

# **Committee Bay Project**

# Proposed Hayes Camp to Three Bluffs all-weather access road Transportation Management Plan

**Revision 1** 

North Country Gold Corp. January 2015

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# 2.0 **DOCUMENT CONTROL**

| Version | Date        | Section | Pages | Revision   |
|---------|-------------|---------|-------|--|
| 1       | 20/Jan/2015 |         |       | Drafted January 2015 to address comments from AANDC. |
|         |             |         |       |  |
|         |             |         |       |  |
|         |             |         |       |  |
|         |             |         |       |  |

## 3.0 COMPANY AND PROJECT BACKGROUND

North Country Gold Corp. ('NCGC') is a publically listed, Canadian based exploration company conducting mineral exploration within the Committee Bay area in the eastern portion of the Kitikmeot Region, Nunavut Territory, Canada.

The Committee Bay Project ('CBP') comprises mineral claims and leases located on both Crown Land and Inuit owned (surface rights) land pursuant to the Nunavut Land Claims Agreement. The project encompasses NCGC's flagship Three Bluffs gold deposit, numerous gold occurrences, four exploration camps and a number of fuel and equipment caches.

Exploration work programs are generally undertaken as seasonal campaigns occurring between March and October in any given year, largely dictated by market conditions. Work activities comprise claim and lease staking, prospecting, geological mapping, rock, till and soil sampling, airborne and ground geophysics and drilling. Supplies, including fuel are airlifted to the CBP from various towns and cities in Nunavut, Manitoba and the Northwest Territories.

In 2011, NCGC initiated an upgrade of its primary camp, Hayes Camp. These upgrades were designed to increase the camp capacity to 100 people and improve the overall safety, working conditions and environmental impacts of ongoing work at the Three Bluffs gold deposit. Upgrades completed in 2011 comprised construction of additional camp accommodation, the installation of new washroom facilities, quonset structures, a dual chambered incinerator, waste water treatment system, and initiation of the construction of a 3000' airstrip. NCGC intends to continue these camp upgrades and to construct an all-weather road from Hayes Camp to, and within, the Three Bluffs drilling area in coming years.

NCGC has the following permits and licences in place to support advanced exploration activity at the CBP.

| Organization  | Description                                    | Permit/Licence #  |
|---|--|-------------------|
| Nunavut Impact Review Board                                   | Project Reference Number                       | 07EN021           |
| Aboriginal Affairs and Northern<br>Development Canada (AANDC) | Land Use Permit (Bullion camp)                 | N2014C0002        |
|   | Land Use Permit (Hayes camp)                   | N2014C0005        |
| Kitikmeot Inuit Association                                   | Land Use Licence for IOL (Ingot /Crater camps) | KTL314C003        |
| Nunavut Water Board (NWB)                                     | Water Licence                                  | 2BE-CRA1015       |
| Aboriginal Affairs and Northern                               | Commercial Leases                              | Lease 065J/11-1-2 |
| Development Canada (AANDC)                                    | Confinercial Leases                            | Lease 065J/12-1-2 |

## 4.0 **INTRODUCTION**

This document has been developed to outline the management of a proposed 5.4 km long all-weather access road linking the Three Bluffs drilling area with Hayes Camp and additional 5.8 km of road to access infrastructure at the Three Bluffs drill site.

This plan is one of a number of plans established by NCGC designed to minimize pollution, protect the environment and protect the health and safety of all workers, contractors and the community at large from any effects of its materials and operations.

This document is designed to meet all regulatory requirements. This document forms part of NCGC's Nunavut Water Board ('NWB') Water Licence renewal application. Once approved, the document will remain in effect for the duration of NCGC's water licence. NCGC will conduct annual reviews of this document to address changes in technology and operational practises. Changes will be implemented upon approval from the NWB.

## 5.0 **SCOPE AND OBJECTIVES**

This document outlines the design, construction, operation, monitoring, maintenance, spill prevention and reclamation and closure of a proposed access road linking Hayes Camp to the Three Bluff drilling area.

The proposed road will be used to provide access and facilitate the efficient movement of equipment, fuel, drilling supplies and personnel between the camp and drilling activities on a daily basis, throughout the course of exploration and development operations.

## 6.0 **PLANNING**

NCGC completed a review of possible road routes between Hayes Camp and Three Bluffs in 2010. A 5.4 km road route was selected based on topography, surficial material and to minimize the impact on drainage. NCGC applied for a commercial lease of federal land in 2011 to construct an all-weather access road. Lease 056J/11-1-2 was granted by Indian and Northern Affairs Canada on the 9<sup>th</sup> September 2011.

## 7.0 **DESIGN**

All proposed roads are designed to be constructed initially to provide a single lane access for large construction equipment (nominal width 5m). Passing lanes will be constructed at regular intervals (estimated every 500m) to enable traffic to pass as required. Road shoulders will have a shallow grade so as to not impede the travel of wildlife.

The road will be designed to enable safe and efficient travel between Hayes Camp and Three Bluffs using principally side by side all-terrain vehicles and light trucks. Heavy earthmoving equipment (Bulldozers, graders etc.) will also be moved along the road as needed during the course of maintenance and as needed at the camp and drilling site. Riprap, geotextile ground covers, filter bags will be utilized where possible, and where appropriate to prevent and control erosion. Silt fences may be installed to prevent transportation and sedimentation.

## 8.0 **CONSTRUCTION**

The Hayes Camp to three Bluffs road design encompasses a number of glacial landforms including esker and glacio-fluvial terraces and outwashes, moraines and bedrock exposures. The road will be constructed within the permafrost environment. All road construction activities will be undertaken using industry best practises for arctic construction.

Road construction is expected to comprise a combination of cut and fill in areas of outcrop exposure; and embankment using crushed fill material where the road passes over ice rich overburden. Materials for embankment comprise crushed material that is not acid generating or metal leaching. This will come from existing permitted borrow sources and additional quarry sites. Applications for additional quarry sites will be completed should this be required. All quarrying will be conducted in accordance with NCGC's Quarry Management Plan. This plan will be updated and approved by relevant regulators prior to implementation of any further work outside of the scope of that already approved.

Road construction activities will only occur when the ground is of sufficient strength to support equipment without rutting or gouging to prevent thermal erosion. All road construction will occur greater than 30 m from the high water mark of all water bodies.

#### 8.1 Drainage Crossings

The proposed road route will require one clear span bridge to cross a small 1-2m wide drainage channel located approximately 300 m east southeast of Hayes Camp. A 50

foot clear span bridge comprising two steel girders which support 4 timber deck modules (presently onsite) will be used to cross this drainage channel. The final location of the bridge and design of abutments will be determined based on further hydrological, geotechnical and structural engineering studies.

The bridge will be located to accommodate peak water flow and will be constructed in accordance with the Department of Fisheries and Oceans (DFO) Nunavut Operational Statement – Clear Span Bridges. No disturbance of the stream bed or bank will occur.

Culverts (including stacked culverts) may be installed where small ephemeral streams and drainages occur along the road route. These streams remain dry except during freshet and large rainfall events.

#### 8.1 Drainage Control

Roads will be constructed to minimize any impacts to the natural drainage. The may involve building a crown along the road to enable water to drain to each side, angling the road to enable runoff to one site or building drains, ditches and cross drains as appropriate.

#### 8.2 Erosion control

Riprap, geotextile ground covers, filter bags will be utilized to prevent and control erosion. Silt fences may be installed to prevent transportation and sedimentation.

## 9.0 **OPERATION**

NCGC will be responsible for the operation of the access road. Given the remote, isolated location and lack of vehicle access to the site, public traffic along the road route is not expected.

The following operating procedures will be put in place following commissioning of the access road:

- All traffic to remain on the access road at all times.
- Speed limits will be posted according to road conditions (visibility, slope etc). Maximum speed limit will be 50 km/h.
- Wildlife will be given right of way. All traffic will stop at a distance until such time as the wildlife has crossed the road.
- Road will be closed if rutting or gouging occurs until such time as this is remedied.
- Regular inspections of road and drainage channels will occur.

## 10.0 **INSPECTIONS**

NCGC will undertake regular inspections of the access road. This will comprise:

- Inspection of the road surface for slumping, potholes, rutting or gouging
- · Maintenance of any road signs
- Inspections of drainage crossings (bridge, culvert) in the fall season before snowfall to ensure there is no buildup of sediment or debris, and to ensure they remain in good serviceable condition.
- Inspections to occur during freshet and high surface runoff events to ensure that drainage crossings are working effectively and that the road route is not impeding the natural drainage. Water sampling may occur where turbidity is evident in surface runoff.

## 11.0 **MAINTENANCE**

The proposed access route will require regular maintenance. This will comprise periodic grading and packing to repair potholes, slumps, ruts, and wash boarding that may occur. A stockpile of crushed material will be kept available for road repairs.

During fall, winter and spring months where snow accumulates, snow will be ploughed off the road to enable ongoing access. Culverts will be marked to ensure these are not damaged by equipment. Snow ploughing will leave a layer of snow on the road to prevent the dark coloured road base absorbing heat from solar radiation. Snow banks will be avoided wherever possible. Where snowbanks are necessary, due to excessive snowfall or drifting, breaks will be made within the snow bank to enable the passage of wildlife.

## 12.0 **SPILLS**

All spills resulting in the release of deleterious material will be managed in accordance with NCGC's *Spill Prevention and Response Plan*.

All equipment used during the construction of the road will be properly maintained and in good working mechanical condition and free of leaks. Drip trays will be placed under equipment when not in use. Fuel Management will be completed in accordance with NCGC's Fuel Management Plan.

## 13.0 **CLOSURE AND RECLAMATION**

Final closure and reclamation of the proposed access road route will occur once it is no longer required. Abandonment and Reclamation will occur in accordance with NCGC's Abandonment and Reclamation Plan.

Reclamation of the road will comprise removal of all culverts and the bridge. The road route will be scarified and allowed to revegetate naturally. The application of peat, fertilizer and seed may be applied as necessary to promote and accelerate plant growth.

## APPENDIX 1

Proposed Hayes Camp to Three Bluffs road route

