

2.15595

GEOLOGICAL OBSERVATIONS

JOHN A. GORE, OXBOW LAKE CLAIMS

South Lorrain Township, Dist. of Timiskaming, Ont.

RECEIVED

SEP 2 7 1994

MINING LANDS BRANCH

A.W. Beecham Haileybury, Ontario 7 January 1994

INTRODUCTION

This report and the accompanying map are based on one day's field work plus a brief study of published geological reports. Assessment file data were not reviewed as this had already been done by the owner. The claims are being explored for silver-cobalt and base metal deposits by John A. Gore. The writer was engaged because of his experience in exploration for VMS and cobalt-silver deposits. The area is about 3 km. southeast of the main productive part of the Silver Centre silver-cobalt camp.

About 2/3 of the day was spent in examining and mapping the main sulphide occurrence, known as Pit # 3 area in the centre of claim 1179631. In the remaining time, several pits and outcrops to the west and southwest were examined briefly.

Any conclusions reached here must be considered in light of the few observations made and the brief time spend in the study.

GENERAL GEOLOGY

In the Silver Centre area, small inliers of Archean volcanic rocks occur within the Huronian cover. Archean rocks are further obscured by the flat lying Nipissing Diabase sheet. In the area east of Oxbow Lake, there are two, small northeast trending inliers. McIlwaine has mapped the northern one as mainly mafic volcanics and the southern one as mainly felsic volcanics (although he shows both felsics and mafics in the same colour on the map.). Because of the Huronian cover and diabase sheet, the extent of the felsic volcanics is poorly known and as noted below, felsic volcanics are probably more extensive than shown by McIlwaine.

STRUCTURE AND STRATIGRAPHY

Based on McIlwaine's top determinations, the Archean rocks appear to form a west plunging syncline, with the Four Claim Lake area being just south of the fold axis, the Maiden's Bay volcanics on the north limb and the Oxbow Lake area on the south limb. In the Oxbow Lake area, the Archean strikes are generally east-northeast and the above interpretation indicates that the Oxbow Lake volcanic sequence would face northwest. i.e the sequence is mafic volcanics overlain by felsics which are in turn overlain by mafic volcanics. This places the study area within a (mainly) mafic volcanic cycle a short distance stratigraphically above a felsic cycle.

MISCELLANEOUS OBSERVATIONS

A number of pits were examined in the area west of Pit #3. The approximate locations of these pits are shown as 'C', 'D', 'E' and 'F' on the location map in Fig. 1. A felsic tuff was seen at location 'C'. Banded felsic volcanics cut by a flat lamprophyre dyke and in near vertical contact with Huronian conglomerate were seen at 'D'. At 'E', a rhyolite-like rock was observed in contact

with mafic flow breccia. At pit #1, location F', a mudseam was seen cutting a banded felsic rock, which is probably a lapilli tuff.

In the area east of Oxbow Lake, at about point 'G', a massive, fine grained, red, felsic rock was observed near the contact with underlying medium to fine grained Nipissing diabase. Although it is uncertain what this felsic rock is, it is though to be either a felsic volcanic or a sub volcanic intrusive.

The above observations indicate that felsic volcanics are more extensive than shown on McIlwaine's map. It appears that felsics are interbedded with mafic volcanic well to the northwest of the felsic band mapped by McIlwaine and shown on the location map in Fig. 1. The mafic rocks mapped in #3 pit area seem to be part of interlayered mafic-felsic sequence. This is a more favourable setting for massive sulphides than the thick sequence of mafics indicated by McIlwaine.

PIT #3 AREA

Geology

The detailed geology of the area around pit #3 is shown in Fig.1. At the time of mapping, Oct. 19, 1993, the area had been recently stripped with a bulldozer and the old pit cleaned out. Although the stripped area had been cleaned up by hand, it had not been washed and parts of the outcrop were obscured by a thin layer of mud. Some details of the geology may therefore have been missed and it is likely that the sulphide distribution shown in Fig.1 is not very accurate.

The north part of the stripped area is mafic volcanics varying from massive flows in the north to flow breccia, (probably pillow breccia) toward the middle. Some of the breccia material has a well developed schistosity.

The contact between the Archean volcanics to the north and the Coleman Member, Gowganda Formation to the south is a small east-west fault. The fault is marked by steep, strong shearing along the south wall of the pit. To the east it appears to die out. Coleman conglomerate extends 1 to 1.5m below surface on the south wall of the pit, indicating a little down throw on the south side of the fault.

Sulphide Occurrences

There are occurrences of pyrite as disseminations, interstitial filling in the volcanic breccia and small veinlets. Concentrations of this patchy pyrite mineralization are mostly in the 1 to 5% range. In a few places the concentrations reach 10 to 15%. The better concentrations seen were in volcanics, but up to 2 % disseminated pyrite was noted in Coleman greywacke. One lenticular veinlet with abundant chalcopyrite occurs along the north wall of the pit. A chip sample of the best part of this veinlet assayed 2.54 % Cu/ 0.3m. There is negligible Pb, Zn, Au and the Ag content is 19 ppm which is typical for the Cu concentrations. This style of fracture controlled sulphide mineralization is commonly associated with massive sulphide bodies in typical VMS systems.

Alteration

Although neither the Archean nor Huronian rocks are spotted, there is some, diffuse chlorite alteration of the volcanics. As well, weak silicification occurs in the volcanic breecia.

Whole Rock Geochemistry

One chip sample was taken across an area of mineralized and altered mafic volcanics east of the #3 pit. The analyses are appended. Although there are no analyses of local unaltered rocks with which to compare the results, some general observations can be made. The CaO content is strongly depleted. This is typical of chlorite spotted mafic volcanics close to cobalt-silver veins in the Cobalt camp. Thomson (1961, pg. 84) gives an example from the 404 Claim east of the town of Cobalt. As well, the writer has noted CaO depletion in chlorite spotted rocks in other parts of the Cobalt camp. Besides the CaO depletion, the SiO₂ and Al₂O₃ contents appear to be somewhat elevated. This is possibly just a reflection of removal of other constituents. There is no apparent depletion of Na₂O as is common in typical VMS settings.

CONCLUSIONS AND RECOMMENDATIONS

The copper showing in pit #3 is associated with chlorite and silica alteration and a significant concentration of pyrite. This is clearly anomalous mineralization and alteration. In addition, although the actual mineralization is in mafic volcanics, it occurs within an inter layered mafic-felsic sequence in contrast to the purely mafic volcanic sequences at Silver Centre and Cobalt. These features are consistent with productive VMS settings.

In contrast to the above features, the whole rock geochemistry, is-typical of Cobalt type base metal-Co-Ag systems. To date these Cobalt type systems have produced only low grade, generally sub-economic base metal deposits.

In spite of some uncertainty of the geological model, the amount of mineralization and the generally attractive setting suggests that exploration for VMS deposits should continue. However, the sulphides and base metals occurrences may also be indicative of cobalt-silver veins. Because of this and because of the proximity to Silver Centre camp, exploration for Co-Ag veins is also warranted.

In the next stages of base metal exploration, mapping of the claim group at a scale of about 1:5000 is recommended in order to provide an overall geological picture and place mineral occurrences in their geological setting. Even though coverage by both by INPUT and VLF airborne EM surveys have produced negative results, massive sulphide orebodies often produce only very short strike length conductors that are easily missed in airborne surveys. Ground EM is therefore recommended. The type of mineralization seen at Pit #3 could probably be mapped by Induced Polarization and there is a good chance that other areas of similar mineralization could be found. However, as the principal target is massive sulphides, (an EM detectable target), the less expensive ground EM should be done before considering I.P.

Conventional prospecting and trenching for cobalt-silver veins might be complemented by soil geochemistry and I.P. surveys. In the Cobalt camp, the main Kerr Lake-Crown Reserve

veins are indicated by a large till streak that is easily detected by soil geochemistry. Although not so well documented in the Silver Centre area as at Cobalt, it is likely that cobalt-silver veins are associated with Archean and Huronian sulphide concentrations which can be mapped by I.P. surveys.

A.W. Beecham

7 January 1994

REFERENCES

McIlwaine W.H.

Geology of South Lorrain Township, Geol. Rep. 83, ODM.

(1970)

Thomson R.

Prel. Rep. on Part of Coleman Township, Con. V, Lot 1-6, Dist of

(1961) Temiskaming

ODM Prel. Rep. 1961-4 (page 83)

APPENDIX ANALYSES SHEETS

- (A) WHOLE ROCK
- (B) SULPHIDE ZONES



Geochemical Lab Report

Inchcape Testing Services

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Geochemical Lab Report

Inchcape Testing Services

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Established 1928

Swastika Laboratories

A Division of TSL / ASSAYERS INC.

Assaying - Consulting - Representation

Geochemical Analysis Certificate

3W-2734-RG1

Company:

JOHN A GORE

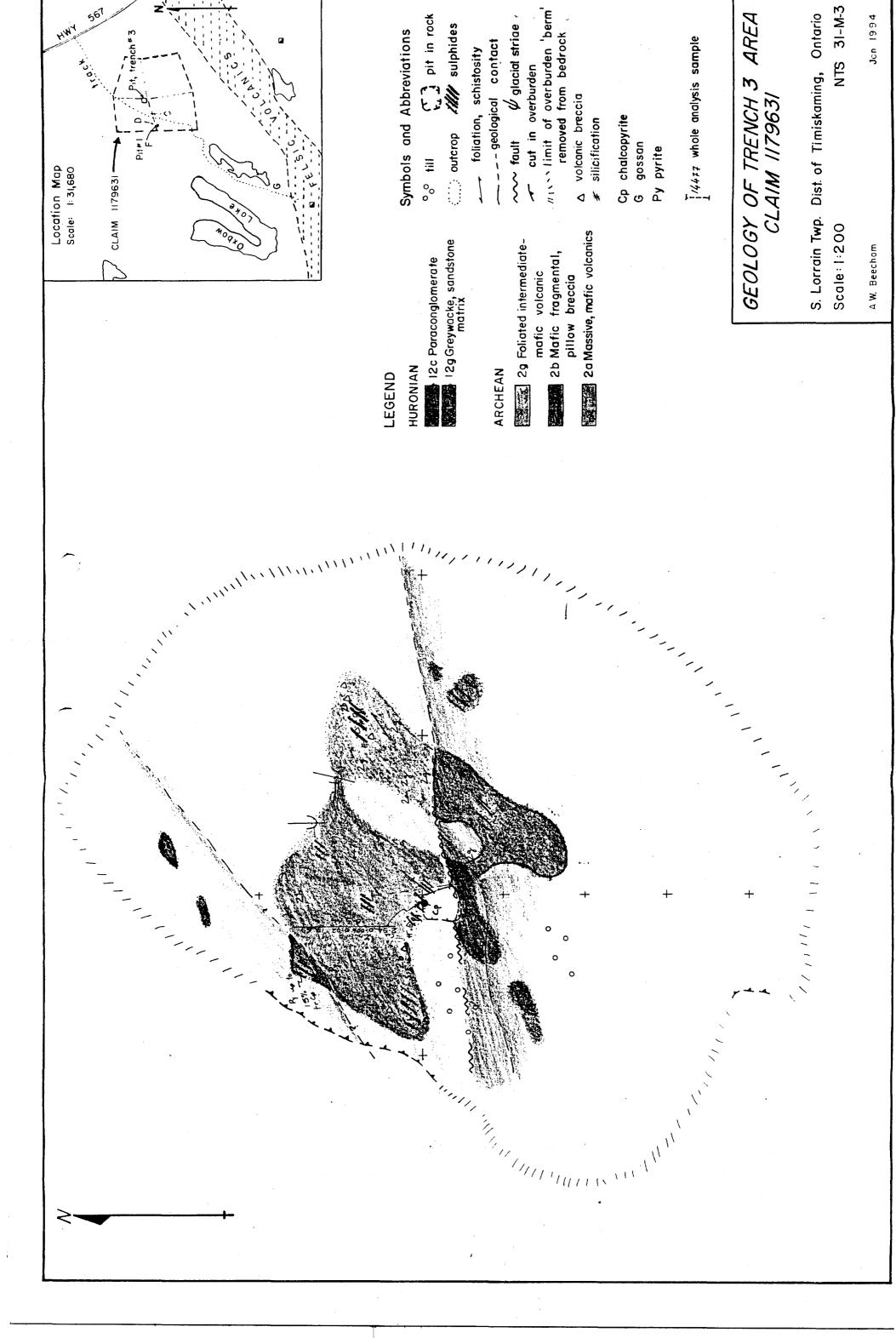
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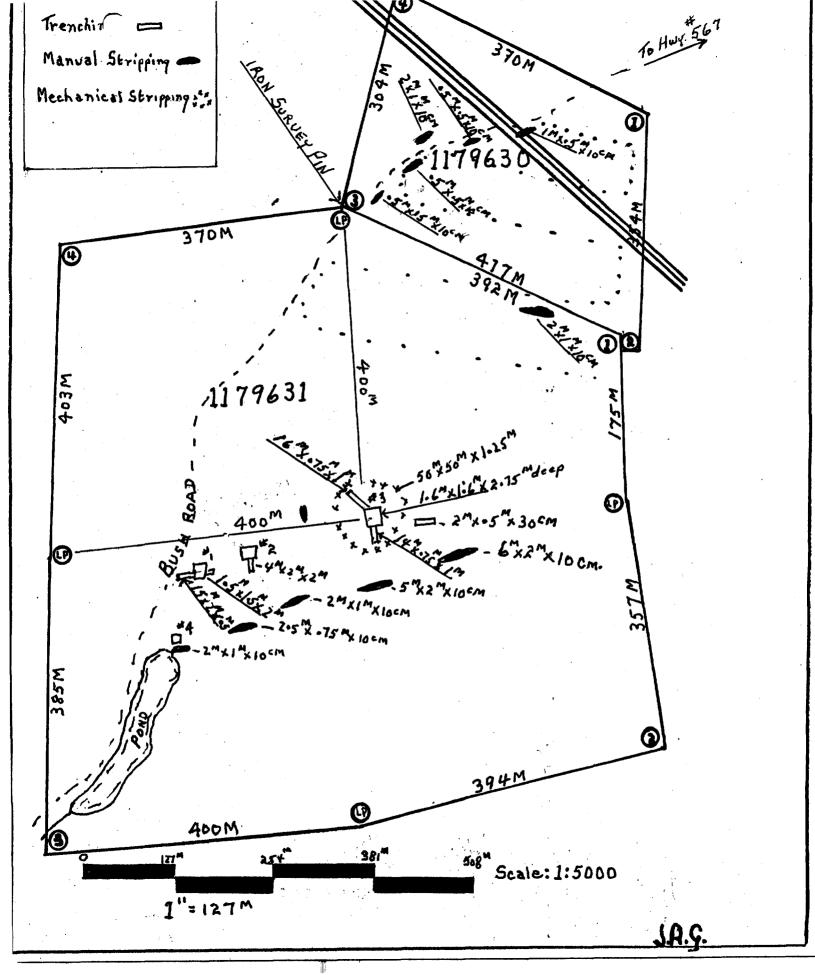
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We hereby certify the following Geochemical Analysis of 1 ROCK samples submitted OCT-28-93 by .

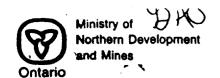
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Report of Work Conducted After Recording Claim

Mining Act

	DOCUMENT No.	
C	9480 00463 PAP 0043-0	19

900

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used for correspondence. Questions about this collection should be directed to the Provincial Manager, Mining Lands, Minis Sudbury, Ontario, P3E 6A5, telephone (705) 670-7264.

0241 (03/91)

- 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 for each Work Group.
- Technical reports and mane must accompany this form in distillance.

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Minist: 4u Dévek, Jment du Nord et des mines

Statement of Costs for Assessment Credit

État des coûts aux fins du crédit d'évaluation

Mining Act/Loi sur les mines

	Transaction No./Nº de transaction
	DOCUMENT No. 463
W	89.A.P. # 0 P93-019

2.15595

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.

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, 4º étage, Sudbury (Ontario) P3E 6A5, téléphone (705) 670-7264.

1. Di	rect (Cost	s/Co(ìts d	irects
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Туре	Description	Amount Montant	Totals Total global
Wages Salaires	Labour Main-d'oeuvre		
	Field Supervision Supervision sur le terrain		
Contractor's and Consultant's	Geological		
Droits de l'entrepreneur	Geological Observation	488.00	
et de l'expert- conseil			488.∞
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Equipment Rental	Туре		
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	Total Die	rect Costs	488.00

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.

Туре	Descrip	tion	Amount Montant	Totals Total global
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Note: The recorded holder will be required to verify expenditures claimed in this statement of costs within 30 days of a request for verification. If verification is not made, the Minister may reject for assessment work all or part of the assessment work submitted.

Note: Le titulaire enregistré sera timo de vérifier les dépenses demandées dans le présent état des coûts dans les le présent état des coûts dans les le la light de la cet effet. Si la vérification n'est pas effectuée, le ministre peut rejeter tout ou une partie des travaux d'évaluation présentés.

Filing Discounts

- Work filed within two years of completion is claimed at 100% of the above Total Value of Assessment Credit.
- 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 =	

Remises pour dépôt

MINING LANDS BRANCH

2 7 1994

et indirects admissibles

- Les travaux déposés dans les deux ans suivant leur achévement sont 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
× 0,50	0 =

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.

that as				
	er, Agent, Position in Company)	_ I am authorized		
	•			
to make this certification	on			

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 c	u'à titre de			je suis autorisé
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à faire cette attestation.

Signature	Date	
John Ce. C	Sept.	6/94
Nota : Dans cette formule, lorsqu'il désigne d	des personnes, le masculin est utilisé a	u sens neutre

0212 (04/91)



Ministry of

Northern Development and Mines

Ministère du

Développement du Nord

et des Mines

Geoscience Approvals Office

933 Ramsey Lake Road

6th Floor

Sudbury, Ontario

P3E 6B5

Telephone: (705) 670-5853

(705) 670-5863

Our File: 2.15595

Transaction #: W9480.00463

November 8, 1994

Mining Recorder Ministry of Northern Development and Mines 4 Government Road East Kirkland Lake, Ontario P2N 1A2

Dear Mr. Spooner:

RE: APPROVAL OF ASSESSMENT WORK ON MINING CLAIMS 1179631 ET. AL. IN SOUTH LORRAIN TOWNSHIP.

The assessment credits for Geology, section 12 of the Mining Act Regulations, as listed on the original Report of Work, have been approved as of November 8, 1994.

Please indicate this approval on the claim record sheets.

If you have any questions concerning this submission please contact Bruce Gates at (705) 670-5856.

ORIGINAL SIGNED BY:

Ron C. Gashinski

Senior Manager, Mining Lands Section

Mining and Land Management Branch

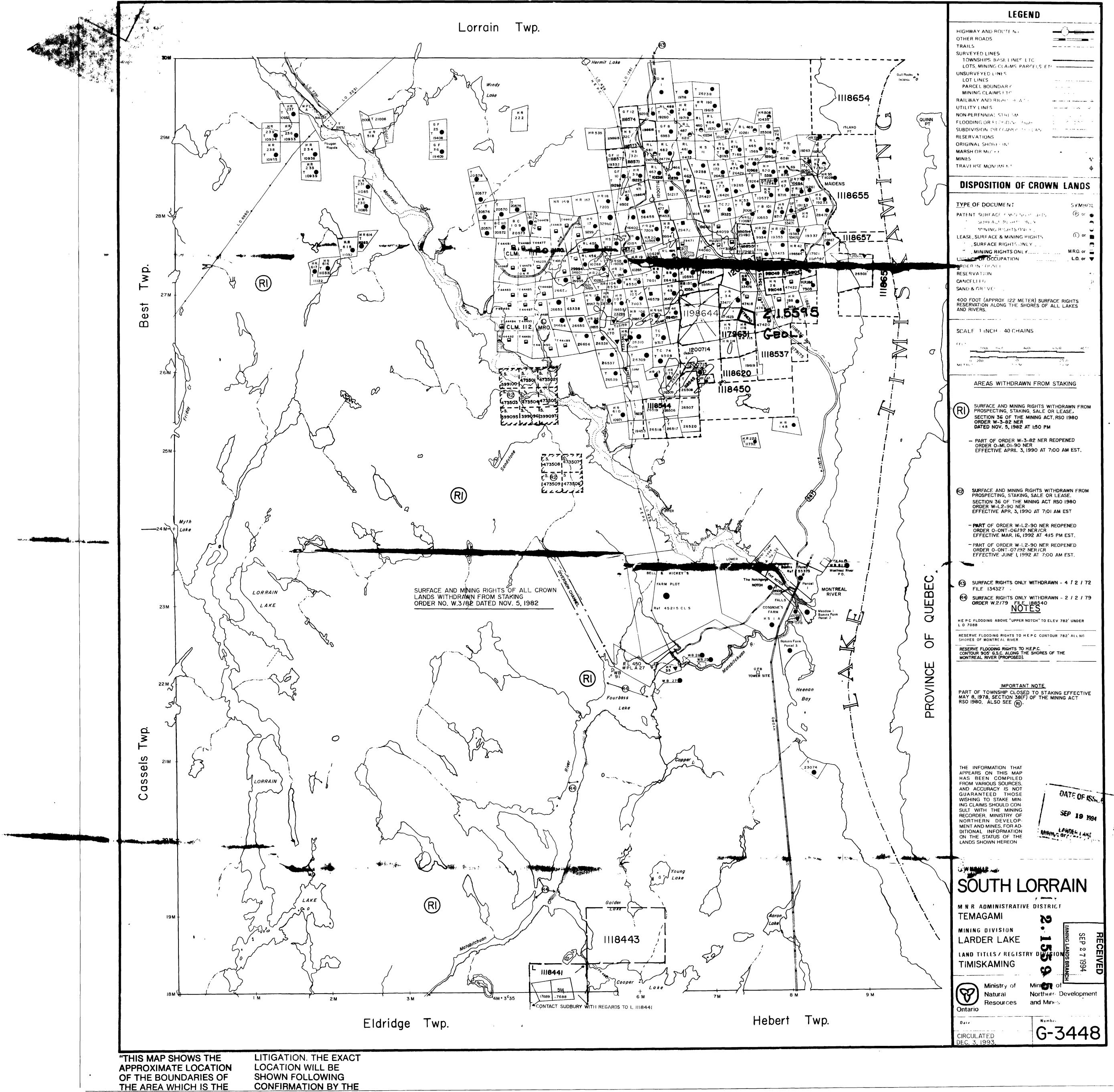
Mines and Minerals Division

BIG/jl

Enclosures:

Assessment Files Office **\$udbury**, Ontario

Resident Geologist Cobalt, Ontario





CONFIRMATION BY THE PARTIES TO THE ACTION."

SUBJECT OF CURRENT