



CARMACKS DEVELOPMENT CORPORATION

MT NANSEN MINE SITE

PHASE I - TAILINGS POND IMPOUND AREA

&

PHASE II - MILL WASTE ROCK SITE

COVER AND VEGETATION

PILOT PROJECTS

PREPARED FOR:

**GOVERNMENT OF YUKON
ENERGY, MINES & RESOURCES
ASSESSMENT AND ABANDONED MINES BRANCH**

BY:

CARMACKS DEVELOPMENT CORPORATION LTD

KEARAH ENVIRONMENTAL CONTRACTING INC

ARCTIC ALPINE RECLAMATION GROUP

OCTOBER 16, 2006

**YUKON ENERGY, MINES
& RESOURCES LIBRARY
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Background:

The project site is located at the Mt Nansen Mine in the Mt Nansen Valley, Mt Nansen, Yukon. The Mt. Nansen gold and silver mine site is located approximately 70 kilometers southwest of the community of Carmacks.

The site is in the traditional territory of the Little Salmon Carmacks First Nation.

A gravel road supplies year round access to the site. The site is within the watershed of Victoria Creek, a tributary stream to the Nisling River, in the Donjek / White River drainage basin.

The sub alpine region is primarily a boreal forest plant community. This area was also a part of a glacial refuge that did not undergo the impacts of the last ice age. The area sustains a diversity of wildlife: woodland caribou / moose / wood bison / grizzly bear / black bear and small furbearers.

The latitude is (62°N) and the elevation of the site is (approx. 1,200 m). Weather data is incomplete from the site. The wind direction data recorded at the site indicate that winds are most prominent from the west, southwest, and east.

The Little Salmon Carmacks First Nation has traditionally accessed the Mt. Nansen area for the harvesting of animals and plants and the area continues to be an important part of the traditional subsistence on the land for the members of the Little Salmon Carmacks First Nation.

Introduction:

The recent (February 2006) Mt. Nansen Terrestrial and Aquatic Effects Study – *draft report* indicates that there is a potential for airborne contaminants from various locations at the site. Of immediate concern are areas that have the greatest potential to provide further airborne contamination while the final reclamation and closure plans are developed and approved.

There are two small areas that provide the opportunity for the establishment of cover test sites (covering of the contaminated materials with a locally available soil and revegetation with a seed mix indigenous to the region. Additionally these pilot projects would continue to provide important annual information needed for the final reclamation and closure plan.

Phase I – Tailings Impound Area Cover Pilot Project

The tailings site is one of the potential sources of air borne contaminants affecting the surrounding vegetation and a cause of concern for the general public and the citizens of the Little Salmon Carmacks First Nation. A portion of the tailings was seeded in a previous project this year (September 2006) and the remaining area proposed in this pilot is immediately adjacent to the existing vegetation test plot area and situated between the pump house and the tailings impound dam. The area is approximately 60 meters by 45 meters. It is proposed for this Tailings Impound Area Cover and Vegetation Pilot project that a Carmacks Development Corporation (CDC) crew commences and completes this pilot project. The pilot project will include the movement (excavation, hauling and placement) of approximately 2000 cu meters of local materials from a designated area on the mine site (adjacent to the dam and tailings pond) to the designated area on the tailings pond impound area to create a .25 hectare tailings cover and vegetation pilot project.



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The local materials will be contoured to provide a gentle slope to the existing vegetation test plot and will provide a gradual depth of soil for testing the potential uptake of existing tailings and the appropriate depth of cover required to minimize the uptake from the tailings. The area will be seeded with an indigenous seed mix and planted with local willow stakes and bundles. This pilot project along with the previous seeding program and establishment of the vegetation trials test plot will provide additional information required to confirm the appropriate methods of reclamation for the final reclamation and closure plan.

Phase II – Mill Site Waste Rock Cover

The Mill Site Waste Rock area is one of the potential sources of air borne contaminants affecting the surrounding vegetation and cause concern for the general public and the citizens of the Little Salmon Carmacks First Nation. The area is approximately 80 meters by 35 meters.

It is proposed for this Mill Site Waste Rock Cover and Vegetation Pilot project that a Carmacks Development Corporation (CDC) crew commences and completes this pilot project. The pilot project will include the movement (excavation and placement) of the mill site waste rock materials from the current area on the mill site to the designated area adjacent to the site and that the local surrounding materials are used to provide a .2 hectare cover for the vegetation pilot project.

The local materials will be contoured to provide a gentle slope to the existing vegetation and will provide a gradual depth of soil for testing the potential uptake of existing contaminants and prevent further direct drainage from the site to lower undisturbed vegetation. The area will be seeded with an indigenous seed mix and planted with local willow stakes and bundles. This pilot project will provide an opportunity to determine the results of deterring further distribution of air borne and run off contaminants and the additional information required to confirm the appropriate methods of reclamation for the final reclamation and closure plan.

Project Management – Phase I & II Pilot Projects

The Carmacks Development Corporation Ltd – General Contractor

- **Kearah Environmental Contracting Inc – Sub Contractor – Supply of Equipment and Locally trained Operators**
- **Arctic Alpine Reclamation Group – Sub Contractor – Project Design and Implementation – Reclamation Technician training**

The Carmacks Development Corporation Ltd / Kearah Environmental Contracting Inc / Arctic Alpine Reclamation Group will be primarily responsible for ensuring that the Project Plan is fully and completely implemented to the Owner's satisfaction including management and training of all labor forces and expediting of materials to complete the:

- Project design and project coordination with the Government of Yukon, Energy, Mines & Resources, Assessment and Abandoned Mines Branch
- Execution of the project requirements



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- The movement (excavation, hauling and placement) of local materials from a designated area on the mine site to a designated area.
 - Phase I – Tailings Impound Area Cover and Phase II – Mill Site Waste Rock Cover
 - Seeding and planting of the project area with indigenous seed and plant material

It is proposed that a CDC crew work until project completion; and it is anticipated that the local crewmembers would continue with training as Reclamation Technicians / Equipment Operators to be able to provide ongoing support for future reclamation projects at Mt. Nansen and other sites in Yukon.

Project Activities

- Site Works & Reclamation Technician Crew Training
 - Execution of project requirements
 - Pilot Project report of activities

Proposed Schedule

October 23 -27 to November 30, 2006

Site Inspection Dates:

To be determined

Authorization to proceed:

Mobilization immediately upon approval

Certified Equipment List Available for the Mt Nansen Phase I & II Pilot Projects:

1. Trucks – 1- 1994 Kenworth End Dump
2. Excavators – 1 1991- 200 Cat Excavator with wrist and twist bucket, brush rakes, tooth and clean up buckets
3. Cats – 1- 1982 – D7G Cat
4. Service Truck – 1- 1995 – Dodge 1 Ton Service Truck
5. Other: Loader / Bobcat
6. Additional equipment available as required or requested

Experienced Equipment Operators and Staff Available for the Mt Nansen Phase I & II

Pilot Projects:

1. 4 Trained and experienced local operators with the opportunity to train additional local personnel
2. 3 Senior Project Managers and site trainer supervisors



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MT NANSEN MINE SITE: COVER AND VEGETATION PILOT PROJECTS

Phase I Mt Nansen Tailings Cover and Vegetation Pilot Project	Description	Project Budget
CDC Project Management	12 Days	8160
CDC Pilot Project Crew Leader	10 Days	7500
AARG Project Management / Supervision and Training	12 Days	12000
Crew Truck Lease & Fuel	14 Days	3000
Equipment – Rentals – Tools	2 Days	2500
Kearah Environmental Contracting	Equipment & Operators	
Dump Truck	8 Days x 8 hrs	7360
Excavator	8 days x 8 hrs	10560
Cat Tractor	4 days x 8 hrs	5920
CDC / KEC / AARG	Mobilization	10000
BUDGET (GST NOT INCLUDED)		67000

Phase II Mt Nansen Mill Site Waste Rock Cover and Vegetation Pilot Project	Description	Project Budget
CDC Project Management	8 Days	5440
CDC Pilot Project Crew Leader	8 Days	4800
AARG Project Management / Supervision and Training	10 Days	10000
Crew Truck Lease & Fuel	12 Days	3000
Equipment – Rentals – 4 Wheeler & Tools	2 Days	2500
Cat Tractor	8 Days x 8 hrs	11840
Excavator	8 days x 8 hrs	10560
Loader	4 days x 8 hrs	3680
CDC / KEC / AARG	Mobilization	6000
BUDGET (GST NOT INCLUDED)		57820
Phase I & II Budget Total		124820

Note: Budget includes all labor / equipment / fuel / food / mobilization costs to provide the services describe within the project. Does not include camp accommodation costs that are to be provided by the Owner at no charge.



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Project Proponents:

Carmacks Development Corporation Ltd – Project General Contractor

The Carmacks Development Corporation is a for-profit company accountable to its shareholder, the Little Salmon/Carmacks First Nation (LSCFN). Our profitability ensures greater financial stability for the LSCFN and our community. Using progressive and fiscally sound management practices, we create and secure successful business opportunities both within our traditional territory and globally. We respect the culture and traditions of the Northern Tutchone people and our land. Because of our ethics, success and focus on communications, we enjoy the support of our employees, shareholder and citizens of Little Salmon/Carmacks, as well as government and business.

Kearah Environmental Contracting Inc – Sub Contactor – Supply of Equipment & Trained Operators

Kearah Environmental Contracting Inc is a wholly owned Canadian and northern aboriginal company that provide turn key environmental solutions to clients in northern regions. A full service, multi – disciplinary environmental remediation and specialty construction firm that brings sufficient staff resources, corporate experience and financial stability to meet the requirements of small and large scale projects in settled and remote regions.

Kearah understands that an adaptive approach that is mindful of traditional knowledge and newer environmental technologies is required to afford the best protection of the environment while offering value and quality of service to the client.

Arctic Alpine Seed Ltd & Arctic Alpine Reclamation Group – Sub Contractor – Reclamation Project Management / Site Supervisor and Crew Training

Arctic Alpine develops, produces and distributes Yukon, northern and arctic seed and plant varieties specifically identified and selected for reclamation projects in circumpolar regions. Arctic Alpine manages the marketing & development as well as the storage and sales of the company's products. The company also acts as a wholesaler / retailer for other reclamation products.

The company distinguishes itself from others with extensive experience in on-site reclamation project management using local forces. It successfully competes in new markets by promoting "***reclamation best practices implementation***" through the Arctic Alpine Reclamation Group

With twenty five years of senior project management working with first nations and other local governments to ensure local economic development and training of local work forces for all reclamation projects. Site services are currently being provided to clients for reclamation projects in the circumpolar regions.



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Project Benefits:

- **Yukon Economic Development and Trades Training**
 - **First Nation Economic Development and Training**
 - **Equipment Operators**
 - **Cat Tractor**
 - **Excavator**
 - **Dump Truck**
 - **Loader**
 - **Bobcat**
 - **Reclamation Technician Training**
 - **“Traditional Knowledge “Best Practices for Mine Reclamation Management”**
 - **Local economic development and training of local work forces**
- **Establishment of Test and Demonstration Plots for Type II Mine Reclamation to determine the potential costs and procedures that will be required to complete the design and cost estimates for future Mine Reclamation and Closure Plans**
- **The potential to reduce further air borne and drainage contamination of the Mt Nansen Mine Site in the traditional territory of the Little Salmon Carmacks First Nation**
- **Demonstration of the current “Best Practices for Mine Reclamation Management”**

The Carmacks Development Corporation Ltd looks forward to discussing the project details at your earliest convenience. I am available in Whitehorse, Friday, October 20 and Monday, October 23 you can reach me on my cell phone (867-334-5603)

Please Contact:

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