



Giant Yellowknife Mines Limited

Tel: 403/873-6301 • Telex: 034-45514 • Fax No: 403/873-2980

Yellowknife Division

April 14, 1988

Marek Stefanski, Ph.D.,
Technology Co-ordinator,
Mineral & Energy Technology,
CANMET,
Energy, Mines & Resources Canada,
555 Booth Street,
Ottawa, Ontario K1A 0G1.

Dear Dr. Stefanski:

Re: Northern Technology Assistance Program

Please find enclosed two applications for assistance under N.T.A.P. for your consideration.

In our view, both projects have the potential for creation of employment in the Northwest Territories and they demonstrate innovative technologies.

As you can see, the proposed schedules are somewhat tight, which may create some difficulties. Unfortunately if the work is to be done this year, the schedules cannot be easily adjusted.

Yours truly,

GIANT YELLOWKNIFE MINES LIMITED

K. Morton,
Technical Project
Supervisor.

KM:kid

Enclosures

cc: A. Lakhani, EDA Secretariat
J. S. McAlpine
S. E. El-Alfy

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ability of upgrading and marketing
in fact a marketing study and testwork
grading plant are currently underway. Should these
encouraging, it is likely that arsenic reclaim at Giant will

In addition to the studies mentioned, it would be extremely useful to conduct tests related to physical recovery of the dust from underground storage. There are a number of possibilities but our preference at this time is for high pressure slurrying of the dust followed by 2 or 3 stage pumping of the slurry to surface.

Objectives

The results of the test should help to determine the most effective means of reclaiming the dust. Armed with this information, detailed engineering of the underground reclaim portion of the plant can proceed with some confidence in the cost estimates for the program.

Scope of Work

Testwork will involve the installation of a submersible pump specially modified to include a high pressure spray ring for reslurrying and a ransack blade for agitation. High pressure water will be piped to the spray ring and the resulting slurry will be pumped to a collection point for density monitoring. The test will be duplicated in 2 or 3 locations having different physical characteristics, such as stope configuration, in-situ moisture content, permafrost effects, etc. It is expected that a 15 hp pump will be adequate for the testing. Installation will include such things as suspension apparatus, electrical services, piping, etc.

PY Requirements

It is estimated that providing electrical service to 3 locations will require 6 manweeks for electrical personnel. Pump and piping installation, 8 manweeks for pipefitters. Conducting the testwork is expected to be quite straightforward and technical personnel requirements should not exceed 8 manweeks. Planning, organizing and supervising the work, as well as report writing, will take 6 manweeks. Total, 28 manweeks.

Budget

Equipment modification and rental for a two month period, will cost approximately \$22,500, piping systems for high pressure water and slurry transfer will cost \$2,500. Electrical cable and switchgear, \$2,500. Labour costs for the project, \$32,308. Total cost of project, \$59,808.

Timetable

Following planning and equipment delivery, the project will take about two months during the period July 11 to Sept 9, 1988. This will permit detailed engineering for full scale installation by the 1st quarter of 1989.

APPLICATION FOR ASSISTANCE
UNDER THE
CANADA/NWT ECONOMIC DEVELOPMENT AGREEMENT



PROJECT FILE NO.	DATE RECEIVED
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Note: A general application form must accompany each project proposal. Please refer to the guidelines for information requirements under each subsidiary agreement.

A. APPLICATION INFORMATION

1. LEGAL NAME OF APPLICANT Giant Yellowknife Mines Limited		2. OPERATING NAME IF DIFFERENT	
3. MAILING ADDRESS P.O. Bag 3000, Yellowknife, N.W.T.		POSTAL CODE X1A - 2M2	BUSINESS PHONE (403) 873-6301
4. CONTACT NAME K. Morton		POSITION/TITLE Technical Project Supervisor	HOME PHONE (403-) 873-6050
5. TYPE OF ORGANIZATION: <input checked="" type="checkbox"/> Incorporated Company <input type="checkbox"/> Sole Proprietor <input type="checkbox"/> Partnership <input type="checkbox"/> Co-operative <input type="checkbox"/> Non Profit Organization <input type="checkbox"/> Travel Association <input type="checkbox"/> Settlement/Hamlet Council <input type="checkbox"/> Educational Institution <input type="checkbox"/> Other (specify)			
The percentage of your organization/operation owned by residents of the Northwest Territories is: _____%			
6. DATE OF INCORPORATION (if applicable): Day Month Year Province of Ontario 3 0 0 6 6 0 Registered in N.W.T. 23 December 1968			

B. PROJECT INFORMATION

7. PROJECT TITLE Arsenic Trioxide Reclaim Project																	
8. Provide a brief description of the proposed project indicating the function, activity, or service to be carried out by the project. Determine whether Arsenic Trioxide can be effectively reclaimed from underground storage using high pressure water to reslurry - followed by pumping to surface for further treatment.																	
9. PROJECT LOCATION (Region)				COMMUNITY Yellowknife				ADDRESS (if different from above)									
10. START/COMPLETION DATES: Estimated Project Start Day Month Year Estimated Project Completion Day Month Year Estimated Interim Stages Day Month Year 0 1 0 6 8 8 0 9 0 9 8 8																	
11. CHECK ONE ONLY. REFER TO APPLICATION GUIDELINES. <table><tr><td>Renewable Resource Development <input type="checkbox"/> 1.1 Renewable Resource Business Development <input type="checkbox"/> 1.2 Product Development and Test Market</td><td>Mineral Development <input checked="" type="checkbox"/> 4.2 Northern Technology Assistance <input type="checkbox"/> 4.3 Northern Mining Information</td></tr><tr><td>Arts and Crafts Development <input type="checkbox"/> 2.1 Product and Market Development <input type="checkbox"/> 2.2 Management Improvement <input type="checkbox"/> 2.3 Artist and Artisan Development</td><td>Small Business Development <input type="checkbox"/> 5.1 Opportunity Identification <input type="checkbox"/> 5.2 Small Business Development Incentives <input type="checkbox"/> 5.3 Business Service Centres</td></tr><tr><td>Applied Economic Planning <input type="checkbox"/> 3.1 Community Planning and Project Implementation <input type="checkbox"/> 3.2 Economic Information Systems <input type="checkbox"/> 3.3 Economic Planning Studies</td><td>Tourism Development <input type="checkbox"/> 6.1 Market Development <input type="checkbox"/> 6.2 Product and Facility Development <input type="checkbox"/> 6.3 Tourism Industry Support</td></tr></table>												Renewable Resource Development <input type="checkbox"/> 1.1 Renewable Resource Business Development <input type="checkbox"/> 1.2 Product Development and Test Market	Mineral Development <input checked="" type="checkbox"/> 4.2 Northern Technology Assistance <input type="checkbox"/> 4.3 Northern Mining Information	Arts and Crafts Development <input type="checkbox"/> 2.1 Product and Market Development <input type="checkbox"/> 2.2 Management Improvement <input type="checkbox"/> 2.3 Artist and Artisan Development	Small Business Development <input type="checkbox"/> 5.1 Opportunity Identification <input type="checkbox"/> 5.2 Small Business Development Incentives <input type="checkbox"/> 5.3 Business Service Centres	Applied Economic Planning <input type="checkbox"/> 3.1 Community Planning and Project Implementation <input type="checkbox"/> 3.2 Economic Information Systems <input type="checkbox"/> 3.3 Economic Planning Studies	Tourism Development <input type="checkbox"/> 6.1 Market Development <input type="checkbox"/> 6.2 Product and Facility Development <input type="checkbox"/> 6.3 Tourism Industry Support
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12. SOURCES OF FINANCING	Applicant's Equity:	- Cash	\$
		- Contributed Labour	\$ 14,952
		- Inventory	\$
		- Plant & Equipment	\$
		TOTAL	\$ 14,952

RECLAMATION OF DISTURBED LANDS PROJECT

STATEMENT OF WORK

Introduction

During the past 40 years of operation, land in the vicinity of Giant Yellowknife Mines has been disturbed through mining activities. These disturbances have been generally unavoidable but the negative effects can be minimized through a well planned reclamation program.

Such a program should be directed towards permanent restoration using natural means wherever possible. Slopes of embankments, for example, should be graded and faced with rip-rap or natural vegetation to prevent erosion. Tailings ponds should be tested for salinity and plant available nutrients so that suitable species can be selected to establish a self-sustaining cover crop.

Objectives

The objectives of this reclamation program are: (1) to determine suitable grass, legume and mulch compositions for various revegetation sites, i.e. waste rock piles, tailings pond embankments, clay borrow pits, tailings pond surfaces, etc. and (2), to begin a long term reclamation program designed to minimize restoration and abandonment requirements following mine closure.

Scope of Work

The enclosed drawing indicates the various sites intended for revegetation testwork during the first year of the program. The sites have been selected for their variety and availability and are unlikely to be disturbed by further mining activity. Altogether, the first year program takes in about 41 hectares of surface area comprising portions of dry tailings, waste rock piles, tailings pond embankments and clay borrow pits. The work will involve hydroseeding these areas using a Bowie Model 800 Hydro-Mulcher and a variety of grass, legume and grass compositions.

PY (Person-Years) Requirements

The work required to complete this project will be done in four stages, planning, organizing, implementing and reporting. Total manpower required for each stage is expected to be as follows:

Planning	150 hours at \$40.00/hr.
Organizing	150 hours at \$40.00/hr.
Implementing	640 hours at \$35.00/hr.
Supervision and Reporting	300 hours at \$45.00/hr.
Total	1240 hours at \$38.63/hr.

Budget

Total project cost breakdown for the first year of the program is as follows:

Bowie, Model 800 Hydro-Mulcher, trailer mounted	\$21,800
Tractor rental, \$1200/wk for 8 weeks	\$9,600
Mulch, grass seed, fertilizer, etc.	\$83,190
Supervision and labour	\$47,900
Soil testing	\$1,000
Total	\$163,490

For budget estimates, a grass seed mixture of reed canarygrass, meadow foxtail and redtop was assumed at an application rate of 60 lbs/acre and a cost of \$3.00/lb. The fertilizer, 20-24-15, costing \$546/ton at an application rate of 300 lbs/acre was used. Weyerhaeuser fiber mulch "Silva-Fibre" at a cost of \$0.30/lb and an application rate of 1500 lbs/acre, and Tackifier "J-Tac R2400" at \$3.00/lb and an application rate of 40 lbs/acre were assumed to be typical. Total cost per acre, \$831.90.

Timetable

Scheduling for the first year of the program is designed to take advantage of the warmest period of the summer, to aid in germination of the seed and to gain access to areas that are boggy in the spring. The 8 week period from June 20 to August 12, 1988 is the period in which the actual seeding will be done. Planning, organizing and report writing will be done immediately prior to and following this period.

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The percentage of your organization/operation owned by residents of the Northwest Territories is: _____%			
6. DATE OF INCORPORATION (if applicable): Day Month Year			

B. PROJECT INFORMATION

7. PROJECT TITLE Reclamation Testing											
8. Provide a brief description of the proposed project indicating the function, activity, or service to be carried out by the project. First stage of a mine reclamation program concentrating on revegetation of disturbed areas. 											
9. PROJECT LOCATION (Region)			COMMUNITY			ADDRESS (if different from above)					
10. START/COMPLETION DATES: Estimated Project Start Day Month Year Estimated Project Completion Day Month Year Estimated Interim Stages Day Month Year											
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12. SOURCES OF FINANCING	Applicant's Equity:	- Cash	\$ 0.0
		- Contributed Labour	\$ 31,272.50
		- Inventory	\$
		- Plant & Equipment	\$ 9,600.00
		TOTAL	\$ 40,872.50

