

**FINAL REPORT** **RECEIVED**  
**MANVILLE - MUNRO**  
**2.18579** JUN 18 1998  
GEOSCIENCE ASSESSMENT  
OFFICE

**Project Number: 7777-143**

Prepared for:  
**Mr. R. H. Tays**  
**FALCONBRIDGE LIMITED**  
**Toronto, Ontario**

Note:

The practice of the Company in issuing reports of this nature is to require the recipient not to publish the proposal, report or any part thereof without the written consent of Lakefield Research Limited.

Prepared By:  
**LAKEFIELD RESEARCH LIMITED**  
**Environmental Services**

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Postal Bag 4300  
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21 First Avenue  
P.O. Box 310  
Schumacher, Ontario P0N 1G0  
Tel: (705) 267-4001  
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January, 1995

# LAKEFIELD RESEARCH

## ENVIRONMENTAL SERVICES

### MEMO

**Date:** January 9, 1995

**From:** Jamie L. Quesnel

**Memo re:** Final Report Manville-Munro LR #7777-143

**Memo to:** Mr. R. Tays - Falconbridge - Toronto

**Copy to:** S. Wade Stogran

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#### **Introduction**

The Manville-Munro property is located in Beatty and Munro Townships which is located in the District of Cochrane. The total area of the property is 640 hectares. This reports documents the reclamation program which was performed on Mining Claim L25634 in Beatty Township.

The reclamation program was proposed on November 21, 1994, by Lakefield Research and was approved by R.H. Tays of Falconbridge, Toronto in a memo dated November 25, 1994. The project started on December 7 and was completed by December 12, 1994.

#### **Reclamation**

The reclamation program included demolition and burning of the headframe, ore bin and building, which were all constructed mainly of wood. Once the buildings were demolished and burning, the existing concrete cap and the internal wooden bulkhead were removed to access the shaft. Water was observed 6 metres below the collar elevation. The shaft was approximately 168 metres deep. This depth was based on the

volume of asbestos ore (estimated volume of 1000 tonnes) and the wasterock placed in the shaft during the reclamation program. Wasterock which was not placed in the shaft was contoured. Additional rock was also placed over the shaft to compensate for compaction and/or slouphage. This may occur to the rock placed in the shaft. Local clay was placed over the entire site to an approximate depth of .3 metres.

Access to the site required the crossings of two creeks. This was approved by the Ministry of Natural Resources, Kirkland Lake. The approved method of crossing was fording of the 2 watercourses ( as per work permit no. KLM94-M157).

### **Analytical Results**

Rock samples were sent to the Lakefield Research laboratory for testing. The samples were tested for Acid Base Accounting (B.C. Research Method), asbestos concentration and analyses for metals using an ICP scan.

Table 1 shows the sample numbers and their description. Four samples were taken at the Manville-Munro minesite and the fourth was taken at the Johns Manville wasterock dump.

**Table 1 Sample Locations**

| <b>SAMPLE #</b> | <b>DESCRIPTION</b>           |
|-----------------|------------------------------|
| 100             | wasterock south of shaft     |
| 101             | wasterock north of shaft     |
| 102             | asbestos ore at ore bin area |
| 103             | wasterock west of shaft area |
| 104             | wasterock at Johns Manville  |

Table 2 shows the results of the Acid Base Accounting static test by using the B.C. Research method. All materials have a net acid consuming ability.

**Table 2 B.C. Research Acid Production Potential Test**

| Sample    | S %  | S = % | Wt. (g) | H2SO4 (ml) | APP (A) | ACA (A) | NACA (A) | Paste pH |
|-----------|------|-------|---------|------------|---------|---------|----------|----------|
| 100       | 0.18 | 0.15  | 10      | 11.45      | 5.5     | 56      | 51       | 9.82     |
| Duplicate | 0.18 | 0.15  | 10      | 11.45      | 5.5     | 56      | 51       |          |
| 101       | 0.26 | 0.26  | 10      | 13.30      | 8.0     | 65      | 57       | 8.58     |
| Duplicate | 0.26 | 0.26  | 10      | 13.45      | 8.0     | 66      | 58       |          |
| 102       | 0.06 | 0.05  | 10      | 17.10      | 1.8     | 84      | 82       | 9.10     |
| Duplicate | 0.06 | 0.05  | 10      | 17.10      | 1.8     | 84      | 82       |          |
| 103       | 0.18 | 0.15  | 10      | 12.05      | 5.5     | 59      | 54       | 9.24     |
| Duplicate | 0.18 | 0.15  | 10      | 11.90      | 5.5     | 58      | 53       |          |
| 104       | 0.09 | 0.07  | 10      | 14.80      | 2.8     | 73      | 70       | 9.04     |
| Duplicate | 0.09 | 0.07  | 10      | 15.10      | 2.8     | 74      | 71       |          |

APP (Acid Production Potential) ACA (Acid Consuming Ability) NACA (Net Acid Consuming Ability) = ACA - APP (A) Kg H2SO4 / Tonne

Table 3 summarizes and shows that the ACA : APP ratio of the rock analyzed to be greater than 4 : 1. This indicates that none of the samples will produce acid.

**Table 3 ACA / APP Ratio**

| Sample    | APP<br>Kg H2SO4 / Tonne | ACA<br>Kg H2SO4 / Tonne | ACA : APP Ratio |
|-----------|-------------------------|-------------------------|-----------------|
| 100       | 5.5                     | 56                      | 10.2 : 1        |
| Duplicate | 5.5                     | 56                      | 10.2 : 1        |
| 101       | 8.0                     | 65                      | 8.1 : 1         |
| Duplicate | 8.0                     | 66                      | 8.3 : 1         |
| 102       | 1.8                     | 84                      | 46.7 : 1        |
| Duplicate | 1.8                     | 84                      | 46.7 : 1        |
| 103       | 5.5                     | 59                      | 10.7 : 1        |
| Duplicate | 5.5                     | 58                      | 10.6 : 1        |
| 104       | 2.8                     | 73                      | 26.1 : 1        |
| Duplicate | 2.8                     | 74                      | 26.4 : 1        |

Table 4 shows the results of the asbestos content in the samples that were taken. The results of the analysis shows the asbestos samples 102 and 104 contain major amounts of asbestos. Material from sample location 102 was placed in the shaft and material from

sample location 104 (wasterock from Johns Manville) was not removed. This material, if suitable, would have been used for the creek crossings. Confirmation from the MNR in Kirkland Lake stated in the work permit that the crossings could be fiorded. From this no material or culverts were necessary for the crossings.

**Table 4 Asbestos Content**

| Sample | Mineral (by XRD)                  | Relative Proportion of Asbestos |
|--------|-----------------------------------|---------------------------------|
| 100    | quartz                            | minor                           |
|        | plagioclase                       | minor                           |
|        | chrysotile(asbestos) or kaolinite | possible trace                  |
| 101    | quartz                            | minor                           |
|        | plagioclase                       | minor                           |
|        | chrysotile(asbestos) or kaolinite | possible trace                  |
| 102    | chrysotile(asbestos) or kaolinite | major                           |
| 103    | quartz                            | minor                           |
|        | plagioclase                       | minor                           |
|        | chrysotile(asbestos) or kaolinite | minor                           |
| 104    | chrysotile(asbestos) or kaolinite | major                           |

XRD - Xray diffraction

Table 5 summarizes the metal content of the rock samples that were taken.

**Table 5 ICP Metal Scan**

| Element  | sample #100 | sample #101 | sample #102 | sample #103 | sample #104 |
|----------|-------------|-------------|-------------|-------------|-------------|
| Al (g/t) | 56000       | 63000       | 8900        | 34000       | 9100        |
| As (g/t) | <30         | <30         | <30         | <30         | <30         |
| Ba (g/t) | 130         | 42          | 16          | 142         | <5.0        |
| Be (g/t) | <2.0        | <2.0        | <2.0        | <2.0        | <2.0        |
| Ca (g/t) | 34000       | 55000       | 4700        | 19000       | 5000        |
| Cd (g/t) | 10.1        | 9.0         | 5.5         | 5.9         | <5.0        |
| Co (g/t) | 65          | 68          | 110         | 74          | 100         |
| Cr (g/t) | 16          | 12          | 650         | 230         | 610         |
| Cu (g/t) | 9.1         | 37          | 12          | 14          | 9.1         |
| Fe (g/t) | 110000      | 120000      | 66000       | 78000       | 47000       |
| La (g/t) | <30         | <30         | <20         | <30         | <10         |
| Mg (g/t) | 18000       | 28000       | 200000      | 97000       | 210000      |
| Mn (g/t) | 1700        | 1800        | 730         | 1200        | 710         |
| Mo (g/t) | <50         | <50         | <10         | <50         | <10         |
| Na (g/t) | 25000       | 22000       | 1600        | 41000       | 690         |
| Ni (g/t) | <5.0        | 20          | 2000        | 853         | 2200        |
| P (g/t)  | 3600        | 3100        | 210         | 1800        | 32          |
| Pb (g/t) | 120         | 120         | 36          | 81          | 31          |
| Sb (g/t) | <40         | <40         | <20         | <20         | <20         |
| Se (g/t) | <50         | <50         | <50         | <50         | <50         |
| Sn (g/t) | <30         | <30         | <20         | <20         | <20         |
| Te (g/t) | <50         | <40         | <10         | <30         | <10         |
| Y (g/t)  | 50          | 51          | 5.3         | 45          | <5.0        |
| Zn (g/t) | 220         | 180         | 90          | 150         | 56          |
| SO4 (%)  | 0.10        | <0.05       | <0.05       | <0.10       | 0.06        |

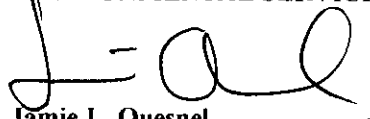
### Final Costs

The proposed costs for the completion of the reclamation at Manville/Munro property was estimated at \$42,100. As the preparation of the access road and the replacement of the shaft concrete cap were not required, the final costs were \$28,575.68.

**Recommendations**

The site should be inspected during the late summer of 1995 to determine if there was any movement of the rock over the shaft.

Yours truly,  
**LAKEFIELD RESEARCH  
ENVIRONMENTAL SERVICES**

A handwritten signature in black ink, appearing to read "J-L-Q", written over the company name.

**Jamie L. Quesnel  
Senior Technologist**

**HEADFRAME AREA PRE-RECLAMATION**

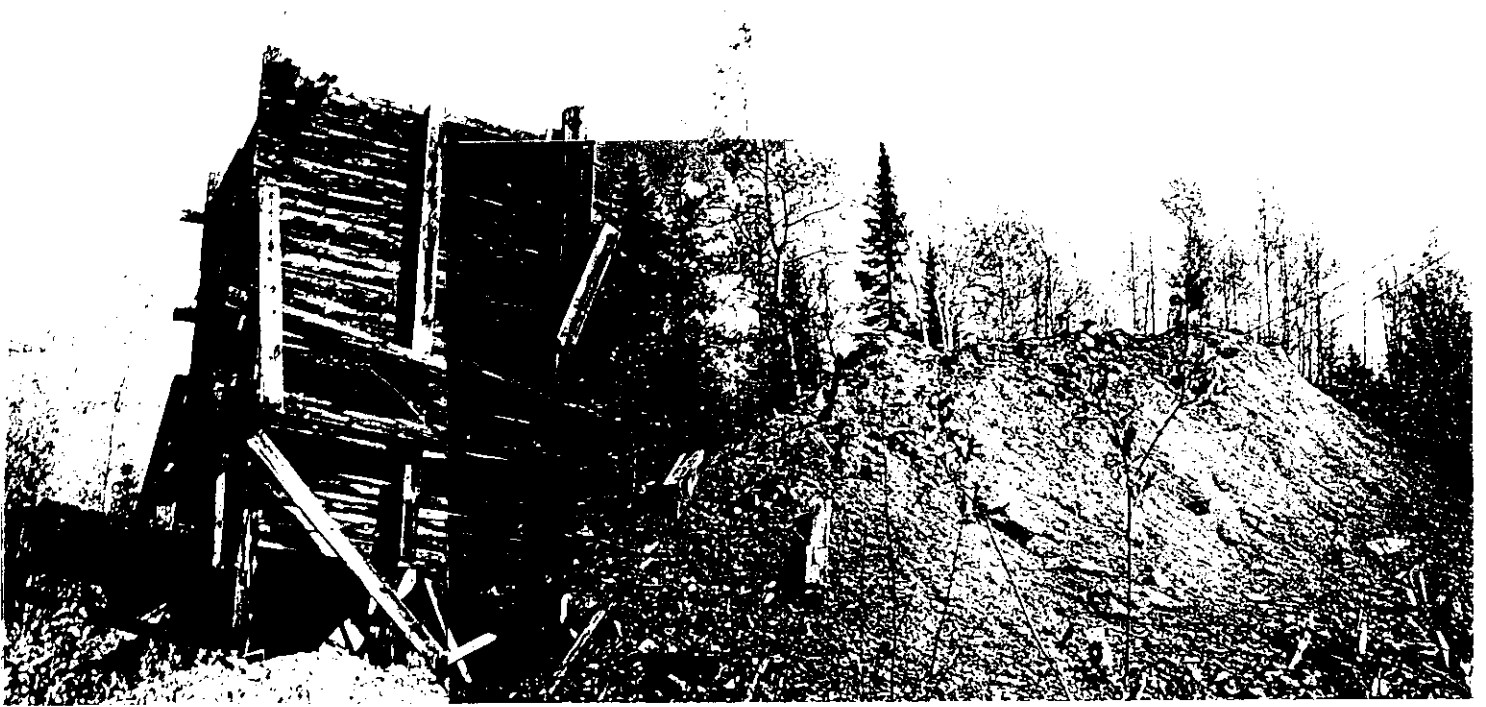


**HEADFRAME AREA POST-RECLAMATION**





**LOAD OUT BIN & ASBESTOS ORE PILE PRE-RECLAMATION**



**LOAD OUT BIN & ASBESTOS ORE PILE POST-RECLAMATION**



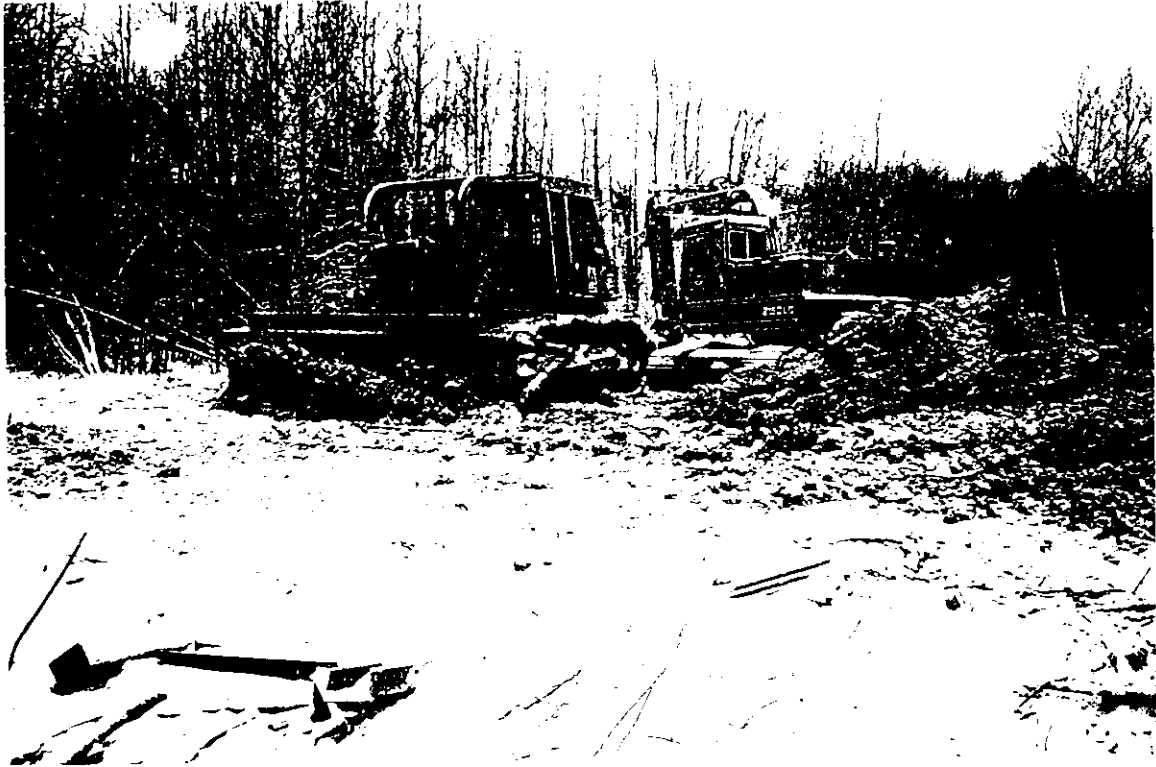
**COLLAPSED BUILDING PRE-RECLAMATION**



**COLLAPSED BUILDING POST-RECLAMATION**



**EQUIPMENT USED FOR RECLAMATION PROJECT**





Ministry of  
Northern Development  
and Mines

### Declaration of Assessment Work Performed on Mining Land

Mining Act, Subsection 65(2) and 66(3), R.S.O. 1990

|   |
|---|
| Transaction Number (office use)<br><b>W9880.00382</b> |
| Assessment Files Research Imaging                     |



42A09SW2002 2.18579 BEATTY

900

if subsection 65(2) and 66(3) of the Mining Act. Under section 8 of the Mining Act, assessment work and correspond with the mining land holder. Questions about this Northern Development and Mines, 3rd Floor, 933 Ramsey Lake Road, Sudbury,

Instructions: - For work performed on Crown Lands before recording a claim, use form 0240.  
- Please type or print in ink.

2.18579

**1. Recorded holder(s)** (Attach a list if necessary)

|         |  |                  |                |
|---------|--|------------------|----------------|
| Name    | FALCONBRIDGE LIMITED                   | Client Number    | 130679         |
| Address | Suite 1200 - 95 Wellington Street West | Telephone Number | (416) 956-5700 |
|         | Toronto, Ontario, M5H 2V4              | Fax Number       | (416) 956-5757 |
| Name    |  | Client Number    |                |
| Address |  | Telephone Number |                |
|         |  | Fax Number       |                |

**2. Type of work performed:** Check (✓) and report on only ONE of the following groups for this declaration.

Geotechnical: prospecting, surveys, assays and work under section 18 (regs)

Physical: drilling stripping, trenching and associated assays

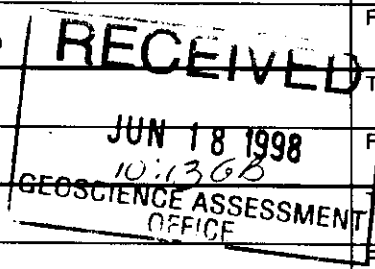
Rehabilitation

|   |   |  |
|---|---|--|
| Work Type                                     | Reclamation Program: demolition and burning of headframe; shaft filled with waste rock; rock samples tested for asbestos contamination. | Office Use                                       |
|   |   | Commodity  |
|   |   | Total \$ Value of Work Claimed <b>14,287</b>     |
| Dates Work Performed                          | From <b>7</b> <b>12</b> <b>94</b> To <b>12</b> <b>12</b> <b>94</b> ✓  | NTS Reference                                    |
| Global Positioning System Data (if available) | Township/Area <b>Beatty Twp.</b>  | Mining Division <b>Larder Lk</b>                 |
|   | M or G-Plan Number <b>M-324</b>   | Resident Geologist District <b>Kirkland Lake</b> |

Please remember to: - obtain a work permit from the Ministry of Natural Resources as required;  
- provide proper notice to surface rights holders before starting work;  
- complete and attach a Statement of Costs, form 0212;  
- provide a map showing contiguous mining lands that are linked for assigning work;  
- include two copies of your technical report.

**3. Person or companies who prepared the technical report** (Attach a list if necessary)

|         |  |                  |                           |
|---------|--|------------------|---------------------------|
| Name    | Robert Foy                             | Telephone Number | (705) 267 - 1188 ext. 243 |
| Address | PO Box 1140, Timmins, Ontario, P4N 7H9 | Fax Number       | (705) 267 - 6080          |
| Name    |  | Telephone Number |                           |
| Address |  | Fax Number       |                           |
| Name    |  | Telephone Number |                           |
| Address |  | Fax Number       |                           |



**4. Certification by Recorded Holder or Agent**

I, Robert Foy (Print Name), do hereby certify that I have personal knowledge of the facts set forth in this Declaration of Assessment Work having caused the work to be performed or witnessed the same during or after its completion and, to the best of my knowledge, the annexed report is true.

|                                       |  |                  |                           |
|---------------------------------------|--|------------------|---------------------------|
| Signature of Recorded Holder or Agent |  | Date             | JUNE 16/98                |
| Agent's Address                       | PO Box 1140, Timmins, Ontario, P4N 7H9 | Telephone Number | (705) 267 - 1188 ext. 243 |
|                                       |  | Fax Number       | (705) 267 - 6080          |

Accred: Sept 16/98

5. **Work to be recorded and distributed.** Work can only be assigned to claims that are contiguous (adjoining) to the mining land where work was performed, at the time work was performed. A map showing the contiguous link must accompany this form.

**W9880 00382**

| Mining Claim Number. Or if work was done on other eligible mining land, show in this column the location number indicated on the claim map. | Number of Claim Units. For other mining land, list hectares. | Value of work performed on this claim or other mining land. | Value of work applied to this claim. | Value of work assigned to other mining claims. | Bank. Value of work to be distributed at a future date |
|---|--|---|--------------------------------------|--|--|
| eg TB 7827  | 16 ha  | \$26,825  | N/A                                  | \$24,000                                       | \$2,825  |
| eg 1234567  | 12   | 0   | \$24,000                             | 0  | 0  |
| eg 1234568  | 2  | \$ 8,892  | \$ 4,000                             | 0  | \$4,892  |
| <sup>1</sup> 8000197 L. 25634   | 1  | \$14,287.84   | 0                                    | \$4,000  | \$10,287.84  |
| 2 L 1190353   | 1  | 0   | \$2,000                              | 0  | 0  |
| 3 L 1190354   | 1  | 0   | \$2,000                              | 0  | 0  |
| 4   |  |   |                                      |  |  |
| 5   |  |   |                                      |  |  |
| 6   |  |   |                                      |  |  |
| 7   |  |   |                                      |  |  |
| 8   |  |   |                                      |  |  |
| 9   |  |   |                                      |  |  |
| 10  |  |   |                                      |  |  |
| 11  |  |   |                                      |  |  |
| 12  |  |   |                                      |  |  |
| 13  |  |   |                                      |  |  |
| 14  |  |   |                                      |  |  |
| 15  |  |   |                                      |  |  |
| <b>Column Totals</b>  | <b>3</b>   | <b>\$14,287.84</b>  | <b>\$4,000</b>                       | <b>\$4,000</b>                                 | <b>\$10,287.84</b>                                     |

I, Robert Foy (Print Full Name), do hereby certify that the above work credits are eligible under subsection 7 (1) of the Assessment Work Regulation 6/96 for assignment to contiguous claims or for application to the claim where the work was done.

Signature of Recorded Holder or Agent Authorized in Writing

*R. Foy*

Date

JUNE 16/98

6. **Instruction for cutting back credits that are not approved.**

Some of the credits claimed in this declaration may be cut back. Please check (✓) in the boxes below to show how you wish to prioritize the deletion of credits:

- 1. Credits are to be cut back from the Bank first, followed by option 2 or 3 or 4 as indicated.
- 2. Credits are to be cut back starting with the claims listed last, working backwards; or
- 3. Credits are to be cut back equally over all claims listed in this declaration; or
- 4. Credits are to be cut back as prioritized on the attached appendix or as follows (describe):

Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

**For Office Use Only**

Received Stamp

**RECEIVED**  
 JUN 18 1998  
 10:13 GB  
 GEOSCIENCE ASSESSMENT  
 OFFICE

0241 (03/97)

Deemed Approved Date

Date Notification Sent

Date Approved

Total Value of Credit Approved

Approved for Recording by Mining Recorder (Signature)





Personal information collected on this form is obtained under the authority of subsection 6 (1) of the Assessment Work Regulation 6/96. Under section 8 of the Mining Act, this information is a public record. This information will be used to review the assessment work and correspond with the mining land holder. Questions about this collection should be directed to a Provincial Mining Recorder, Ministry of Northern Development and Mines, 3rd Floor, 933 Ramsey Lake Road, Sudbury, Ontario, P3E 6B5.

Table with 4 columns: Work Type, Units of work, Cost Per Unit of work, Total Cost. Includes rows for Reclamation Work, Associated Costs, Transportation Costs, and Food and Lodging Costs. Total Value of Assessment Work: \$14,287.84

Calculations of Filing Discounts:

- 1. Work filed within two years of performance is claimed at 100% of the above Total Value of Assessment Work.
2. If work is filed after two years and up to five years after performance, it can only be claimed at 50% of the Total Value of Assessment Work. If this situation applies to your claims, use the calculation below:

\$28,575.68 x 0.50 = \$14,287.84

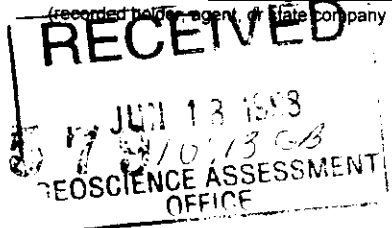
TOTAL VALUE OF ASSESSMENT WORK x 0.50 = Total \$ value of worked claimed.

Note:
- Work older than 5 years is not eligible for credit.
- A recorded holder may be required to verify expenditures claimed in this statement of costs within 45 days of a request for verification and/or correction/clarification. If verification and/or correction/clarification is not made, the Minister may reject all or part of the assessment work submitted.

Certification verifying costs:

I, Robert Foy, do hereby certify, that the amounts shown are as accurate as may reasonably be determined and the costs were incurred while conducting assessment work on the lands indicated on the accompanying

Declaration of Work form as Agent (Project Geologist, Falconbridge Limited) I am authorized to make this certification.



Signature: [Handwritten Signature] Date: JUNE 16/98

Geoscience Assessment Office  
933 Ramsey Lake Road  
6th Floor  
Sudbury, Ontario  
P3E 6B5

Telephone: (888) 415-9846  
Fax: (877) 670-1555

September 23, 1998

FALCONBRIDGE LIMITED  
SUITE 1200, 95 WELLINGTON STREET WEST  
TORONTO, ONTARIO  
M5J-2V4

Visit our website at:  
[www.gov.on.ca/MNDM/MINES/LANDS/mlsmnpge.htm](http://www.gov.on.ca/MNDM/MINES/LANDS/mlsmnpge.htm)

Dear Sir or Madam:

**Submission Number:** 2.18579

**Status**

**Subject: Transaction Number(s):** W9880.00382 Deemed Approval

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We have reviewed your Assessment Work submission with the above noted Transaction Number(s). The attached summary page(s) indicate the results of the review. WE RECOMMEND YOU READ THIS SUMMARY FOR THE DETAILS PERTAINING TO YOUR ASSESSMENT WORK.

If the status for a transaction is a 45 Day Notice, the summary will outline the reasons for the notice, and any steps you can take to remedy deficiencies. The 90-day deemed approval provision, subsection 6(7) of the Assessment Work Regulation, will no longer be in effect for assessment work which has received a 45 Day Notice. Allowable changes to your credit distribution can be made by contacting the Geoscience Assessment Office within this 45 Day period, otherwise assessment credit will be cut back and distributed as outlined in Section #6 of the Declaration of Assessment work form.

Please note any revisions must be submitted in DUPLICATE to the Geoscience Assessment Office, by the response date on the summary.

If you have any questions regarding this correspondence, please contact Lucille Jerome by e-mail at [jeromel2@epo.gov.on.ca](mailto:jeromel2@epo.gov.on.ca) or by telephone at (705) 670-5858.

Yours sincerely,



ORIGINAL SIGNED BY  
Blair Kite  
Supervisor, Geoscience Assessment Office  
Mining Lands Section

# Work Report Assessment Results

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**Submission Number:** 2.18579

**Date Correspondence Sent:** September 23, 1998

**Assessor:** Lucille Jerome

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| <b>Transaction Number</b> | <b>First Claim Number</b> | <b>Township(s) / Area(s)</b> | <b>Status</b>   | <b>Approval Date</b> |
|---------------------------|---------------------------|------------------------------|-----------------|----------------------|
| W9880.00382               | 8000197                   | BEATTY                       | Deemed Approval | September 16, 1998   |

**Section:**

19 Rehabilitation OREHAB

**Correspondence to:**

Resident Geologist  
Kirkland Lake, ON

Assessment Files Library  
Sudbury, ON

**Recorded Holder(s) and/or Agent(s):**

Robert Foy  
TIMMINS, ONTARIO, CANADA

FALCONBRIDGE LIMITED  
TORONTO, ONTARIO

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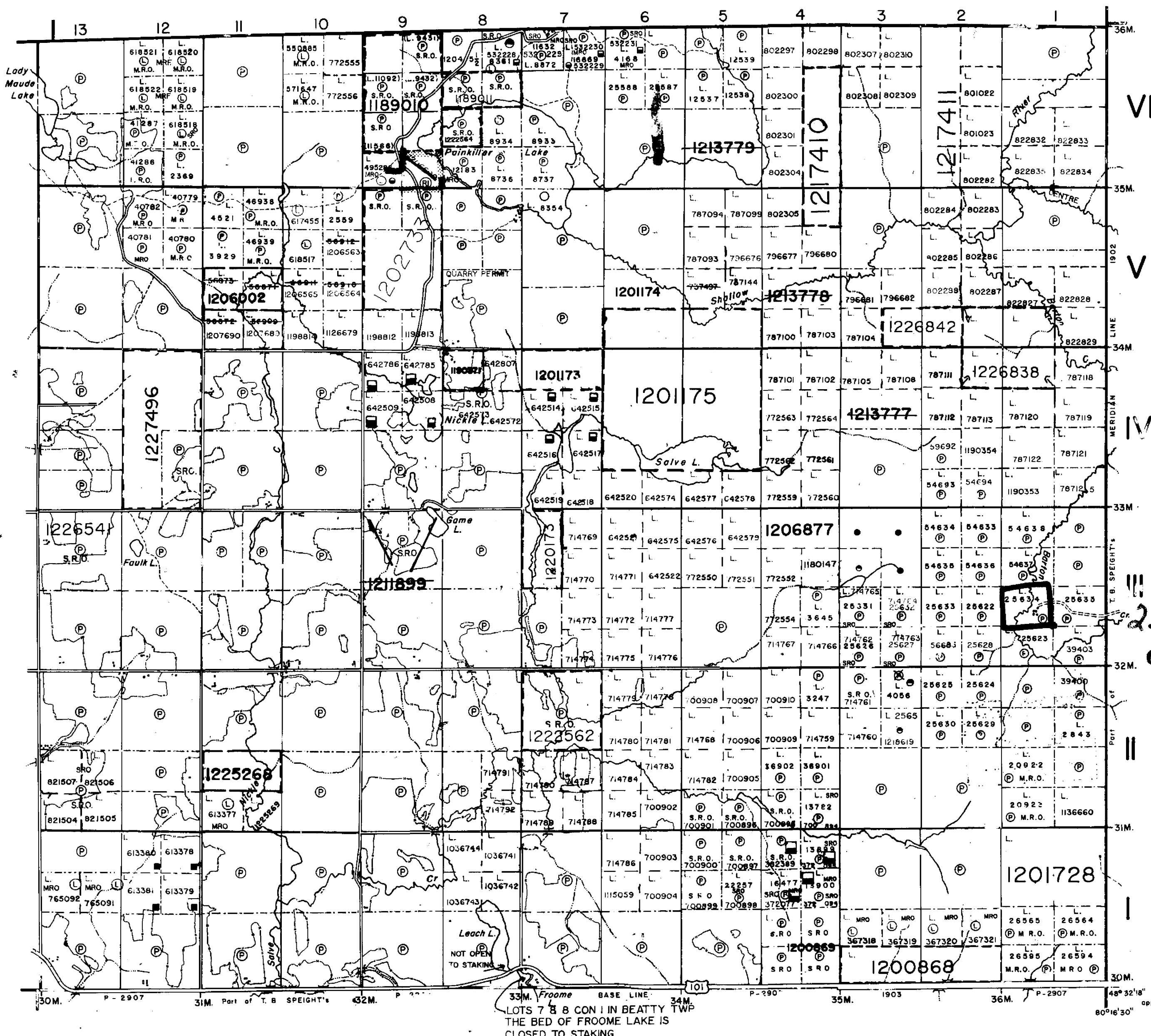


Couison Twp. (M.340)

Carr Twp. (M.335)

Junro Twp. (M.376)

Hislop Twp. (M.355)



NOTES

400' Surface Rights Reservation along the shores of all lakes and rivers.

NOTICE OF FORESTRY ACTIVITY

THIS TOWNSHIP / AREA FALLS WITHIN THE WATABEAG MANAGEMENT UNIT, AND MAY BE SUBJECT TO FORESTRY OPERATIONS. THE MNR UNIT FORESTER FOR THIS AREA CAN BE CONTACTED AT:

PO BOX 129  
SUNSTKA, ONT.  
POK ITO  
705-642-3222

(R) MINING RIGHTS WITHDRAWN FROM STAKING, PROSPECTING, SALE OR LEASE, SECTION 35, THE MINING ACT, RSO 1990  
W-L-22/96 NER

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOPMENT AND MINES, FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON.

LEGEND

- LEASED FOR MINING RIGHTS ONLY
- PATENTED LAND
- PATENTED FOR SURFACE RIGHTS ONLY
- LEASE
- LICENSE OF OCCUPATION
- CROWN LAND SALE
- LOCATED LAND
- CANCELLED
- MINING RIGHTS ONLY
- SURFACE RIGHTS ONLY
- HIGHWAY & ROUTE No.
- ROADS
- TRAILS
- POWERS
- POWER LINE
- MARSH OR MUSKEG
- MINES

\*used only with summer resort locations or when space is limited.

TOWNSHIP OF

**BEATTY**

RECEIVED

DISTRICT OF COCHRANE  
JUL 15 1993  
GEOLOGICAL ASSESSMENT OFFICE

LARDER LAKE  
MINING DIVISION

SCALE: 1 INCH = 40 CHAINS (1/2 MILE)

DR. k.k.  
DATE Oct./71 PLAN No. **M.324**

ONTARIO  
DEPARTMENT OF MINES  
AND NORTHERN AFFAIRS

CIRCULATED NOVEMBER 29 1994 ML

ARCHIVED JANUARY 25, 1994  
ARCHIVED ON JUNE 01/95  
ARCHIVED APRIL 23/97.



254

BEATTY TWP

253M