

Introduction

The following report covers the testing of two sets of dimension stone specimens. These specimens were submitted by the client and identified as "Woods Road #1" and " Killbear #1".

The specimens were assessed for Water Absorption, Bulk Specific Gravity, Modulus of Rupture, and Compressive Strength. Testing was carried out in accordance with ASTM standards for Dimension Stone at the laboratories of Inchcape Testing Services NA. Ltd. in Mississauga, between the dates of January 2, 1996 and January 10, 1996.

1.1	Water Absorption & Bulk Specific Gravity Test (ASTM C97)	RECEIVED
Descr	iption & Procedure:	6.58 <u>9</u> 1996
a) Wa		WINING LANDS BRANCH

The specimens for this test were cubes approximately 52 mm by 52 mm by 52 mm prepared by the client.

The cube specimens were dried for 48 hrs. in a ventilated oven at a temperature of $60^{\circ} \pm 2 C^{\circ}$, then cooled in a desiccator for a period of 30 minutes and weighed. Then the specimens were immersed completely in a water at room temperature for 48 hrs., removed from the water one at a time, surface dried, and weighed.

THIS REPORT IS FOR THE EXCLUSIVE USE OF WARNOCK HERSEY'S CLIENT AND IS PROVIDED PURSUANT TO THE AGREEMENT BETWEEN WARNOCK HERSEY AND ITS CLIENT. WARNOCK HERSEY'S RESPONSIBILITY AND LIABILITY ARE LIMITED TO THE TERMS AND CONDITIONS OF THE AGREEMENT. WARNOCK HERSEY ASSUMES NO LIABILITY TO ANY PARTY, OTHER THAN TO THE CLIENT IN ACCORDANCE WITH THE AGREEMENT, FOR ANY LOSS, EXPENSE OR DAMAGE OCCASIONED BY THE USE OF THIS REPORT.

ONLY THE CUENT IS AUTHORIZED TO COPY OR DISTRIBUTE THIS REPORT AND THEN ONLY IN ITS ENTIRETY. ANY USE OF THE WARNOCK HERSEY NAME OR LOGO FOR THE SALE OR ADVERTISEMENT OF THE TESTED MATERIAL, PRODUCT OR SERVICE MUST FIRST BE APPROVED IN WRITING BY WARNOCK HERSEY. THE OBSERVATIONS AND TEST RESULTS IN THIS REPORT ARE RELEVANT ONLY TO THE SAMPLE TESTED. THIS REPORT BY ITSELF DOES NOT IMPLY THAT THE

З. MATERIAL, PRODUCT OR SERVICE IS OR HAS EVER BEEN UNDER A WARNOCK HERSEY CERTIFICATION PROGRAM.

J.R. Trusler		
January	12,	1996

Report No. 284-4539-01/ Revised Revised January 15, 1996

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b) Bulk Specific Gravity

The same specimens used for the water absorption test were used for this test. The specimens were weighed suspended in water immediately following the weighing for the absorption tests.

Results of Water Absorption & Bulk Specific Gravity Test:

A) Woods Road #1 specimens

Specimen	Absorption weight (%)	Bulk Specific Gravity
WR#1 ⊥ 1	.15	2.63
WR#1 ⊥ 2	.15	2.63
WR#I ⊥ 4	.14	2.63
WR#1 ± 5	.13	2.64
WR#1 - 6	.14	2.63
The highest value	.15	2.64
The lowest value	.13	2.63
The average value	.14	2.63

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January 12, 1996	 Revised	January 15, 1996

Results of Water Absorption & Bulk Specific Gravity Test / Continued

B) Killbear #1 specimens

Specimen	Absorption weight (%)	Bulk Specific Gravity
Kb#1 ⊥ 1	.24	2.64
Kb#1 ⊥ 2	.22	2.62
Kb#1 ± 3	.27	2.62
Kb#1 4	.25	2.65
Kb#1 ₋ 5	.20	2.62
Kb#1 ⊥ 6	.20	2.62
The highest value	.27	2.65
The lowest value	.20	2.62
The average value	.23	2.63

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1.2 Modulus of Rupture (ASTM C99)

Description & Procedure:

The specimens for this test were prisms of approximately 200 mm long by 100 mm wide by 58 mm thick, prepared by the client.

The specimens were conditioned in an oven for 48 hrs at a temperature of $60^{\circ} \pm 2 \text{ C}^{\circ}$. The specimens were cooled to room temperature in a desiccator before testing.

The standard specifies a minimum of five specimens for each set of tests; however, fewer specimens were submitted in some cases.

The tests were performed using a Baldwin Satec Universal Testing Machine. The specimens were placed flat wise on the supporting knife edges of the centre point knife edged loading jig as shown in the diagram below. The load was applied at a steady rate not exceeding 4,450 N/min, until failure.

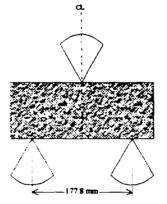


Fig. 1 - Modulus of Rupture test setup

Calculations - Modulus of Rupture

- P = breaking load on specimen in Newtons,
- L = test span of specimen in mm = (177.8 mm = 7")
- b = width of specimen in mm,
- t = thickness of specimen in mm,
- f = Modulus of Rupture in MPA

Then

$$f = (3PL) / 2bt^2$$

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Results - Modulus of Rupture

A) Woods Road #1 specimens

Specimen	Modulus of Rupture Perpendicular to the rift (MPa)
WR#1⊥ 1 Pr.	14.8
WR#1⊥ 2 Pr.	16.4
WR#1_ 3 Pr.	15.2
WR#1⊥ 4 Pr	17.6
The average value	16.0

Specimen	Modulus of Rupture Parallel to the rift (MPa)
WR#1=1 Pr. *	1.9
WR#1=2 Pr.	8.2
WR#1=3 Pr.	9.2
WR#1=4 Pr.	9.8
WR#1 # 5 Pr.	8.3
The average value	8.9

Notes:

* WR#1 || 1 Pr. was excluded as breaking load was very low (>20% under the average).
 A hair line crack was detected at the end 1/3 span of the specimen & subsequently the specimen failed along the same line.

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Results - Modulus of Rupture / continued

B) Killbear #1 specimens

Specimen	Modulus of Rupture Perpendicular to the rift (MPa)
Kb#1⊥ 1 Pr.*	15.0
Kb#1⊥ 2 Pr.**	16.0
Kb#1⊥ 3 Pr.	14.2
Kb#1 ₁ 4 Pr. ***	13.1
The average value	14.6

Specimen	Modulus of Rupture Parallel to the rift (MPa)
Kb#1= 1 Pr.	9.3
Kb#1=2 Pr.	10.2
The average value	9.8

Notes:

* Kb#1₁ 1 Pr. Coarser grain visible strata at sides of sample with visible weathering.

****** Kb#1 \pm 2 Pr. Specimen failed at 1/3 end span.

***Kb#1 \pm 4 Pr. A hair line crack was detected at the end 1/3 span of the specimen & subsequently the specimen failed along the same line.

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1.3 Compressive Strength (ASTM C170)

Description & Procedure:

The specimens were cubes of approximately 52 mm by 52 mm by 52 mm, prepared by the client.

The same specimens used to assess Water absorptionn & bulk specific gravity were reconditioned in an oven for 48 hrs at a temperature of $60^{\circ} \pm 2 \text{ C}^{\circ}$. The specimens were then cooled to room temperature in a desiccator before testing.

The specimens were centred in the RIEHLE MC-400 Testing Machine, and a load was applied at a steady rate not exceeding 690 KPa/sec., until failure.

Results - Compressive strength

A) Woods Road #1 specimens

Specimen	Compressive strength Perpendicular to the rift (MPa)
WR#1 ⊥ 1	174
WR#1 _ 2	162
WR#1 - 4	166
WR#1 _ 5	90
WR#1 - 6	169
The average value	152

Notes:

^{*} WR#1 \pm 3 was tested in the parallel direction as sample was cut too poorly to be tested in that direction.

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Results - Compressive strength / Continued

A) Woods Road #1 specimens

Specimen	Compressive strength Parallel to the rift (MPa)
WR#1 # 1	182
WR#1 #2	173
WR#1 # 3	182
WR#1 = 4*	115
WR#1 # 5	148
WR#1 = 6	119
WR#1 ⊥ 3	167
The average value	155

Notes:

* WR#1 #4 This specimen had a chipped corner.

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Results - Compressive strength / Continued

B) Killbear #1 specimens

Specimen	Compressive Strength Perpendicular to the rift (MPa)
Kb#1 _ 1	149
Kb#1 ⊥ 2	171
Kb#1 _ 3*	171
Kb#1 ⊥ 4	157
Kb#1 ⊥ 5	172
Kb#1 <u>+</u> 6	163
The average value	164

Notes:

* Kb#1 ⊥ 3

Vertical hair line crack going through the centre of the specimen and subsequently the specimen also failed along the weak fault line.

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Results - Compressive strength / Continued

B) Killbear #1 specimens

Specimen	Compressive Strength Parallel to the rift (MPa)
Кb#1 п 1	181
Kb#1 = 2	123
Kb#1 # 3	143
Kb#1 = 4	92
Kb#1	126
Kb#1 = 6	148
The average value	136

Tested and Reported by : Taline Tajerian and Bob Obuchi

Respectfully Submitted, Inchcape Testing Services NA Ltd.

Taleentajuran

Taline Tajerian, B. Sc. Engineering Assistant Physical Testing Services

TNT/VWJ/tnt 2 cc: Client Reviewed by

the

Vern W. Jones, C.E.T. Assistant Manager Physical Testing Services

APPENDIX A

INCHCAPE TESTING SERVICES NA LTD. IS FULLY ACCREDITED BY THE STANDARDS COUNCIL OF CANADA (SCC). A GENERAL OVERVIEW FROM THE S.C.C. DIRECTORY IS GIVEN BELOW.

ACCREDITED LABORATORY NO:36

Inchcape Testing Services NA Ltd. Warnock Hersey - Mississauga 3210 American Drive Mississauga, Ont. L4V 1B3

Contact: Mr. Barry H. Cooke

TEL: (905) 678-7820 FAX: (905) 678-7131

Clients Served: All interested parties.

Field(s) of Testing/Measurement: ELC MEC PHY T&F

MAIN PRODUCT(S) TESTED/SERVICE(S): Solid Fuel Burning Appliances and Accessories, Plumbing Components, Building Materials, Geosynthetics, Doors and Windows, Oil and Gas Fired Appliances and Accessories and Electric and Electronic Appliances and Components.

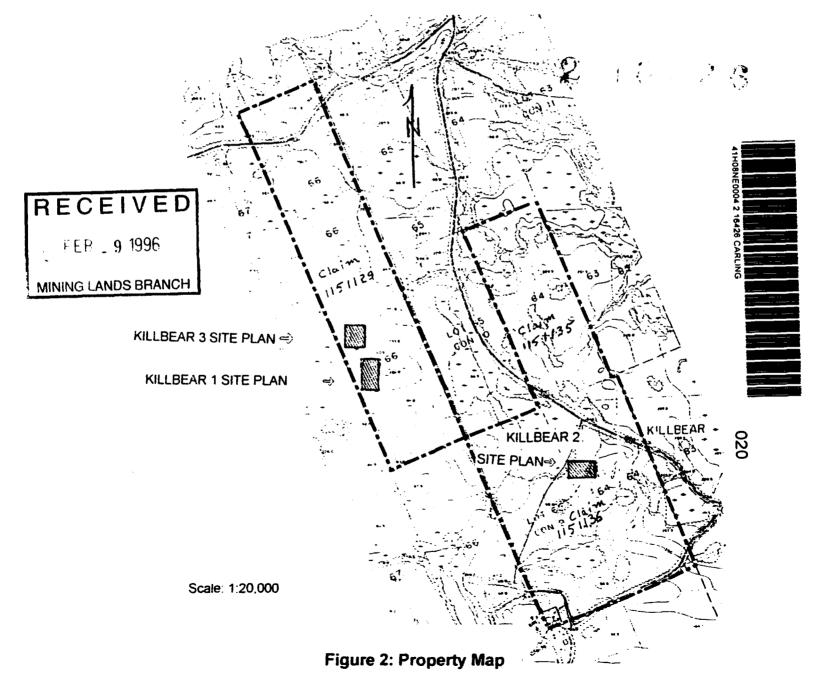
GENERAL OVERVIEW: Equipped and staffed to test solid fuel burning appliances and accessories, geosynthetics, building stone, tiles, doors, windows, curtain walls, plumbing components, oil and gas fired appliances and accessories and electrical and electronic appliances and components to verify compliance with U.S. and Canadian standards.

STAFF: 30: includes 10 Engineers and 15 Technologist.

PROPERTY

The Killbear Point property comprises approximately 500 acres and is more particularly described in TABLE 1 (Figure 2). Assessment was applied to the claims in 1993, and this report will be filed for assessment. As a result sufficient credits should be available to keep the entire claim group in good standing for some three years from date of filing. <u>TABLE 1: KILLBEAR POINT PROPERTY</u>

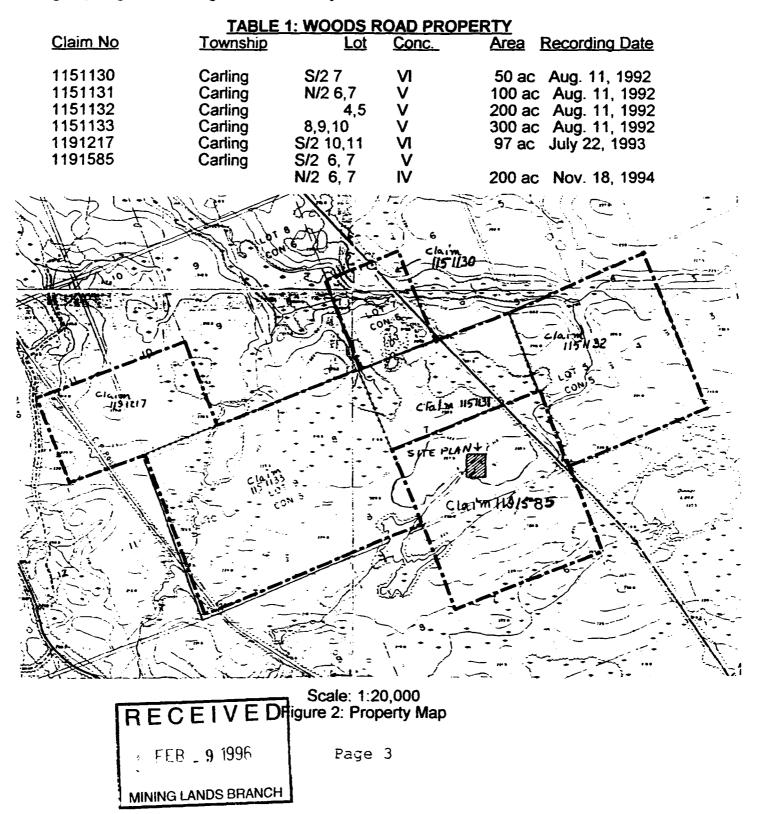
<u>Claim No</u>	Township	Lot Conc	<u>Area</u>	Recording Date
1151129	Carling	66 XI 66 X	200 a	c Oct.23, 1991
1151135 1151136	Carling Carling	64 X 64,65 IX	100 a 200 a	c Nov. 5, 1992



PROPERTY

The Woods Road property comprises approximately 947 acres and is more particularly described in TABLE 1 (Figure 2).

Assessment will be filed for the current work on the claims, and it is anticipated, as a result, that sufficient credits should be available to keep the entire claim group in good standing for some three years from the date of submission.



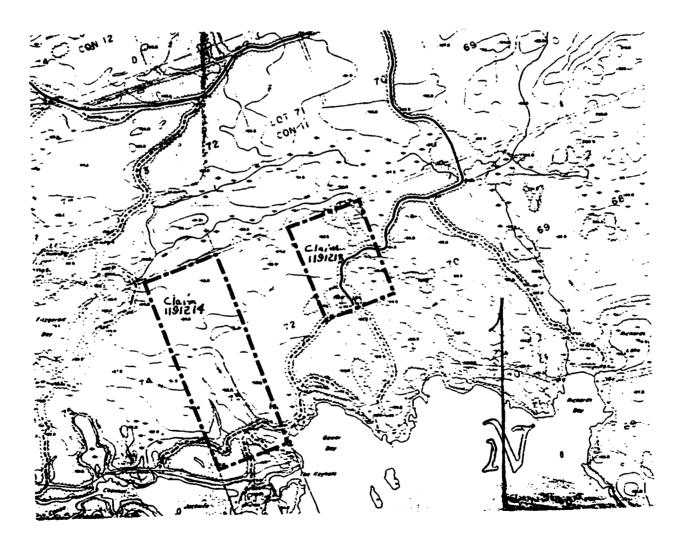
PROPERTY

The Jacknife Harbour property comprises approximately 149 acres and is more particularly described in TABLE 1 (Figure 2).

Assessment will be filed for the current work on the claims, and it is anticipated, as a result, that sufficient credits should be available to keep the entire claim group in good standing for some five years from the date of submission.

TABLE 1: JACKNIFE HARBOUR PROPERTY

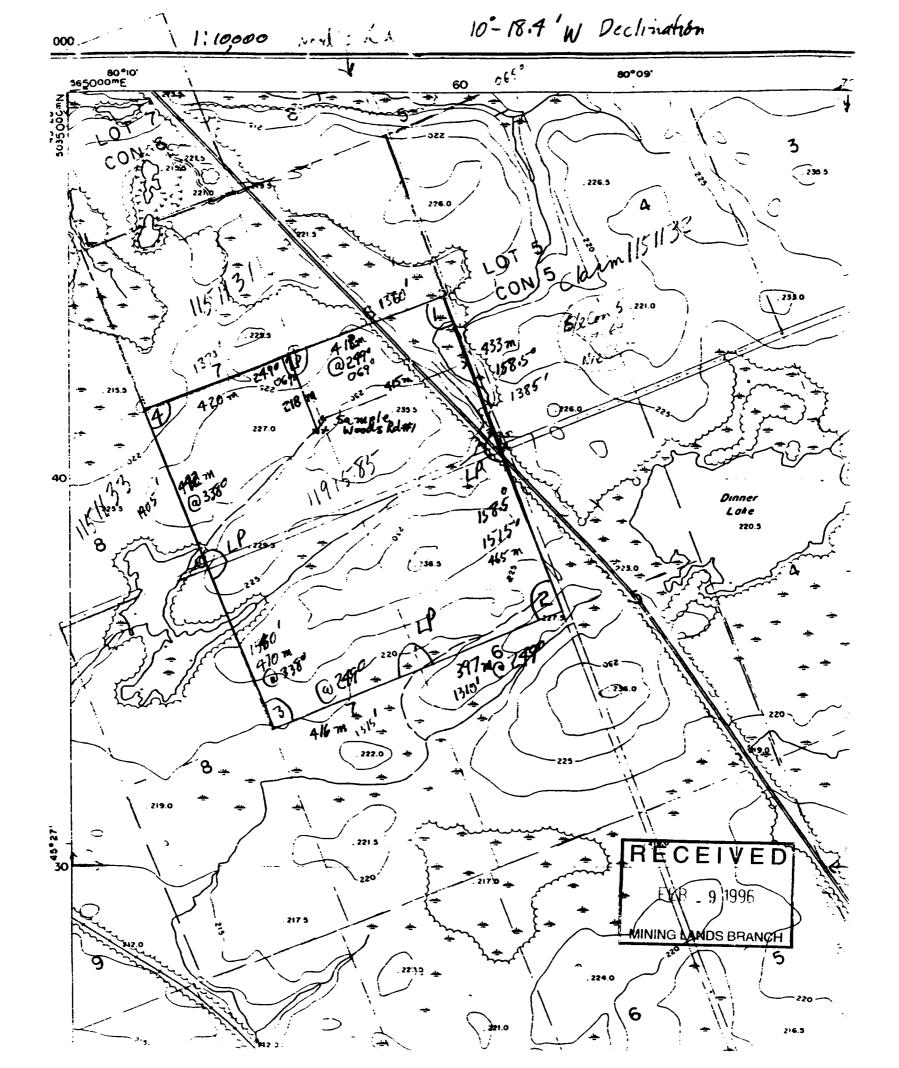
<u>Claim No</u>	<u>Township</u>	Lot	Conc.	<u>Area</u>	Recording Date
1191213	Carling	N/2 71		4 ac	May 4, 1993
1191214	Carling	Pt. 73		D ac.	May 4, 1993

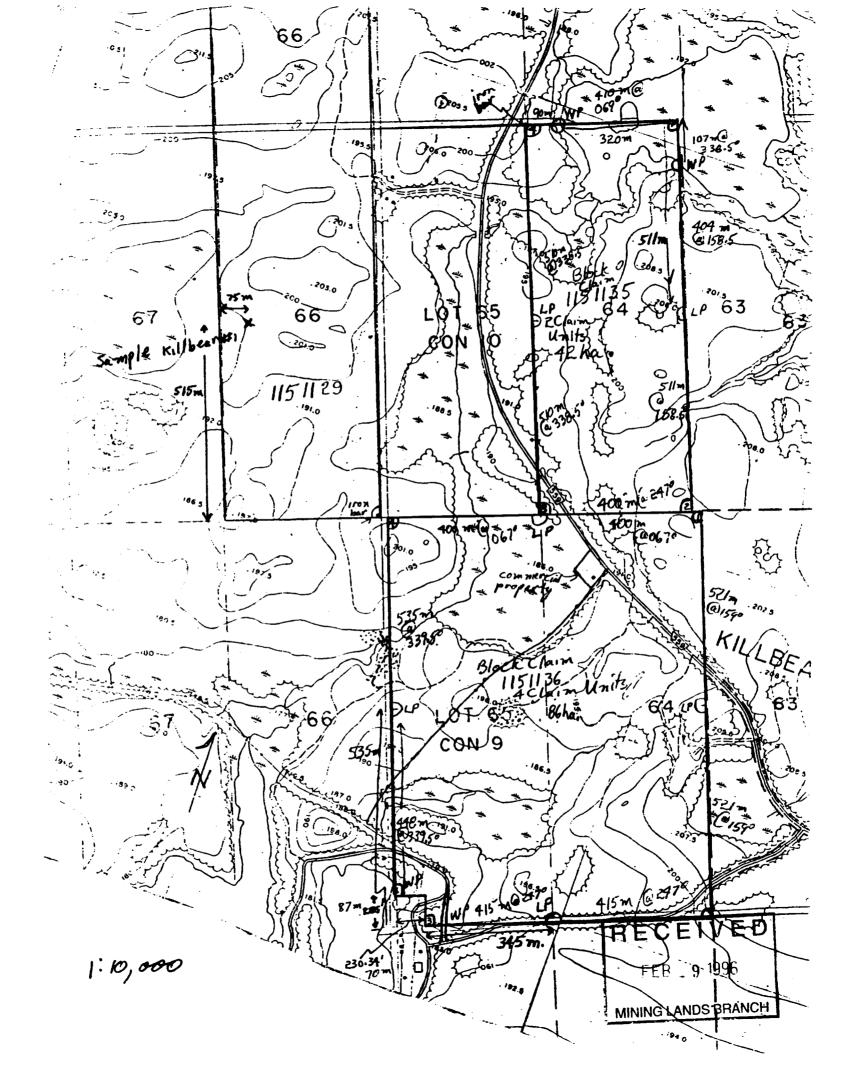


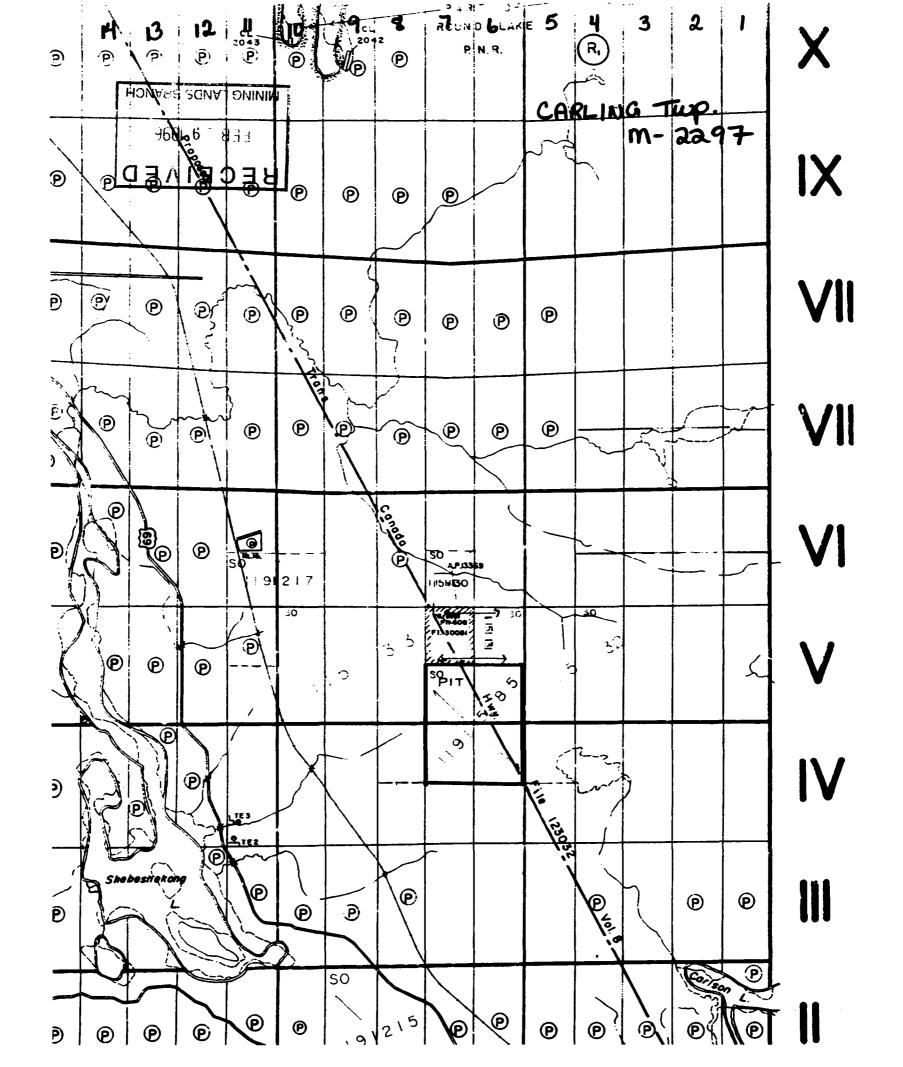
Scale: 1:20,000 Figure 2: Property Map

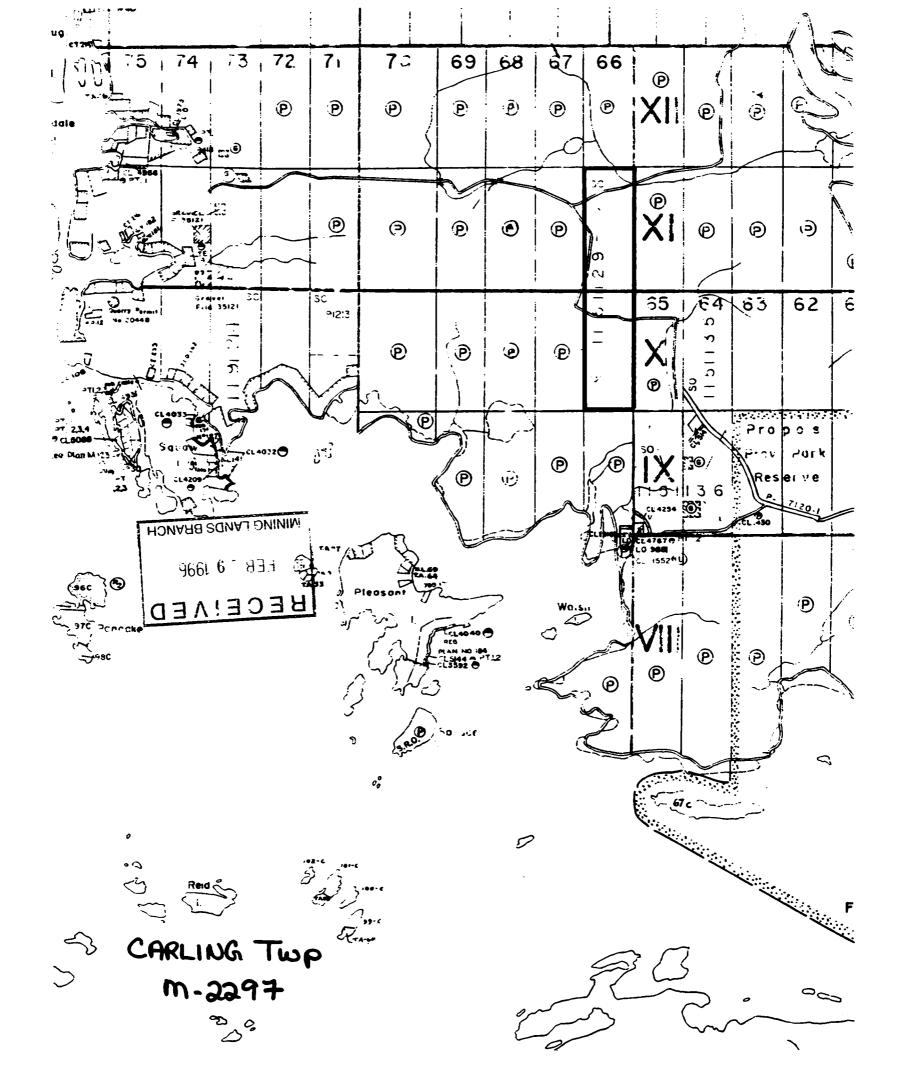
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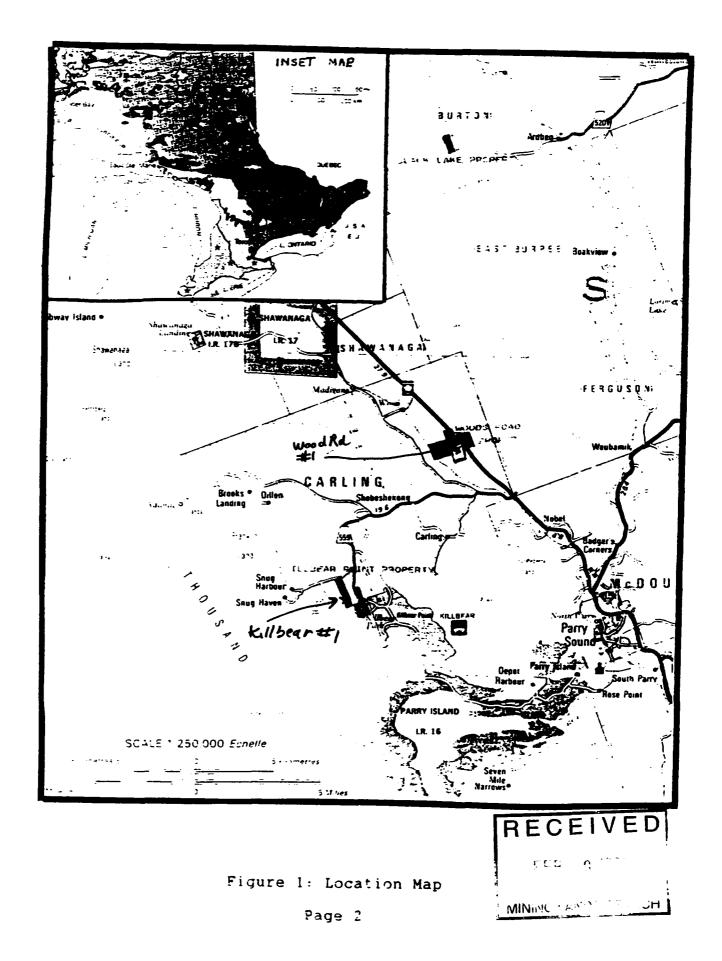
Page 3











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TEL:416 314 3789

Onterla

Ministry of Northern Development and Mines

Report of Work Conducted After Recording Claim

Mining Act

²ersonal information collected on this form is obtained under the authority of the Mining Act. This information will be used for correspondence. Questions about the collection should be directed to the Provincial Manager, Mining Laxis, Ministry of Northern Development and Mines, Fourth Flags, 18, cedar Street, Budbury, Ontario, PSE BAS, telephone (705) 870-7884. $2 \cdot 164 \cdot 26$

- Instructions: Please type or print and submit in duplicate.
 - Refer to the Mining Act and Regulations for requ Recorder.
 - A separate copy of this form must be completed
 - Technical reports and maps must accompany thi
 - A sketch, showing the claims the work is assignt

JAMES R TRUSLER	Clari No. <i>203 40 3</i>
143 TEMPERAIKE ST AURORA ONT LAGERS	Alaphana Na. 905-727-5084
SOUTHERN ONTARIO CARLING	MZZ97
Mark Prom: SEPT. 1, 1995 Tor JAN31,	1986

Work Performed (Check One Work Group Only)

_	Work Group	Туре
	Geotechnical Survey	
1	Physical Work, Including Drilling	REMOVAL OF LARGE SAMPLES AND PREPARATION FOR
	Rehabilitation	REMOVAL OF LARGE SAMPLES AND PREMARATION FOR AST M TESTS - Conducting ASTM TESTS BECEIVED
~	Other Authorized Work	
	Assays	<u>≽</u> FEB - 9 1996
	Assignment from Reserve	MINING LANDS BRANCH
	tel Assessment Worl	Claimed on the Attached Statement of Costs \$ 3,923

Note: The Minister may reject for assessment work credit all or part of the assessment work submitted if the recorded holder cannot verify expenditures claimed in the statement of costs within 30 days of a request for verification.

Persons and Burvey Company Who Performed the Work (Give Name and Address of Author of Report)

Name	Address
JAMES RTRUSLER	193 TEMPERANCE ST AURIRA ONT LABORS
SMITH MONNMENTCO LTD	349 WESTON R.D. TORONTO, ONT MON 3P7
•	3210 AMERICAN DRIVE, MISSISSAUGA, MAT. LAVID

attach a schedule if necessary)

Certification of B	eneficial Interest	* See Note No.	1 on reverse side
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I certify that at the time the work was performed, the claims covered in this work report were recorded in the current holder's name or held under a beneficial interest by the current recorded holder.	NAN 31/91	placen a hora container
Satification of Work Banad		7

Sartification of Work Report

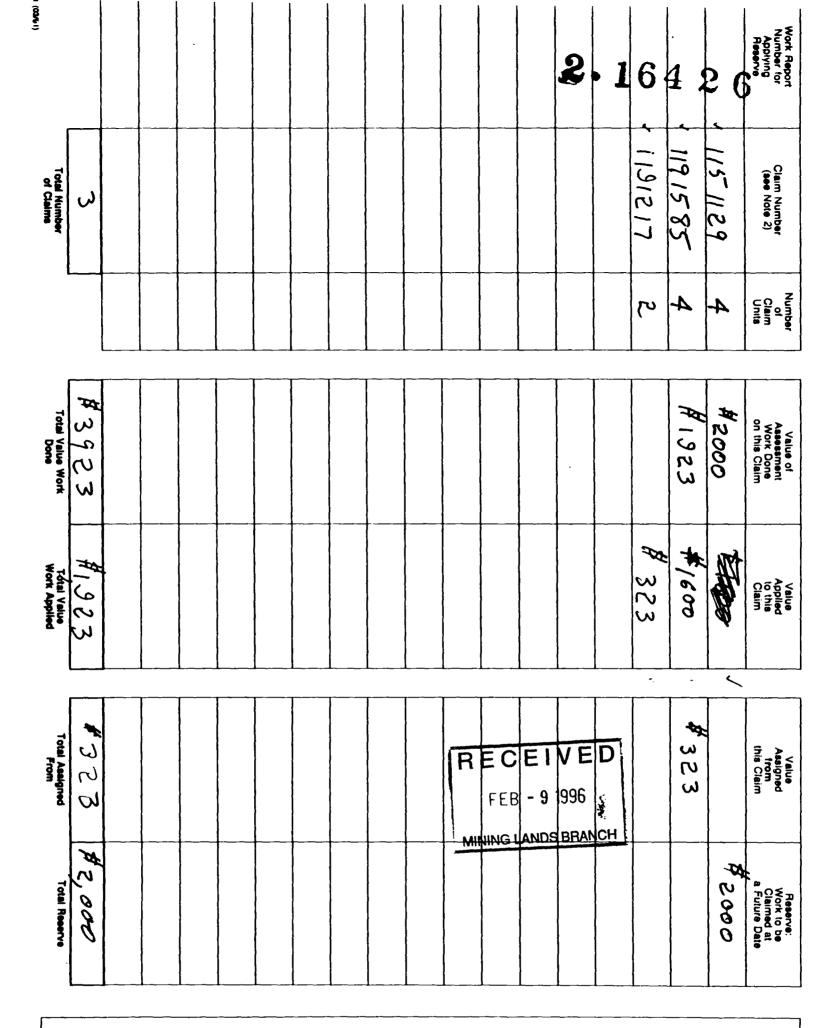
I cartily that I have a personal knowledge of the facts set forth in this Work report, having performed the work or witnessed same during and/or after its completion and annexed report is true.

JAMES R		143TEAF	FRANCE	ST MBOL	A ONT
10-000 No. 905-727-50	Care	31. 1996	Carefind By (Signature)	Trudy	
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Credits you are claiming in this report may be cut back. In order to minimize the adverse effects of such deletions, please indicate from which claims you wish to priorize the deletion of credits. Please mark (\sim) one of the following:

1. Credits are to be cut back starting with the claim listed last, working backwards.

2. Credits are to be cut back equally over all claims contained in this report of work.

3. Credits are to be cut back as priorized on the attached appendix.

In the event that you have not specified your choice of priority, option one will be implemented.

Note 1: Examples of beneficial interest are unrecorded transfers, option agreements, memorandum of agreements, etc., with respect to the mining claims.

Note 2: If work has been performed on patented or leased land, please complete the following:

I certify that the recorded holder had a beneficial interest in the patented	Signature	Date
or leased land at the time the work was performed.		

Northern Development and Mines

Ministère du Développement du Nord et des mines -----

for Assessment Credit

État des coûts aux fins du crédit d'évaluation

Mining Act/Loi sur les mines

W9690.0006

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used to maintain a record and ongoing status of the mining claim(s). Questions about this collection should be directed to the Provincial Manager, Minings Lands, Ministry of Northern Development and Mines, 4th Floor, 159 Cedar Street, Sudbury, Ontario P3E 6A5, telephone (705) 670-7264.

1. Direct Costs/Coûts directs

Туре	Description	Amount Montant	Totais Totai globai
Wages Salaires	Labour Main-d'oeuvre		
	Field Supervision Supervision sur le terrain		
Contractor's and Consultant's	Typo sa melingeration	@1275	
Fees Droits de l'entrepreneur	sawing nock	\$130	
et de l'expert- conseil	sawing nock ASTM Testing	1391	3596
Supplies Used Fournitures utilisées	Туре		
Equipment Rental	Туре		
Location de matériel			
	Total Direct Costs Total des coûts directs		3,596

Les renseignements personnels contenus dans la présente formule sont recueillis en vertu de la Loi sur les mines et serviront à tenir à jour un registre des concessions minières. Adresser toute quesiton sur la collece de ces renseignements au chef provincial des terrains miniers, ministère du Développement du Nord et des Mines, 159, rue Cedar, 4^e étage, Sudbury (Ontario) P3E 6A5, téléphone (705) 670-7264.

2. Indirect Costs/Coûts Indirects

** Note: When claiming Rehabilitation work Indirect costs are not allowable as assessment work. Pour le remboursement des travaux de réhabilitation, les coûts indirects ne sont pas admissibles en tant que travaux

d'évaluation. Totals Amount Туре Description Montant Total global Гуре Transportation Transport 299.50 249.50 Food and Lodging Nourriture et 82.44 82.49 hébergement Mobilization and Demobilization Mobilisation et démobilisation Sub Total of Indirect Costs 26,94 Total partiel des coûts indirects Amount Allowable (not greater than 20% of Direct Costs) 326.94 Montant admissible (n'excédant pas 20 % des coûts directs Valeur totale du crédit d'évaluation Total Value of Assessment Credit ۲.3 (Total of Direct and Allowable (Total des couts directe Indirect costs) et indirects admissi

Note: The recorded holder will be required to verify excenditures Le titulaire enregistré sera tenu de vérifier les dépenses demandées dans repuest to Cetticalio VIIE this statement of costs within 30 days of a D le présent état des coûts dans les 30 jours suivant une demande à cet verification is not made, the Minister may effet. Si la vérification n'est pas effectuée, le ministre peut rejeter tout all or part of the assessment work submit ou une partie des travaux d'évaluation présentés. FEB Filing Discounts Remises pour dépôt MINING LANDS BRANCH 1. Work filed within two years of completion is claimed at 100% of 1. Les travaux déposés dans les deux ans suivant leur achèvement sont

- Work filed within two years of completion is claimed at 100% of the above Total Value of Assessment Credit.
- 2. Work filed three, four or five years after completion is claimed at 50% of the above Total Value of Assessment Credit. See calculations below:

Total Value of Assessment Credit	Total Assessment Claimed
× 0.50 =	

Certification Verifying Statement of Costs

I hereby certify:

that the amounts shown are as accurate as possible and these costs were incurred while conducting assessment work on the lands shown on the accompanying Report of Work form.

Recorded Holder (Recorded Holder, Agent, Position in Company) that as I am authorized

to make this certification

remboursés à 100 % de la valeur totale susmentionnée du crédit d'évaluation.

 Les travaux déposés trois, quatre ou cinq ans après leur achèvement sont remboursés à 50 % de la valeur totale du crédit d'évaluation susmentionné. Voir les calculs ci-dessous.

Valeur totale du crédit d'évaluation Evaluation totale demandée \times 0,50 =

Attestation de l'état des coûts

J'atteste par la présente :

que les montants indiqués sont le plus exact possible et que ces dépenses ont été engagées pour effectuer les travaux d'évaluation sur les terrains indiqués dans la formule de rapport de travail ci-joint.

Et qu'à titre de je suis autorisé (trulaire enregistré, représentant, poste occupé dans la compagnie)

à faire cette attestation.

Signatu Date Jan 31, 1996 XIII . MANK

Nota : Dans cette formule, torsqu'il désigne des personnes, le masculin est utilisé au sens neutre.



Ministère du Ministry of Geoscience Assessment Office Développement du Nord Northern Development 933 Ramsey Lake Road et des Mines and Mines 6th Floor Sudbury, Ontario P3E 6B5 Telephone: (705) 670-5853 Fax: (705) 670-5863 April 24, 1996 Our File: 2.16426 Transaction **#**: W9690.00006 Mining Recorder Ministry of Northern Development & Mines MacDonald Block, Room M2-17 900 Bay Street Toronto, Ontario

Dear Mr. Denomme:

M7A 1C3

SUBJECT: APPROVAL OF ASSESSMENT WORK CREDIT ON MINING LAND, CLAIMS SO.1151129 & 1191585 IN CARLING TOWNSHIP

Assessment work credit has been approved as outlined on the Declaration of Assessment Work Form accompanying this submission. The credit has been approved under Section 18(4)(INDUS) of the Assessment Work Regulation.

THE APPROVAL DATE IS APRIL 23, 1996.

If you have any questions regarding this correspondence, please contact Lucille Jerome at (705) 670-5858.

Yours sincerely, ORIGINAL SIGNED BY:

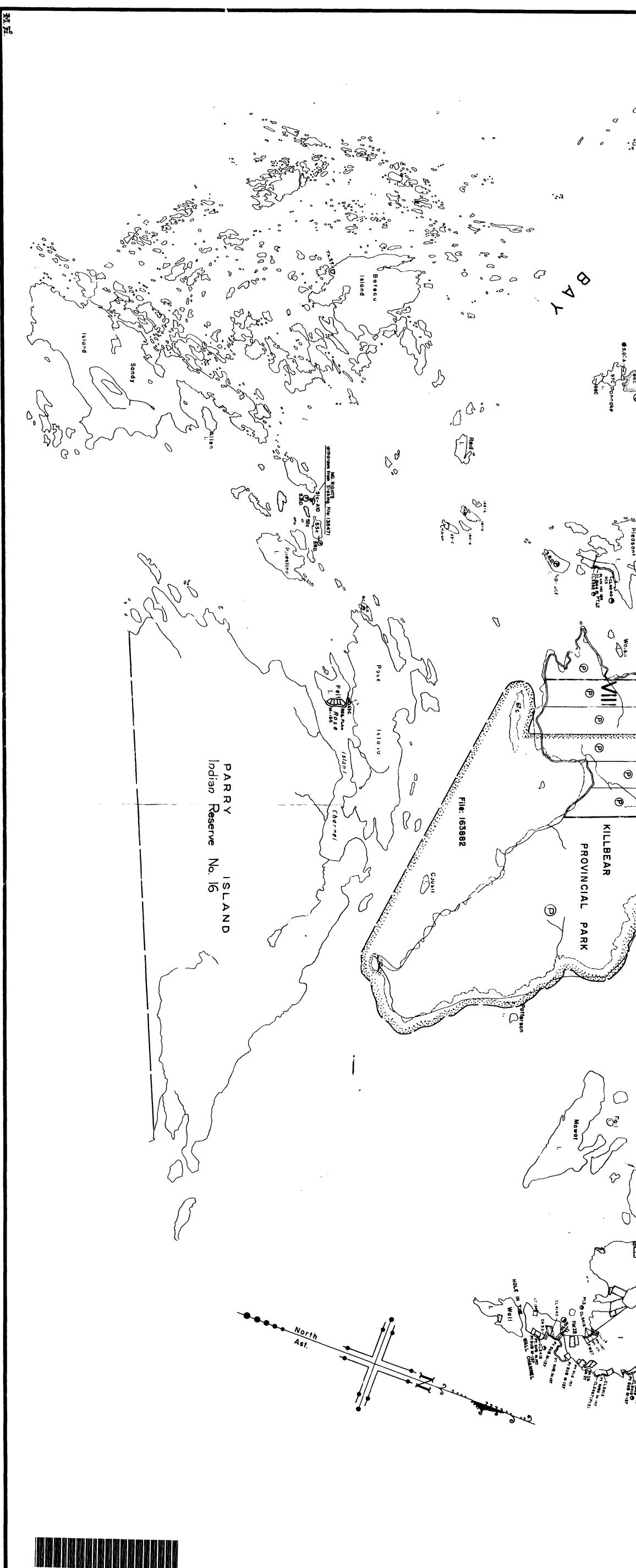
Rom Classical.

Ron C. Gashinski Senior Manager, Mining Lands Section Mines and Minerals Division

LBJ/jl Enclosure:

> cc: Resident Geologist Sudbury, Ontario

\/Assessment Files Library
Sudbury, Ontario



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