan*). Any contaminated soil will be drummed and removed for proper disposal, if in small quantity, or remediated as described on Page 2. If necessary, the ground in the storage areas will be sampled for contamination. The use areas will be restored to prior condition. At final closure, all fuels and empty drums will be removed; usable fuel will be transported to another project or returned with empties to the supplier.

### **CHEMICAL STORAGE**

The chemicals to be used on site will be limited to household-strength cleaning supplies such as Javex, window/countertop sprays, wash soaps, degreasers and the like, and limited miscellaneous items such as antifreeze, insect repellent and aerosols; environmentally-benign cleaning and washing products will be used wherever possible<sup>2</sup>. These will be stored in their original containers in their respective use areas, and removed off-site with routine garbage backhauls. When drilling is under way, the contractor responsible will store the required drilling muds, additives, oils and lubricants in a temporary shed at drillsite; these materials would not be present on site at closure. Upon closure of the camp, any unused inventory will be recycled to another project, returned to the supplier or properly disposed of; partially-used containers will be removed for disposal or returned to the supplier, if possible. As part of final closure activities, areas in the immediate vicinity of chemical storage areas, such as the kitchen, dry and generator shed, will be inspected, any soil so requiring will be collected, drummed and removed off-site for disposal. If necessary, ground at chemical storage areas will be sampled for contamination.

### **MOBILE AND FIXED EQUIPMENT**

All mobile and fixed equipment will be removed from the site prior to closure. This inventory in 2013<sup>3</sup> will include generators, pumps, snow machines, power and hand tools, welder, and any drilling equipment. Equipment<sup>2</sup> required for abandonment and restoration, such as shovels, chainsaw, a generator for power tools, *etc.*, will remain on site until all activities are completed. Areas such as sump pits will be re-covered with reserved overburden and re-contoured, if required, to blend with surrounding terrain and ensure drainage away from nearby watercourses.

### **WATER MANAGEMENT**

During fieldwork, water consumption figures will be kept and the total reported in the Nunavut Water Board (NWB) Annual Report.

Water-quality sampling will occur as part of final abandonment and restoration activities, if required, as directed by the NWB, and will be conducted in compliance with the NWB water licence then in effect. Grab samples will be collected from the camp water source (river) for analysis of standard parameters by an accredited laboratory against CCME guidelines to ensure minimal degradation from the demobilisation and abandonment of the campsite. Seasonal water-quality monitoring will continue until closure<sup>3</sup> if stations are in place; winter water sampling<sup>3</sup> will occur in association with lake-based drilling, in compliance with the Drilling from Ice Guidelines.

### **DRILL SITE MANAGEMENT AND CLOSURE**

In compliance with best practice, Peregrine ensures that each drillsite is properly cleaned up when the hole is closed, not simply when the project closes. In compliance with the land-use permit, lake-based coreholes will be closed with grout plugs, any lake-based large-diameter holes (should such be drilled in a future year) will be capped with cement, and land-based holes closed<sup>3</sup> and casings cut. Locations of drillholes are recorded as GPS co-ordinates for future reference. Co-ordinates of proposed 2013 drill targets are not yet available, but will be supplied when available.<sup>3</sup> In the current (third revision) version of the Plan, the locations of the last holes drilled, in 2011, are presented as *Figure 1* (below).<sup>3</sup>

In addition to closure of the hole, and removal of all associated equipment and débris, sumps also are inspected. In almost all cases, the underflow material consists only of sandy/silty water. However, where necessary, sumps are backfilled; if this is not possible due to snowcover and frozen ground, then any sumps requiring backfill will be filled in summer conditions. Should additives not rated as environmentally benign be used in any holes, the associated sediments will be placed in poly-lined sumps where necessary and the liner material and contents disposed of as manifested hazardous waste on flight backhauls. However, Peregrine promotes use only of environmentally-benign additives, as determined by Material Safety Data Sheets (MSDS). The drill contractor is required to supply MSDS prior to an additive being approved by Peregrine for delivery to site. Drill sumps for a possible 2013<sup>3</sup> programme and any subsequent programmes will be sited so as to lessen the possibility of flow of drill cuttings into any neighbouring waterbodies, taking advantage of topographic features such as natural depressions and bedrock outcrops. Berms or barriers to control flow will be erected as and if required.<sup>2</sup>

At final closure, old work sites will be re-inspected to ensure compliance and return of the sites to their natural condition.

### **SHORT-TERM SHUTDOWN**

Since activity on the property is at the exploration/early evaluation stage, there will continue to be periods of short-term shutdown, *i.e.*, periods when the camp is inactive and no geophysical surveying, sediment sampling or drilling is occurring. At the end of the 2013<sup>3</sup> programme, the tent camp, fuels and equipment such as snow machines will be secured for the winter. A seasonal shutdown procedure will be activated. The camp would be cleaned up and secured, an inventory taken, personal and unnecessary office items removed, and empty drums and garbage removed off site for proper disposal, thus ensuring public and wildlife safety. All fuel and water lines would be drained, and all fuel and power sources would be shut off and disconnected. However, the camp will be left in such a way that all equipment, buildings and utilities remain in serviceable and safe condition, such that startup in the next season could be effected safely and efficiently, and in consonance with the terms and intent of the governing authorisations.

### **POST-CLOSURE INSPECTION AND/OR MONITORING**

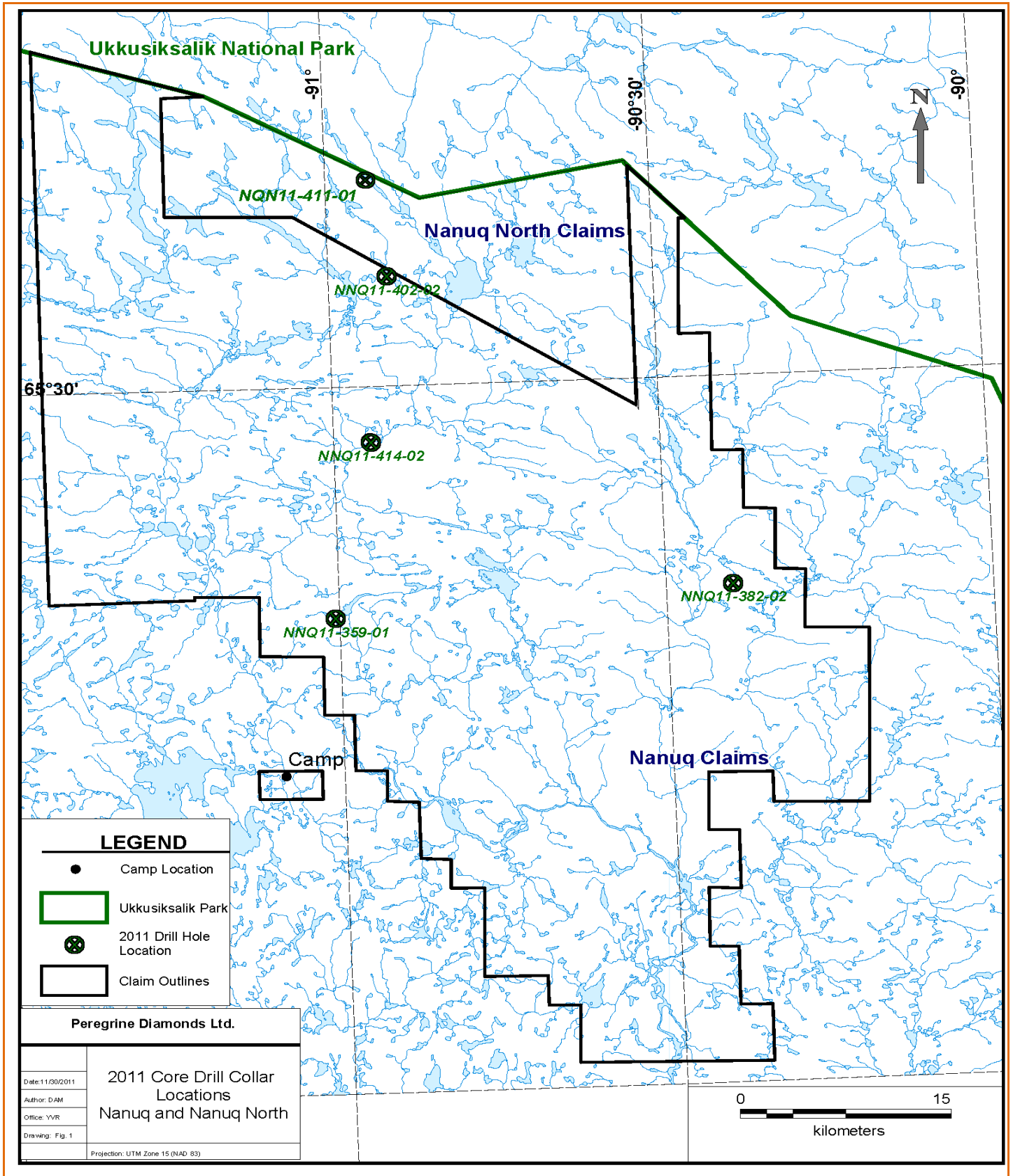
At the time of 2013<sup>3</sup> temporary closure, inspectors will be notified of this event in advance, should they wish to visit the site. No drilling equipment will be left behind unless properly stored and with advance notice to inspectors.<sup>2</sup> At final closure, final inspection, documentation and one or more site visits in co-operation and consultation with AANDC staff, NWB staff and local land users<sup>2</sup> will ensure successful closure of this exploration camp. One or more community visits also may occur.

Some past abandonment incidents by others (non-Peregrine) at campsites and fuel caches in the NWT and Nunavut have been unfortunate, and are not condoned by this permitholder or its agents. Peregrine practises a good-neighbour policy in all its programme areas, and voluntarily removes abandoned drums or scrap that it encounters. Where the unknown abandoned areas are extensive, the permitting authorities are supplied with co-ordinates.

If, in the judgement of regulators, it is deemed that monitoring is required in regard to some component of the Nanuq camp, drilling or associated activities, this will be carried out by the permitholder in such form and manner, and for such duration, as is best able to ensure successful abandonment and restoration of the property and its future benefit to other land users.

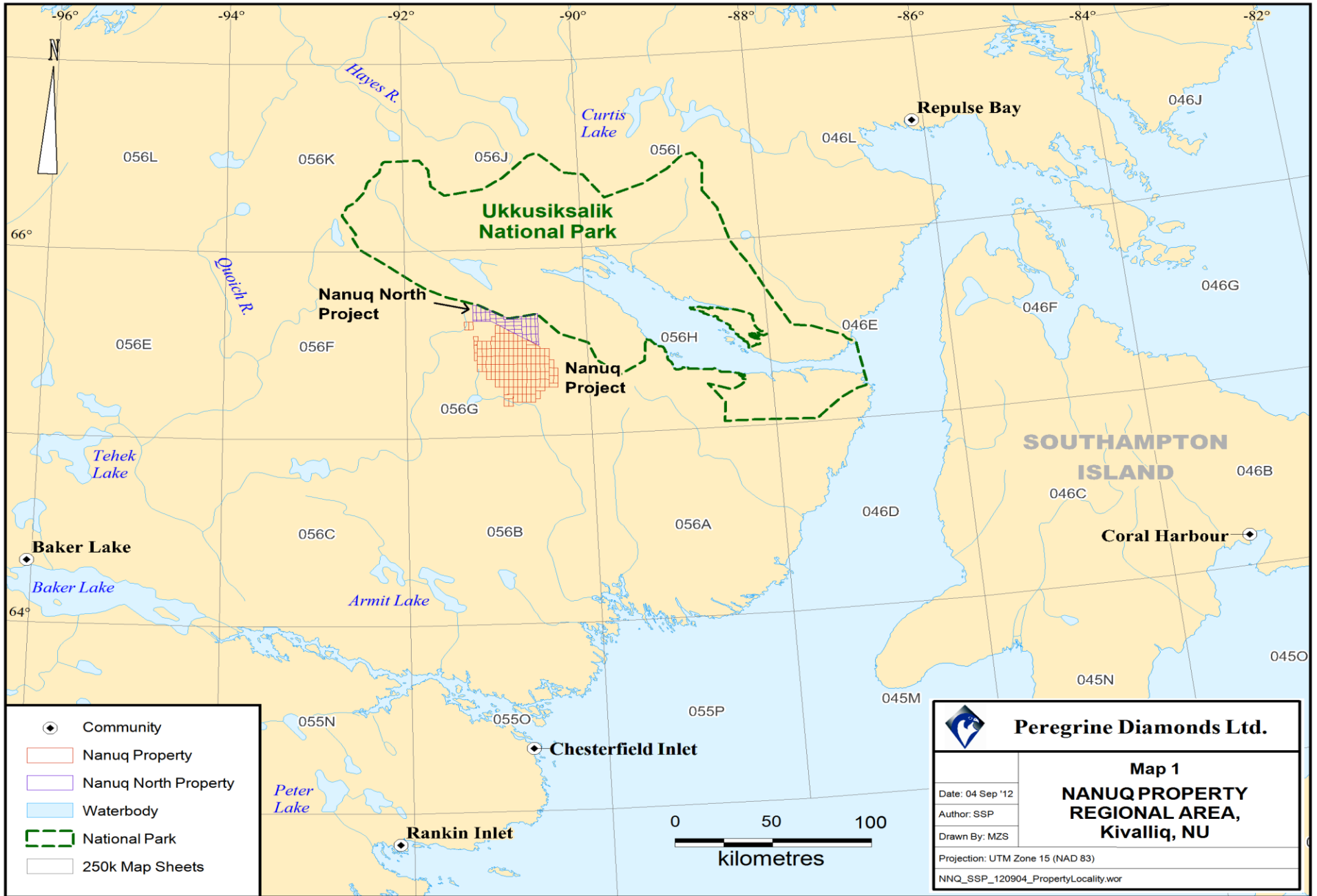
-- Shirley Standafer-Pfister  
Peregrine Diamonds Ltd.

Figure 1

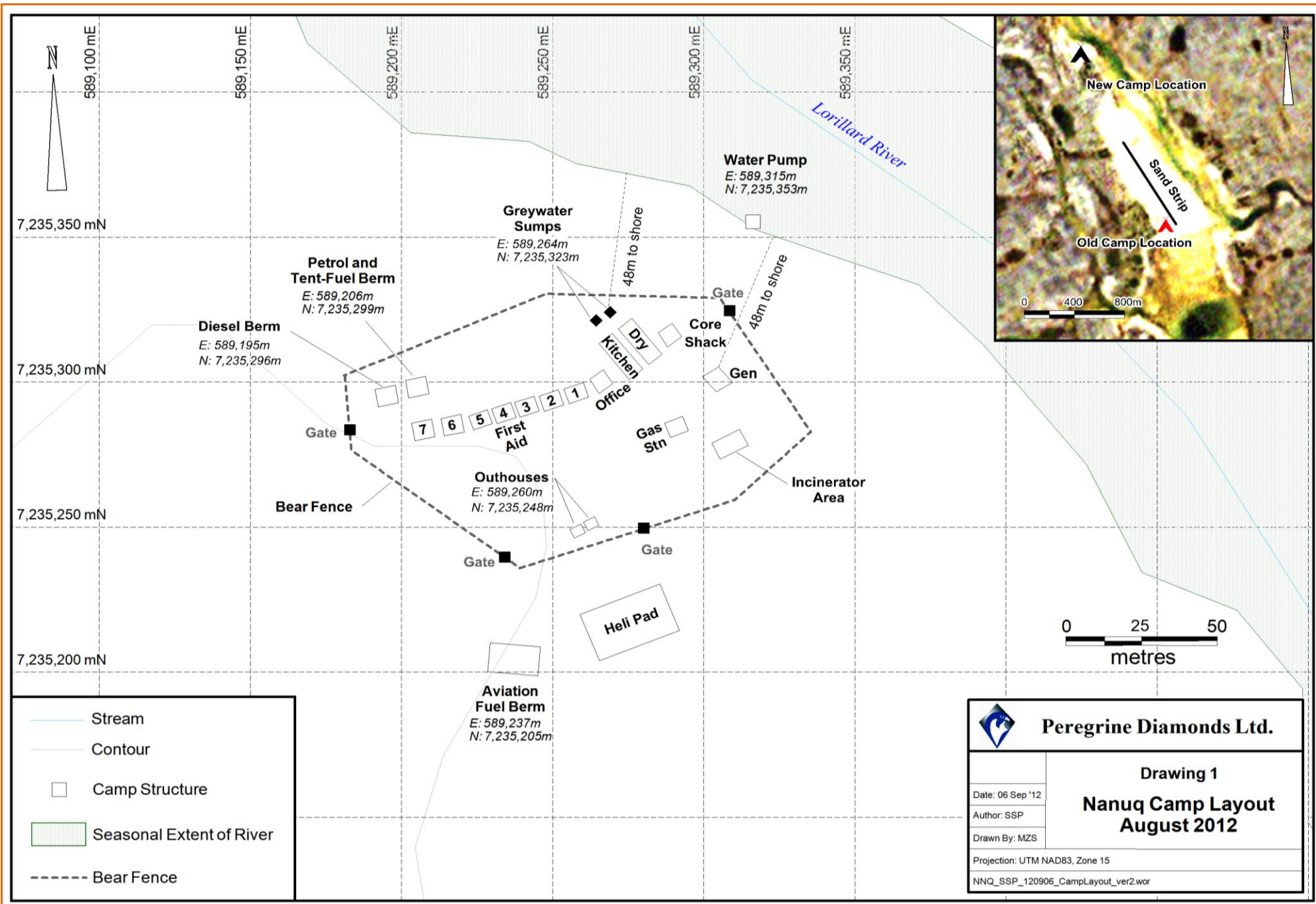


**A total of 585.46m of core drilling was conducted on 5 geophysical targets in 2011, all but one on the Nanuq property. Even on the adjoining Nanuq North property, Peregrine followed its own approved A&R Plan.**

# Map 1



**Nanuq Project in relation to communities and the supply centres of Rankin Inlet (275 SSW) and Baker Lake (250km SW).**



Nanuq Camp layout as per seasonal-closure inspection, August 2012.