



201-1250 HOMER STREET, VANCOUVER, BRITISH COLUMBIA, CANADA V6B 1C6  
TELEPHONE: (604) 408-8880 FAX: (604) 408-8881  
[www.peregrinediamonds.com](http://www.peregrinediamonds.com)

## **PEREGRINE DIAMONDS LTD.**

### **WINTER TRAIL CLEANUP AND RECLAMATION STABILISATION PLAN: CHIDLIAK PROJECT, BAFFIN, NU**

**Original Plan: 21 June 2012**



## LIST OF REVISIONS: ADDENDUM PAGE

Original Plan: 21 June 2012

Revision 1: N/A

Revision 2: N/A

*(NOTE 1: Revisions will be identified in the text with a superscript number at the end of the revised or added sentence, phrase or paragraph. Superscript numbers added in future will appear as <sup>1</sup>, <sup>2</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 or routings and new appendices.)*



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## **WINTER TRAIL CLEANUP AND RECLAMATION STABILISATION PLAN - 2013**

### **INTRODUCTION**

This Peregrine Diamonds Ltd. (Peregrine) Winter Trail Cleanup and Reclamation Stabilisation Plan (the Plan) has been developed in consultation with winter-transportation, site-services, reclamation and heavy-equipment experts, Nuna Logistics Limited (Nuna), a northern 51% Inuit-owned company who will instal, maintain, monitor, progressively reclaim and close the equipment trail between Iqaluit and site and the winter-trail network between camps, kimberlites, water sources and cuttings-deposition areas for the Chidliak Project (Chidliak), South Baffin Island, NU, during each season of use.

The winter-trail network (*cf. Map 1 below*), comprising approximately 41.16km of approved access (with 37.56km of this total added by permit amendment in early 2012), will be used to support winter bulk-sampling of diamondiferous kimberlites of economic potential over a several-year period, in winter conditions, between camps and large-diameter-drill bulk-sampling sites, water sources and cuttings-deposition areas. The equipment trail (*cf. Map 2 below*), which will be between approximately 163km and 175km in length, between Iqaluit and Discovery Camp, depending on routing, was approved by permit amendment in early 2012.

Although conduct of the bulk-sampling programme was intended to commence in 2012, Peregrine has deferred the initial sample to 2013, with the period of use remaining the same as approved, *i.e.*, between approximately 15 February and 31 May.

### **Requirement for this Plan and Its Relationship to Other Documents**

This Plan is required by Condition #26 of Amendment #3 to Aboriginal Affairs and Northern Development Canada (AANDC) Class A Land-Use Permit #N2008C0005. Other conditions applying to construction and use of winter trails include: Condition #14, #19, #20, #21, #22, #23, #24, #25 and #27. It also must be emphasised that this Plan is intended to complement existing Monitoring Plans, such as the Peregrine Spill Contingency Plan and Bulk-Fuel Management Facilities Monitoring Plan, and Standard Operating Procedures, all of which serve the ultimate goal of environmental protection within the context of human safety.

In addition, this Plan is informed by AANDC's "Northern Land Use Guidelines – Access: Roads and Trails" (January 2010 or most recent version).

### **Effective Date of this Plan**

Peregrine was granted permission by AANDC Lands to defer production of this Plan until such time as Peregrine applied for a renewed land-use permit to replace #N2008C0005, because installation and use of the equipment trail and winter-trail network to support bulk sampling has not yet occurred. Thus, this Plan accompanies the renewal application both as an appendix (Appendix 14) and as a stand-alone plan. The Plan shall be considered to be in effect from the date of its preparation – 21 June 2012 – until such time as neither of the winter trails is in operation, but shall be updated at least annually on or before 21 June.

### **PLAN OBJECTIVE: PROGRESSIVE RECLAMATION**

The objective of this Plan is to ensure that all activities associated with the equipment trail and winter-trail network are undertaken with a view to progressive reclamation of the trail-use area. This wide-scope approach to maintaining landscape sustainability has the following major components:

- Pre-use study of the terrain for the most appropriate routings and alternate routings by means of examination of air photos and topographic maps. (Who is involved: Peregrine staff in association with expert local land-users, a road contractor (Nuna), Arctic geotechnical and transportation engineers, and a Nunavut-registered archaeologist.)
- Aerial flyovers and ground-truthing of proposed routing. (Who is involved: Peregrine staff, Nuna, engineers, archaeologist.)

- Scouting and finalisation of routing and any alternate routings, including GPS recording of datapoints to ensure accurate tracking of movements real-time and accurate monitoring of trails. (Who is involved: Peregrine staff in association with Nuna heavy-equipment operators and expert local land-users. In the case of the equipment trail and winter-trail network, experts from the Amarok Hunters & Trappers Association, Iqaluit, participated with operators in selecting and test-navigating the routings.)
- Active cleanup during trail use, e.g., no material left behind on the trail during a haul trip and operators maintaining steady communication with the camps on either end of the circuit (Sunrise-Discovery-CH-6 camps trail network or camp-Iqaluit-camp equipment trail).
- Final cleanup and inspection of the equipment trail and winter trail network, and any supplementary routing, at the end of the bulk-sample season to ensure any remaining materials, such as trail markers, have been removed and that nothing is left behind.
- Weather- and temperature-appropriate use of the equipment trail and winter-trail network. Operation of trails only when weather, cold, snow cover and ice thickness permit is critical both to effective reclamation and to avoidance of the need to stabilise ground by revegetation after trail use ceases. For example, clearing the narrowest-width trail suitable for the width of the equipment, tailoring/grooming of the trail base, regular snow management and contouring during use of a trail segment can be effective in preventing soil erosion later during spring freshet.
- Review of progressive reclamation measures at the end of each season of trail use to ensure adjustments or improvements are made if required. For example, if review of haul-trip records indicates that realignment is required at specific points of drifting or weaker ice, e.g., these adjustments/improvements are incorporated into the Plan for the next winter season.
- Any year which constitutes the final year of the bulk-sampling programme – whether this be year 1, year 2 or year 3 – will include a thorough final inspection with photo documentation and mapping, so as to conclude trail use to the regulators' satisfaction.
- All trail segments are selected and managed such that they would be suitable for future haul routes beyond bulk-sampling, so as to control project footprint wherever possible.
- Expert advice, such as provided by transportation or geotechnical engineers, Peregrine's road contractor, consulting archaeologist or experienced local land-users, will be sought and incorporated into the Plan as required from time to time.

### **AVOIDING INSTABILITY AND RUTTING**

When operating with the objective of progressive reclamation, best practice dictates that the equipment trail and winter-trail network will be established only when waterbodies which must be navigated are sufficiently frozen and ice is competent, and when there is sufficient snow cover so that inadvertent damage to soils, the sparse vegetation of the bulk-sampling area and rutting are avoided.

### **Measures for Prevention of Instability and Rutting**

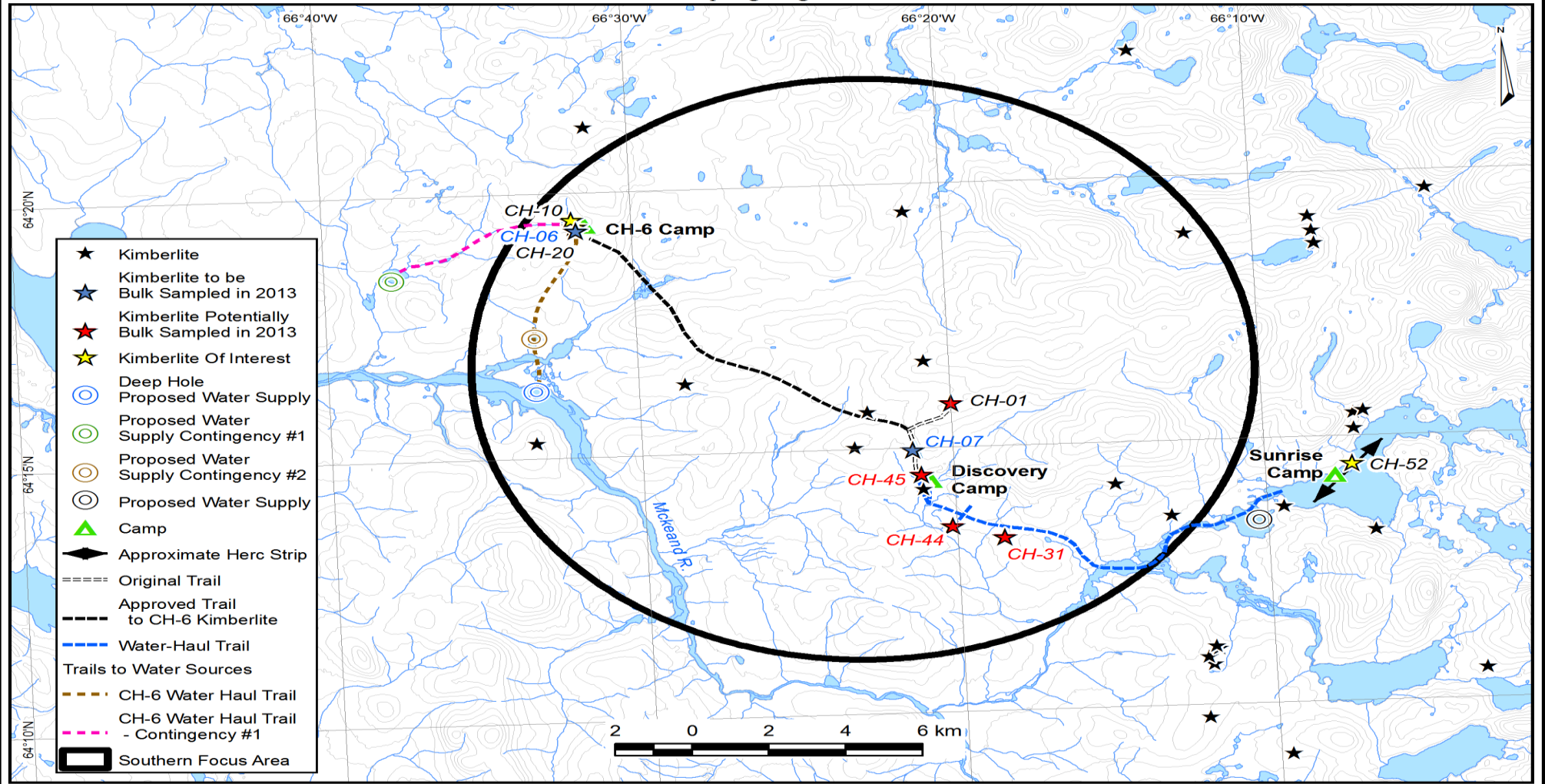
Peregrine will follow these best practices:

- Training and refresher training of operators and other personnel, such as labourers or crew, who are required to utilise the equipment trail or winter-trail network as operators or occasional passengers. Training will include familiarity with this Plan, winter-trail maintenance and spill prevention and control.

- Restricted access. Trained heavy-equipment operators specifically assigned to drive the routes are the only personnel who will be permitted direct access to the Peregrine winter-trail network or segments of the equipment trail that are not community trails (*i.e.*, segments that do not follow the community Pang Trail north-south and the associated community Suka Trail west-east). Restrictions will be enforced by the steady operator communications, which are noted on Page 2.
- No use of the winter-trail network or equipment trail until suitable freezing and other winter conditions prevail, such as adequate snow cover over land and competent ice cover at any watercourses that may form part of the routes.
- Continual monitoring when trail use is under way.
- Removal from service of any trail sections blown free of snow cover until snow cover is determined adequate and packed for travel.
- Ceasing of haul trips in periods of blizzards and whiteouts, which otherwise could result in risk to human safety and inadvertent deviations from the approved routing.
- Alternate routings will supplant main routings where conditions so dictate, *e.g.*, where snow-pack, ice, low-lying or riparian areas, visibility, or slope stability could be compromised, or in areas which give evidence of habitual or recent crossings by an animal group or herd.
- Any operator-created snow banks or drifts which were necessary for efficient trail operation during a season will be removed or reduced prior to end of season to ensure normal seasonal melting and to prevent pooling.
- Trail use will cease prior to freshet, so as to safeguard underlying soils and any early-thaw sections of watercourses.
- Erosion controls will be kept on hand or readily available should their use be required despite best efforts. Examples include: silt barriers, sandbags, erosion-control matting, peat blocks, and rocks and cobbles stockpiled at a designated area, such as at the main Discovery Camp, to be used as ditch blocks or blankets.
- At the end of each season, preferably in summer conditions, the equipment trail and winter-trail network will be reviewed by flyover and selective ground-truthing to ensure correction of any areas of potential instability and future trail competence.

## MAP 1

### Peregrine Diamonds Ltd. Kimberlites with Economic Potential in the Southern Focus Area, as Well as Bulk-Sampling Targets Prioritised for 2013



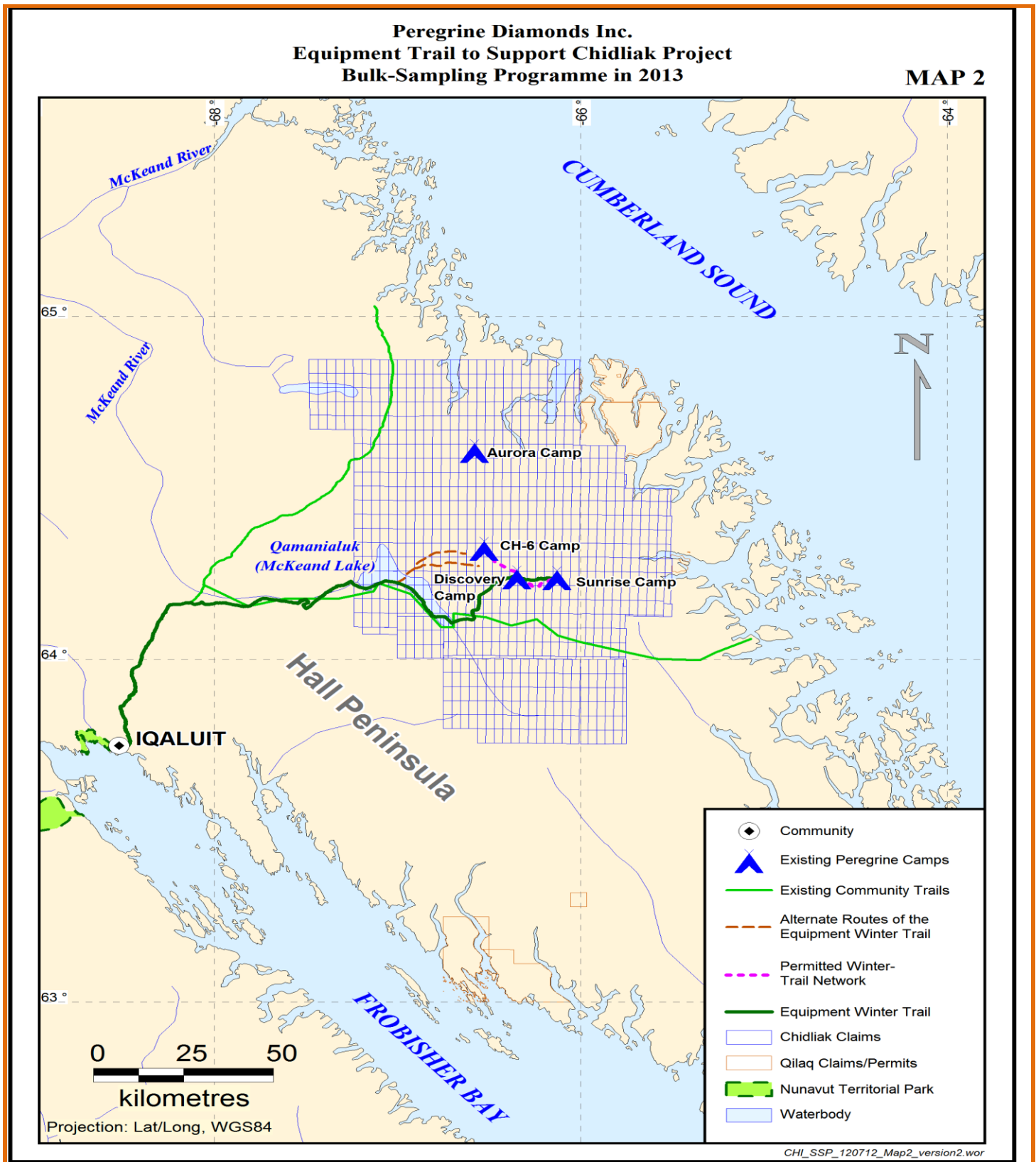
The approved bulk-sampling winter-trail network will be governed by this Plan, as well as other existing Plans, such as the Spill Plan, wherever relevant.

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## MAP 2

### Peregrine Diamonds Inc. Equipment Trail to Support Chidliak Project Bulk-Sampling Programme in 2013

## MAP 2



The approved Equipment Trail will be governed by this Plan, as well as other existing Plans, such as the Spill Plan, wherever relevant.