



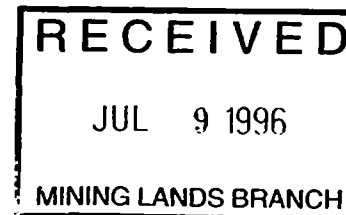
42D15SW0004 2 16658 TUURI

010

REPORT
of the
RECONNAISSANCE GEOLOGICAL
PROGRAM
on the
STEEL RIVER PROPERTY
for
Brain Fowler and Mike Shuman

NTS
42 D 15/SW

'2. 16 65 8



JAN. 1996

Qual # 2.11019
J.G. Clark
CLARK GEOLOGICAL SERVICES



42D15SW0004 2 16658 TUURI

010C

TABLE OF CONTENTS

| | |
|---------------------------------------|----|
| Introduction..... | 1 |
| Location and Access..... | 2 |
| Claims..... | 4 |
| Regional Geology..... | 5 |
| Generalized Property Geology..... | 7 |
| Target Model..... | 8 |
| Previous Work..... | 9 |
| 1995 Prospecting Program..... | 12 |
| Discussion of Results of Program..... | 13 |
| Conclusions and Recommendations..... | 14 |
| References..... | 15 |
| Statement of Qualifications..... | 17 |

LIST OF FIGURES

| | |
|-----------------------------|---|
| Figure 1: Location Map..... | 3 |
|-----------------------------|---|

LIST OF TABLES

| | |
|---|---|
| Table 1: The Probable Sequence of Deposition and Intrusion for the Major Units (Walker 1967)..... | 6 |
|---|---|

LIST OF APPENDICES

| |
|--|
| Appendix I: Sample Numbers, Descriptions and Assay Results |
| Appendix II: Assay Certificate |

LIST OF MAPS (in pocket)

| |
|--------------------------------|
| Map 1: Regional Geology Map |
| Map 2: Map of Previous Work |
| Map 4: Northeast Sheet Geology |
| Map 5: Southwest Sheet Geology |

INTRODUCTION

B. Fowler and M. Shuman contracted Clark-Eveleigh Consulting to complete a geological follow-up prospecting on work completed by Echo Bay Mines Ltd. on the Steel River Property. The property consists of 25 claims (280 units) located within Tuuri Township of the Thunder Bay Mining Division of Northwestern Ontario.

LOCATION AND ACCESS

The Steel River Property is located within Tuuri Township (G-635) approximately 225 kilometres via TransCanada Highway 17 northeast of Thunder Bay, Ontario (Figure 1). The TransCanada Highway crosses the southern quadrant of the property and provides excellent access to the south half of the property. Access to the north of the property is restricted to trails along the hydro lines and helicopter. The property is centred on Latitude 45 46'00" and Longitude 86 46'00" within NTS 42 D 15/SW.

Electrical power lines and the Canadian Pacific Railway cross the property. The property is located between the towns of Terrace Bay and Marathon which can provide all supplies and manpower needed for exploration and development. Marathon is situated on a deep water port on Lake Superior.

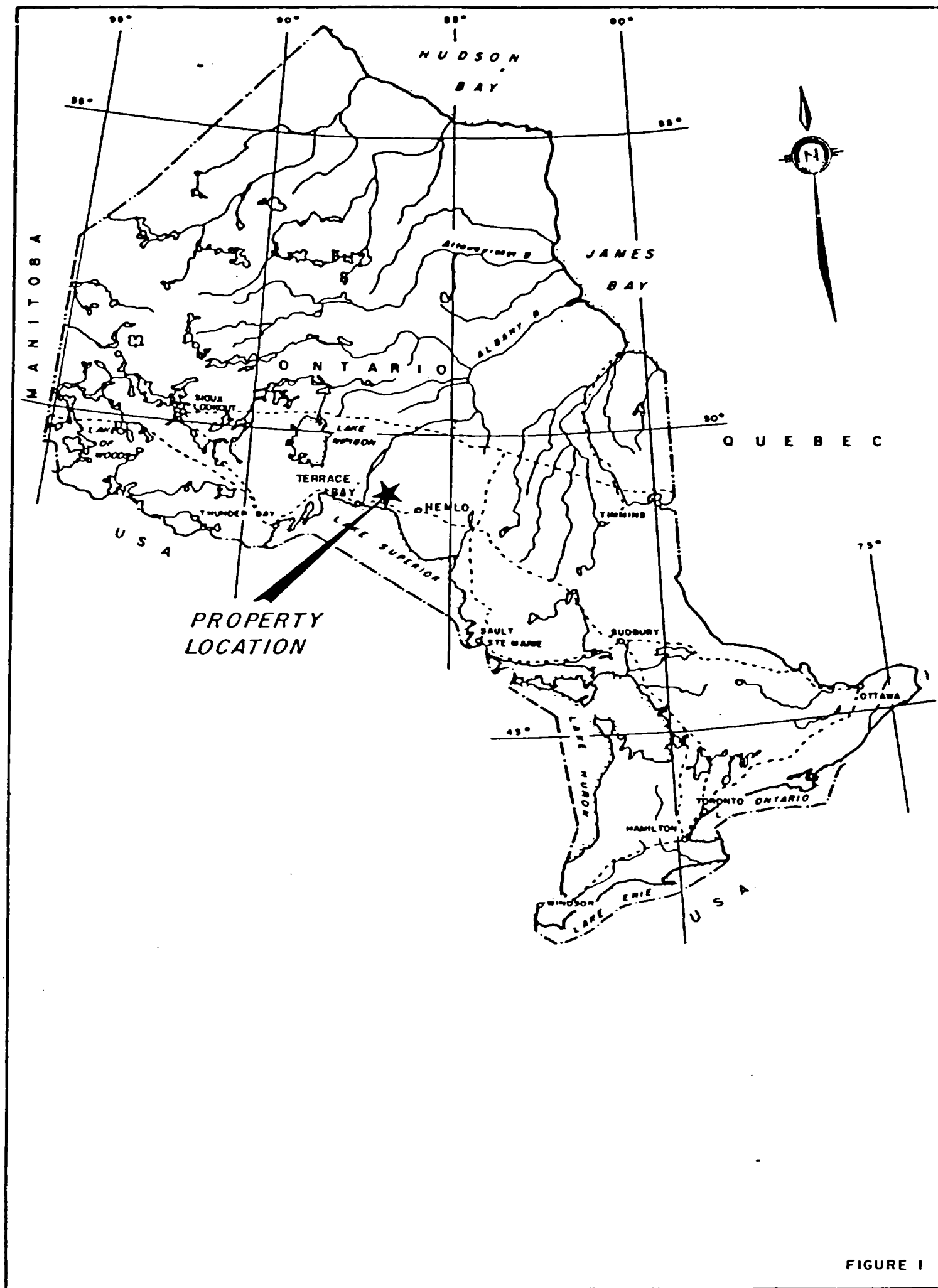


FIGURE I

CLAIMS

The Steel River Property consists of 25 unpatented contiguous mining claims (280 units, 4480 hectare) recorded in good standing in the Thunder Bay Mining Division within Tuuri Township (G-635)(Map 1). The claims and required assessment work are:

| <u>CLAIMS/UNITS</u> | <u>ASSESSMENT WORK DUE DATE</u> |
|---------------------|-------------------------------------|
| TB 1195277 (4) | April 27, 1997 |
| TB 1195278 (4) | " |
| TB 1196623 (3) | Dec. 29, 1996 |
| TB 1202266 (15) | Dec. 5, 1996 |
| TB 1202267 (16) | " |
| TB 1202279 (16) | Dec. 29, 1996 |
| TB 1204871 (16) | Sept. 22, 1996 |
| TB 1204872 (16) | " |
| TB 1204873 (16) | " |
| TB 1204874 (16) | " |
| TB 1204875 (16) | " |
| TB 1204892 (16) | " |
| TB 1204893 (16) | " |
| TB 1208592 (16) | Dec. 5, 1996 |
| TB 1208593 (1) | Dec. 29, 1996 |
| TB 1208967 (12) | Oct. 20, 1996 |
| TB 1208968 (6) | " |
| TB 1208969 (16) | " |
| TB 1208970 (9) | Sept. 20, 1996 |
| TB 1209502 (16) | Sept. 22, 1996 |
| TB 1224847 (15) | Dec. 5, 1996 |
| TB 1224848 (4) | " |
| TB 1207929 (16) | Feb. 27, 1997 |
| TB 1207905 (1) | |
| TB 1207908 (2) | |

REGIONAL GEOLOGY

The project area lies within the Schreiber-Hemlo greenstone belt and represents a portion of the Abitibi-Wawa Subprovince of the Superior Province. The Abitibi-Wawa Subprovince is a supracrustal east-west trending metavolcanic-metasedimentary sequence which has been intruded by granite-syenitic plutons and metagabbroic dikes and sills.

The Schreiber portion of the belt is approximately 70 kilometres long and 25 kilometres wide (Map 2). The western portion of the belt is composed of two limbs, separated by the Crossman Lake Batholith, which form an east-west trending anticline. The northern limb, the Big Duck Lake volcanic belt is approximately 35 kilometres long and 10 kilometres wide, while the southern limb (Jackfish-Middleton Area Map 2) is approximately 50 kilometres long and 10 kilometres wide. The project area is situated in the southern limb of the belt.

The metavolcanic rocks within the Schreiber-Hemlo belt vary from calc-alkalic pyroclastics, breccias, tuffs, flows, porphyritic flows, schists and gneisses to mafic, iron-rich tholeiites which include pillowed and massive flows, tuffs, schists and gneisses. The metasedimentary rocks consist of graded turbidites, wackes, mudstones, schists, paragneisses, minor conglomerates and iron formation. Sulphide-facies iron formation and ferruginous cherts form good marker horizons and predominate in the Schreiber-Terrace Bay area. Numerous felsic batholiths, plutons, stocks and porphyry dikes, including the Terrace Bay Batholith intrude the supracrustal rocks. The supracrustal rocks have been metamorphosed under low-grade (greenschist facies) conditions in the Schreiber-Jackfish area, under medium-grade (amphibolite facies) in the Fishnet Lake area and medium to high grade (upper amphibolite) facies in the extreme northern part of the project area.

The supracrustal rocks have undergone up to 4 periods of deformation, with evidence of multiple or complex folding events. Large-scale faulting is easily recognized from airphotos.

Proterozoic (Keweenawan) rocks are represented by diabase dikes and sills, and intrusive rocks such as alkalic and carbonatite complexes as the Coldwell and Killala alkalic complexes and the Prairie Lake carbonatite, as well as mafic to felsic dikes (Table 1).

Table 1

THE PROBABLE SEQUENCE OF DEPOSITION AND INTRUSION FOR THE
MAJOR UNITS (Walker, 1967).

PRECAMBRIAN

Late Precambrian

Keweenawan(?):

Diabase and lamprophyre dikes.

Syenite complex:

Trachyte, nepheline syenite, red hornblende-
biotite syenite, quartz-bearing syenite, augite
syenite, gabbro

INTRUSIVE CONTACT - THERMAL METAMORPHISM

Animikie(?):

Conglomerate, quartzite

UNCONFORMITY

EARLY PRECAMBRIAN

Granitic Rocks:

Aplite, pegmatite, granite to quartz diorite,
syenite, granite gneiss, hybrid rocks.

INTRUSIVE CONTACT - REGIONAL METAMORPHISM
FOLDING

Older Basic Intrusive Rocks:

Gabbro-diorite, hornblendite and derived
amphibolite; granophyre.

INTRUSIVE CONTACT

Sedimentary Rocks:

Greywacke, slate, derived phyllite, schist and
gneiss.

Quartz-feldspar-biotite schist and gneiss,
migmatite.

Iron formation types: pyritic chert, sugar quartz,
and siliceous, graphitic schist.

Acidic Volcanic Rocks:

Porphyry, agglomerate and tuff, derived phyllite,
schist and gneiss.

Basic to Intermediate Volcanic Rocks:

Pillow lava and tuff; derived phyllite, schist and
amphibolite.

Mafic pyroxene-bearing gneiss and schist.

GENERALIZED PROPERTY GEOLOGY

The Steel River Property is underlain by two distinct environments of the Schreiber-Hemlo Greenstone Belt (Map 1). The southern half of the property covers the northeast trending sequence of greywacke sediments, gabbro-diorite intrusives (ultramafic flows?), pillowed mafic volcanics and narrow felsic flows and tuffs. The northern half of the property covers the thick east-west trending mafic pillowed flows and tuffs to felsic pyroclastics, tuffs and flows. The two sequences of the property are on either side of a synclinal axis.

The northeast trending sequences in the southern half of the property are structurally complex due to the northeast trending faults (Williams 1989). Regional mapping has identified extensive carbonate alteration within the gabbro-diorite, mafic volcanic and sediment contacts along the fault structures. Alteration zones of 100's of metres are present at the contact of pillowed volcanics and graphitic pyrite bearing argillites (Schnieders 1987). Intense carbonate-silica alteration associated with green muscovite and quartz veinlets has been identified in two locations approximately 2 kilometres apart (Bernie Schnieders Pers. Comm.). Pillowed flows indicate a northwest facing direction. The metamorphic grade of the south half of the property increases northward. Walker (1967) identified the biotite and garnet isograds crossing the property in a northeast trend.

The east-west trending sequences in the north half of the property consists of the south limb of an anticlinal sequence with the pillowed mafic volcanics to the south of the intermediate to felsic units. West of the property felsic intrusive dikes/sills are subcordant to stratigraphy. Sodium depletion anomalies associated to alteration have been noted within the intermediate-felsic volcanics. A large potassium radiometric anomaly has been identified in the north portion of the property. A potassium alteration ground source has not been located to date. Feldspar porphyritic intrusives have been noted within the area of the anomaly (B. Schnieders Pers. Comm.). The pillowed flows indicate a south facing direction. The metamorphic grade of the north half of the property increases northward. Walker (1967) identified the amphibolite isograd to be east-west parallel to the north boundary of the property.

EXPLORATION TARGET MODELS

The Steel River Property has had sporadic exploration for gold mineralization since the 1890's. The exploration work has concentrated on quartz vein and graphitic pyrite bearing argillite sequences. Recent geological mapping and structural studies by Bernie Schnieders (Pers. Comm.) and Howard Williams (1989) have interpreted a geological environment with similarities to Hemlo Gold Mines Inc.'s Lightning Zone in Holloway Township, Northeastern Ontario.

The northeast trending geological sequences in the southern part of the property include ultramafic units in contact with mafic volcanics and sediments. Howard Williams (1989) has interpreted the numerous northeast trending faults to be part of a belt scale deformation zone potentially similar to the Destor-Porcupine Fault (Schnieders Pers. Comm.). The complexity of the geological environment includes distinct re-folded folds with intense green muscovite carbonate alteration zones (Schnieders 1987).

Review of available data indicates the systematic exploration for a Lightning Zone type gold deposit model has not been completed on the Steel River Property. The exploration project will concentrate on evaluating the contact zones of the ultramafic, mafic volcanic and sediments for pyrite and sericite enrichment similar to the Lightning Zone. The proposed exploration program will be a comprehensive field program commencing with a geological and prospecting reconnaissance program. The geology and prospecting program will identify areas of detailed exploration including trenching, geophysics and diamond drilling.

A regional airborne radiometric survey completed by the Geological Survey of Canada has been completed on the Schrieber-Hemlo area. The survey identifies Potassium Anomalies potentially associated to mineralization similar to the Hemlo deposits. The northern area of Steel River Property adjacent Spider Lake hosts an airborne Potassium anomaly that has not been explained.

PREVIOUS WORK

The exploration records for the property contained within the Resident Geologist Assessment Files housed in Thunder Bay indicate that exploration has been sporadically completed since 1896. Gold exploration in the area dates back to the late 1900's when the Empress Mine (Syine Township) and Fire Mountain (Tuuri Township) were located. Base metal exploration has dominated the area. The exploration of the area has been driven by discovery of mineralization in the area. The exploration concentration has peaked with the discovery of Geco (Cu,Zn) middle 1950's, Winston Lake (Zn,Cu) early 1980's and Hemlo (Au) early 1980's. Areas of previous work on the property are illustrated on Map 2.

The previous exploration work completed on the Steel River Property includes:

- 1896: W. H. Arnold (Map 2 #60) acquired a claim at the east end of the present claim block. The property was known as Fire Mountain. A discovery of a sulfide zone with gold values of up to 4 ounces gold per ton was trenced and an adit was completed. The exact location was lost until 1991.
- 1951: Work was completed on sulfide graphite horizons within mafic and felsic volcanics. The work included geological mapping, stripping, trenching and diamond drilling. The showings discovered are known as the Kingdom and Simard-Swetz Occurrences (Map 2 #34). Recent sampling by the Resident Geologist has returned values of up to 0.10 and 0.06 ounces gold per ton respectively. The area of work was in the southwest corner of the present claim block.
- 1955: Gordon Goodwin (Map 2 #10) completed a geological sampling and mapping program on a claim block on the east end of the present claim block. The results of the assays were disappointing and the claims were allowed to lapse.
- 1955: Noranda Mines Ltd. (Map 2 #26) completed a ground electromagnetic survey on a claim block covering Spider Lake at the north boundary of the present claims. No follow-up work was reported.
- 1963: Roman Corp. (Map 2 #27) completed a ground horizontal loop electromagnetic survey on a claim block covering Spider Lake at the north boundary of the present claim block. The survey failed to locate significant anomalies.

- 1964: Consolidated Mining and Smelting (Map 2 #2) completed a diamond drill program on a small block of claims on the east end of the present claim block. The diamond drill logs are filed for assessment work without assays.
- 1977: Hudson Bay Oil and Gas (Map 2 #15) completed a diamond drill program on a small claim block north of Steel Lake in the south of the present claim block. Only one hole was reported for assessment work. No significant assays are reported in the drill log.
- 1983: Del Norte Chrome Corp. (Map 2 #29) completed a ground magnetic and electromagnetic (Vlf-EM) survey on a claim block covering the in the southeast corner of the present claim block. Several electromagnetic anomalies corresponding to magnetic highs and lows were outlined. Recommendations of for further work were made but no additional data was filed for assessment.
- 1983: Teck Explorations (Map 2 #37) completed a 5 hole diamond drill program on a claim block at the northeast corner of the present claim block. No assays were included with the logs. The logs report sulfide contents of up to 10% over 1 metre.
- 1983: Marathon Minerals Inc. (Map 2 #22) completed a ground magnetic and electromagnetic (Vlf-EM) survey over the east claim of the present claim block. The work was hampered by powerlines but further exploration was recommended.
- 1983-84: Cumberland Resources (Map 2 #5) completed an extensive exploration program on a large claim block over the southeast of the present claim block. The work included airborne magnetic and electromagnetic surveys, mapping, lithogeochemistry and diamond drilling (8 holes, 1598 feet). The project concentrated on base metals. The results included 0.015 ounces per ton gold, 0.02 ounces per ton silver and 0.06% zinc over 12.4 feet.
- 1983-84: Silver Sceptre Mines (Map 2 #19+43) completed a comprehensive gold exploration program over a claim block covering the south of the present claim block. The work included ground magnetic and electromagnetic (Vlf-EM) surveys followed by diamond drilling. The diamond drilling totalled 4041 feet and the best results were 0.01 ounces gold per ton over 2.5 feet.

1983-87: Kingdom Resources Ltd. (Map 2 #54+18) completed a comprehensive gold exploration program over a claim block at the extreme south of the present property. The work included airborne and ground magnetic and electromagnetic surveys (Vlf-EM), soil geochemistry, geological mapping and 4 diamond drill holes. The surface sampling returned assays up to 0.08 ounces gold per ton and 0.61 ounces silver per ton. The diamond drill holes targeted anomalous gold trends associated to graphitic, pyrite bearing argillites. The drill holes intersected graphitic, pyritic argillites and assayed:

| <u>DRILL HOLE</u> | <u>Ounces Gold per Ton/ Metres</u> |
|-----------------------|---|
| DDH-01 | 0.027/ 3.0 0.036/ 3.0 (consecutive) |
| DDH-03 | 0.025/ 3.0 |
| DDH-04 | 0.025/ 3.0 |

1988: Noranda Exploration Company Ltd. (Map 2 #57) completed a mapping and lithochemistry program over a claim block, south of Spider Lake, in the north of the present claim block. The survey outlined a sodium depletion zone but follow-up work is not reported.

1991: George Daniels (Map 2 #60) completed a prospecting, mapping and sampling program assisted by Ontario Prospectors Assistance Program. The work covered was completed in an area in the east boundary of the present claim block. The work located the Fire Mountain adit and trenches. The prospecting of the area located various new occurrences that assayed up to 0.02 ounces gold per ton.

1994: Echo Bay Mines Ltd. completed a geological recon program on the property. A total of 477 samples were taken and analyzed for gold. The work was completed on traverses accessed by helicopter or roads.

1995 PROSPECTING PROGRAM

The 1995 prospecting consisted of four days of prospecting within the area of the Steel River Property. Dave MacLean and Mike Grieve completed the program to follow-up the interesting assays and mineralized environments located by the Echo Bay work. Since the completion of the Echo Bay work 2 additional claims were acquired near the Prairie River occurrence and this area was covered by the present program.

A total of 7 samples were taken and assayed by Accurassay Labs. of Thunder Bay. All seven were assayed for gold and 5 for copper, lead, zinc and silver (Appendix I+II).

The results of the exploration program are presented on two 1:10000 scale maps (Map 4+5).

DISCUSSION OF RESULTS OF PROGRAM

The program concentrated on four principal areas of potential economic gold mineralization. The area along the powerline, the creek south of the powerline and Steel Mountain were all indicated as potential gold mineralization environments during the exploration program completed by Echo Bay. The area around the Prairie West occurrence had been acquired after the Echo Bay Program.

The traverse along the powerline pursued the sulfide mineralization with carbonate, silica alteration in mafic volcanics and cherty horizons (Map 4). Four samples were taken for assay from sheared silica altered mafic volcanics with 5-20% disseminated to banded pyrite (Appendix I+II). The results of the samples failed to return significant gold values.

The traverse up to Steel Mountain was completed to evaluate the green mica sericite schist located during the Echo Bay program. The present program included hand stripping on strike to the known outcrops (Map 5). Two samples were taken for analyses (Appendix I+II). The samples failed to return significant gold values.

A traverse was completed south of the powerline along a creek to evaluate the strongly altered mafic volcanics, quartz diorite and ultramafics (Map 4). One sample was taken of grey white quartz vein. the vein contained 109 ppb gold per ton (Appendix I+II).

A traverse along the claim lines of the new claims acquired near the Prairie West Showing. The traverse failed to locate any significant mineralization or potential extension of the Prairie West Occurrence.

CONCLUSIONS AND RECOMMENDATIONS

The exploration project completed on the Steel River Property followed- up the work completed by Echo Bay Mines Ltd.. The program concentrated on four specific areas. The exploration consisted of traverses and sampling in areas of potential gold mineralization. The best assay was returned from a narrow quartz vein (109 ppb gold).

The property covers favourable geology for the deposition for gold. The alteration, structure and rock types of a classic gold hosting environment are all present. Further prospecting should be completed along alteration and structural trends.

The base metal potential of the Steel Mountain and Spider Lake area was not evaluated by this program. The presence of felsic pyroclastic units and sulfides (pyrite and trace galena and sphalerite) in the Steel Mountain should be followed up. The Spider Lake area has not been examined thoroughly by one company in the past and is located in an area of known base metal mineralization.

REFERENCES

- Assessment files, Schreiber-Hemlo Resident Geologist's District, Thunder Bay Mining Division, Thunder Bay, Ontario
- Clark, J.G.
1995: Compilation and Recommendations Report on the Steel River Property for Echo bay Mines Ltd. (internal report by Clark-Eveleigh Consulting)
- Graham, D.F. and Ford, K.L.
1991: The Intergration of Airborne Radar and Geophysical Data for Reconnaissance Geological Mapping in the Marathon-Schrieber Area, Northwestern Ontario; in Proceeding, 14th Canadian Symposium on Remote Sensing
- Schnieders, B.R. and Smyk, M.C.
1988: Schreiber-Hemlo Resident Geologist's District; in Report of Activities, Resident Geologists, Ontario Geological Survey, Miscellaneous Paper 142, p.133-155.
- Schnieders, B.R. and Smyk, M.C.
1989: Schreiber-Hemlo Resident Geologist's District; in Report of Activities, Resident Geologists, Ontario Geological Survey, Miscellaneous Paper 147, p.139-159.
- Schnieders, B.R. and Smyk, M.C.
1990: Schreiber-Hemlo Resident Geologist's District; in Report of Activities, Resident Geologists, Ontario Geological Survey, Miscellaneous Paper 152, p.141-169.
- Schnieders, B.R. and Smyk, M.C.
1991: Schreiber-Hemlo Resident Geologist's District; in Report of Activities, Resident Geologists, Ontario Geological Survey, Miscellaneous Paper 158, p.121-163.
- Schnieders, B.R. and Smyk, M.C.
1992: Schreiber-Hemlo Resident Geologist's District; in Report of Activities, Resident Geologists, Ontario Geological Survey, Miscellaneous Paper 161, p.121-165.
- Schnieders, B.R. and Smyk, M.C.
1993: Schreiber-Hemlo Resident Geologist's District; in Report of Activities, Resident Geologists, Ontario Geological Survey, Miscellaneous Paper 162, p.131-135.
- Schnieders, B.R.
1987: Geology of Sulfide-Facies Iron-Formation and Associated rocks in the lower Steel River-Little Steel Lake Area, Terrace Bay, Ontario: Unpublished M.Sc. Thesis, Lakehead University, Ontario.

Walker, J.W.R.

1967: Geology of the Jackfish-Middleton Area, District of Thunder Bay, Geological Report 50, Maps 2107,2112; Scale 1 in.= 1 mile.

Williams, H.R.

1989: Geological studies in the Wabigoon, Quetico and Abitibi-Wawa Subprovinces, Superior Province of Ontario, with Emphasis on the Structural Development of the Beardmore-Geraldton Belt; Ontario Geological Survey, Open File Report 5724, 189p.

Statement of Qualifications

I, J. Garry Clark do hereby certify:

- I am a resident of Thunder Bay, Ontario, Canada with address
120 Robinson Drive, P7A 6G5
- I have been engaged in base and precious metal exploration
as a geologist since 1983
- I am a graduate of Lakehead University, Thunder Bay, Ontario
(H.B.Sc., Geology, 1983)
- I have not received, directly or indirectly, or expect to
receive any interest in the company and its properties

Signature:  _____

Name: J. Garry Clark _____

Date: Jan 96 _____

APPENDIX I
Sample Numbers, Descriptions and Assay Results

APPENDIX II
Assay Certificate

 **ACCURASSAY LABORATORIES**
A DIVISION OF ASSAY LABORATORY SERVICES INC.

1070 LITHIUM DRIVE, UNIT 2
THUNDER BAY, ONTARIO P7B 6G3
PHONE (807) 623-6448
FAX (807) 623-6820
Page 1


CLARK-EVELEIGH CONSULTING
1000 ALLOY DRIVE
THUNDER BAY, ONTARIO
P7B 6A5

October 10, 1995

Job #9541533

Ref: Fowler OPAP

| Accurassay | Sample # | Customer | Gold ppb | Gold Oz/t |
|------------|----------|----------|-------------|--------------|
| | 1 | 182149 | <5 | <0.001 |
| | 2 | 182150 | 8 | <0.001 |
| | 3 | 182201 | 12 | <0.001 |
| | 4 | 182202 | <5 | <0.001 |
| | 5 | 182203 | 6 | <0.001 |
| | 6 | 182204 | <5 | <0.001 |
| | 7 | 182205 | 44 | 0.001 |
| | 8 Check | 182205 | 109 | 0.003 |

Certified By: 

Report name: Claim Abstract
Username: LANDRY_P
Date and Time: 1996-JUN-27 12:23
Selection Criteria: Claim Number - 1204892 To :1204892

Work Perf

JUNE 1/95 - AUG. 1/95

1207908

RECORDED
AUG. 10/95 X

REC. HOLDER
DUNCAN MICHAHO

1204892

SEPT. 22/94

BRIAN FOWLER

1204875

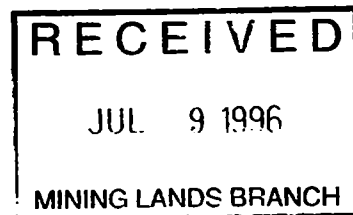
SEPT. 22/94

BRIAN FOWLER

1207910

AUG. 10/95 X

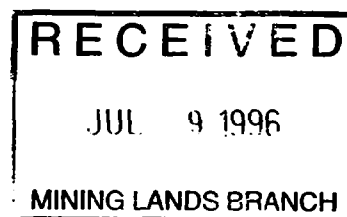
DUNCAN MICHAHO



2.16658

Report name: Claim Abstract
Username: LANDRY_P
Date and Time: 1996-JUN-27 12:23
Selection Criteria: Claim Number - 1207908 To :1207908

2. 1. 6. 5. 8



Report name: Claim Abstract

Username: LANDRY_P

Date and Time: 1996-JUN-27 12:24

Selection Criteria: Claim Number - 1204875 To :1204875



Report of Work Conducted After Recording Claim

Mining Act

Transaction Number

119640-227

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, Ministry of Northern Development and Mines, Fourth Floor, 159 Cedar Street, Sudbury, Ontario, P3E 6A5, telephone (705) 870-7264.

2.16658

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



42D155W0004 2 16658 TUUR1

900

Recorded Holder(s) Duncan Michano / BRIAN FOWLER (133247) Client No. 170165 Address 35 Pic River Rd. Heron Bay 21 RADISSON CR. Box 963, MATHURON, ONT. L7R 2E0 Telephone No. 705-229-2881 Mining Division Thunder Bay DOT 120 Township/Area Tuuri Twp. M or G Plan No. G-635 Dates Work Performed From: June 1/95 Sept. 1 To: Aug 1/95 Nov. 1/95

Work Performed (Check One Work Group Only)

Table with columns Work Group and Type. Includes checkboxes for Geotechnical Survey, Physical Work, Rehabilitation, Other Authorized Work, Assays, and Assignment from Reserve. Type is Geological Survey. Includes a RECEIVED stamp dated JUL 9 1996 from MINING LANDS BRANCH.

Total Assessment Work Claimed on the Attached Statement of Costs \$ 4601

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

Table with columns Name and Address. Entry: Clark-Evelyn Consulting, 1000 Alroy Drive, Thunder Bay, Ont. P9B 6A5

(attach a schedule if necessary)

Certification of Beneficial Interest * See Note No. 1 on reverse side

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. Date: Apr 16/95 Recorded Holder or Agent (Signature): [Signature]

Certification of Work Report

I certify 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. Name and Address of Person Certifying: BRIAN FOWLER, 21 Radisson Cr., Mathuron, Ont. P05 2E0 Telephone No. 807-229-1474 Date: Mar 4/96 Certified By (Signature): [Signature]

For Office Use Only

Table for office use with columns: Total Value Cr. Recorded (\$4601), Date Recorded, Mining Recorder (Signature), Deemed Approval Date (July 16, 1996), Date Approved (APR 16 1996), Date Notice for Amendments Sent, Received Stamp (THUNDER BAY MINING DIVISION RECEIVED APR 16 1996)



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 question sur la collecte 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.

1. Direct Costs/Coûts directs

| Type | Description | Amount Montant | Totals Total global |
|--|--|----------------|---------------------|
| Wages Salaires | Labour Main-d'oeuvre | 1960 | |
| | Field Supervision Supervision sur le terrain | 500 | 2360 |
| Contractor's and Consultant's Fees Droits de l'entrepreneur et de l'expert-conseil | Type Clark-Corleigh Report | 924.00 | |
| | Assay (Haurasson) | 210.00 | 1134.- |
| Supplies Used Fournitures utilisées | Type | | |
| | | | |
| | | | |
| Equipment Rental Location de matériel | Type | 435.- | |
| | | | 435.- |
| Total Direct Costs Total des coûts directs | | | 3929 |

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.

| Type | Description | Amount Montant | Totals Total global |
|--|-------------|----------------|---------------------|
| Transportation Transport | Type | | |
| | Recon. | 304 | 304 |
| Food and Lodging Nourriture et hébergement | | | |
| | | 368 | 368 |
| Mobilization and Demobilization Mobilisation et démobilité | | | |
| | | | |
| Sub Total of Indirect Costs Total partiel des coûts indirects | | | 672 |
| Amount Allowable (not greater than 20% of Direct Costs) Montant admissible (n'excédant pas 20 % des coûts directs) | | | 672 |
| Total Value of Assessment Credit (Total of Direct and Allowable indirect costs) Valeur totale du crédit d'évaluation (Total des coûts directs et indirects admissibles) | | | 4601 |

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 tenu de vérifier les dépenses demandées dans le présent état des coûts dans les 30 jours suivant une demande à cet effet. Si la vérification n'est pas effectuée, le ministre peut rejeter tout ou une partie des travaux d'évaluation présentés.

Filing Discounts

1. 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 |
| | x 0.50 = |

Remises pour dépôt

1. Les travaux déposés dans les deux ans suivant leur achèvement sont remboursés à 100 % de la valeur totale susmentionnée du crédit d'évaluation.
2. 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 |
| | x 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.

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

to make this certification

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 (titulaire enregistré, représentant, poste occupé dans la compagnie)

à faire cette attestation.

Signature: [Signature] Date: Mar 14/96

Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

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

Telephone: (705) 670-5853
Fax: (705) 670-5863

July 11, 1996

Our File: 2.16658
Transaction #: W9640.00227

Mining Recorder
Ministry of Northern Development & Mines
435 James Street South, Suite B003
Thunder Bay, Ontario
P7E 6S7

Dear Mr. Weirmeir:

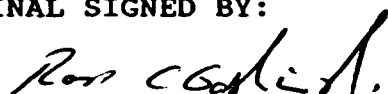
**SUBJECT: APPROVAL OF ASSESSMENT WORK CREDIT ON MINING LAND,
CLAIMS 1207908 ET AL IN TUURI TOWNSHIP**

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 12, Geology, of the Assessment Work Regulation.

The approval date is July 11, 1996.

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

Yours sincerely,
ORIGINAL SIGNED BY:



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

LBJ/cc

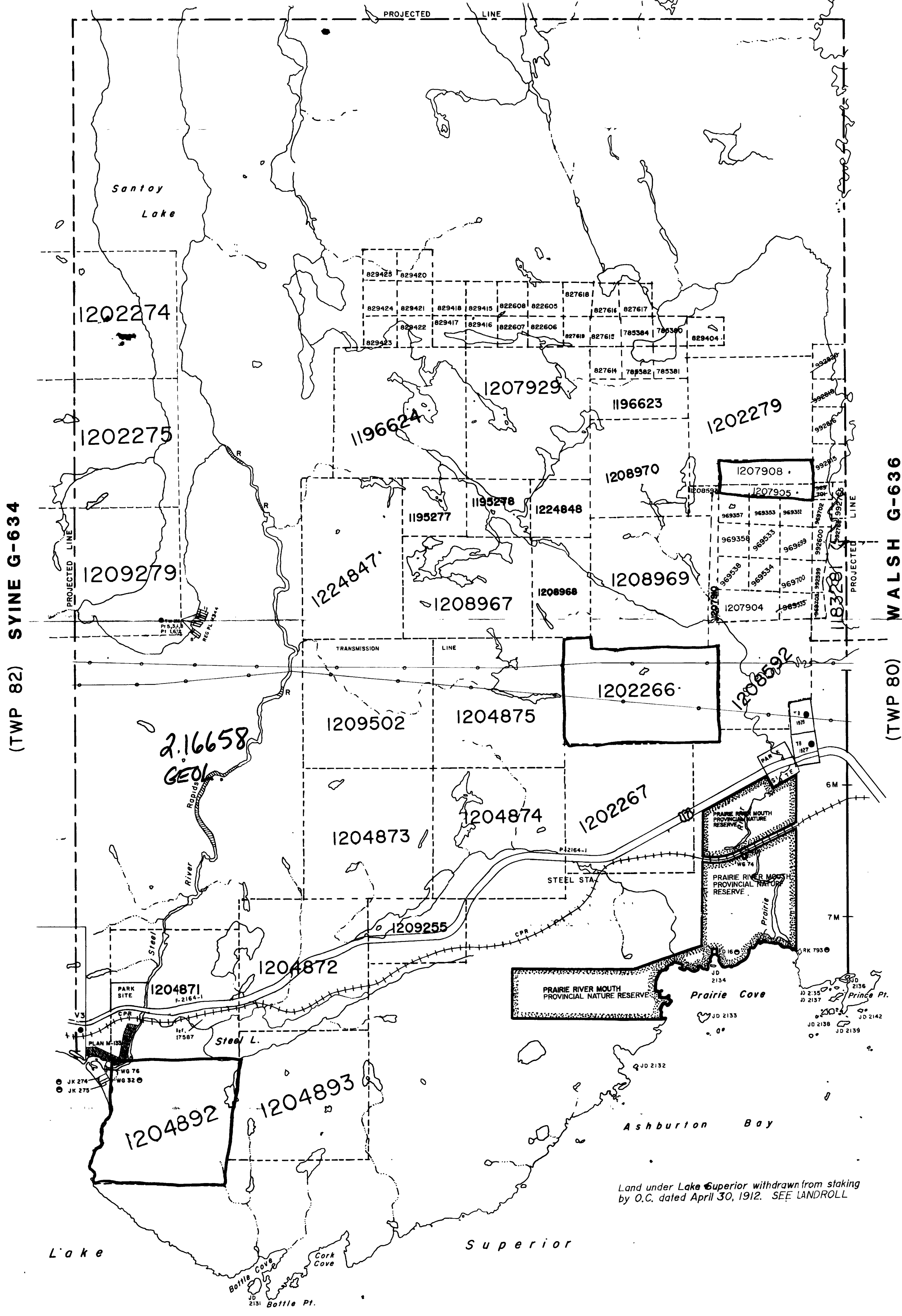
cc: Resident Geologist
Thunder Bay, Ontario

✓ Assessment Files Library
Sudbury, Ontario

RECEIVED
JUL 9 1996
MINING LANDS BRANCH

2,16658

SANTOY LAKE G-612



REFERENCES

AREAS WITHDRAWN FROM DISPOSITION

M.R.O. - MINING RIGHTS ONLY
S.R.O. - SURFACE RIGHTS ONLY
M+S. - MINING AND SURFACE RIGHTS

| Description | Order No. | Date | Disposition | File |
|-------------|-----------|------|-------------|------|
|-------------|-----------|------|-------------|------|

NOTICE:
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 thereon.

LEGEND

| | |
|---------------------------|---|
| MINING RIGHTS ONLY | ○ |
| SURFACE RIGHTS ONLY | ○ |
| MINING AND SURFACE RIGHTS | ○ |
| PROVINCIAL NATURE RESERVE | ■ |
| TRANSMISSION LINE | — |
| RAILWAY | — |
| ROAD | — |
| WATER | — |
| BOUNDARY | — |
| SETBACK | — |
| STAKE | ○ |
| MINING CLAIM | ○ |
| THUNDER BAY | ○ |

DISPOSITION OF CROWN LANDS

| TYPE OF DOCUMENT | SYMBOL |
|--|--------|
| PATENT SURFACE RIGHTS | ○ |
| SURFACE RIGHTS | ○ |
| MINING RIGHTS | ○ |
| LEASE SURFACE & MINING RIGHTS | ○ |
| SURFACE RIGHTS | ○ |
| MINING RIGHTS | ○ |
| LICENSE OF OCCUPATION | ○ |
| ORDER IN COUNCIL | ○ |
| RESERVATION | ○ |
| CANCELLED | ○ |
| SAND & GRAVEL | ○ |
| LAND USE PERMITS FOR COMMERCIAL TOURISM, OUTPOST CAMPS | ○ |
| NOTE: MINING RIGHTS NOT VESTED IN CROWN LANDS ACT R | ○ |

SCALE 1 INCH = 100 METERS

TOWNSHIP
TUURI
M.N.R. ADMINISTRATIVE DISTRICT
TERRACE BAY
MINING DIVISION
THUNDER BAY
LAND TITLES / REGISTRY DIVISION
THUNDER BAY

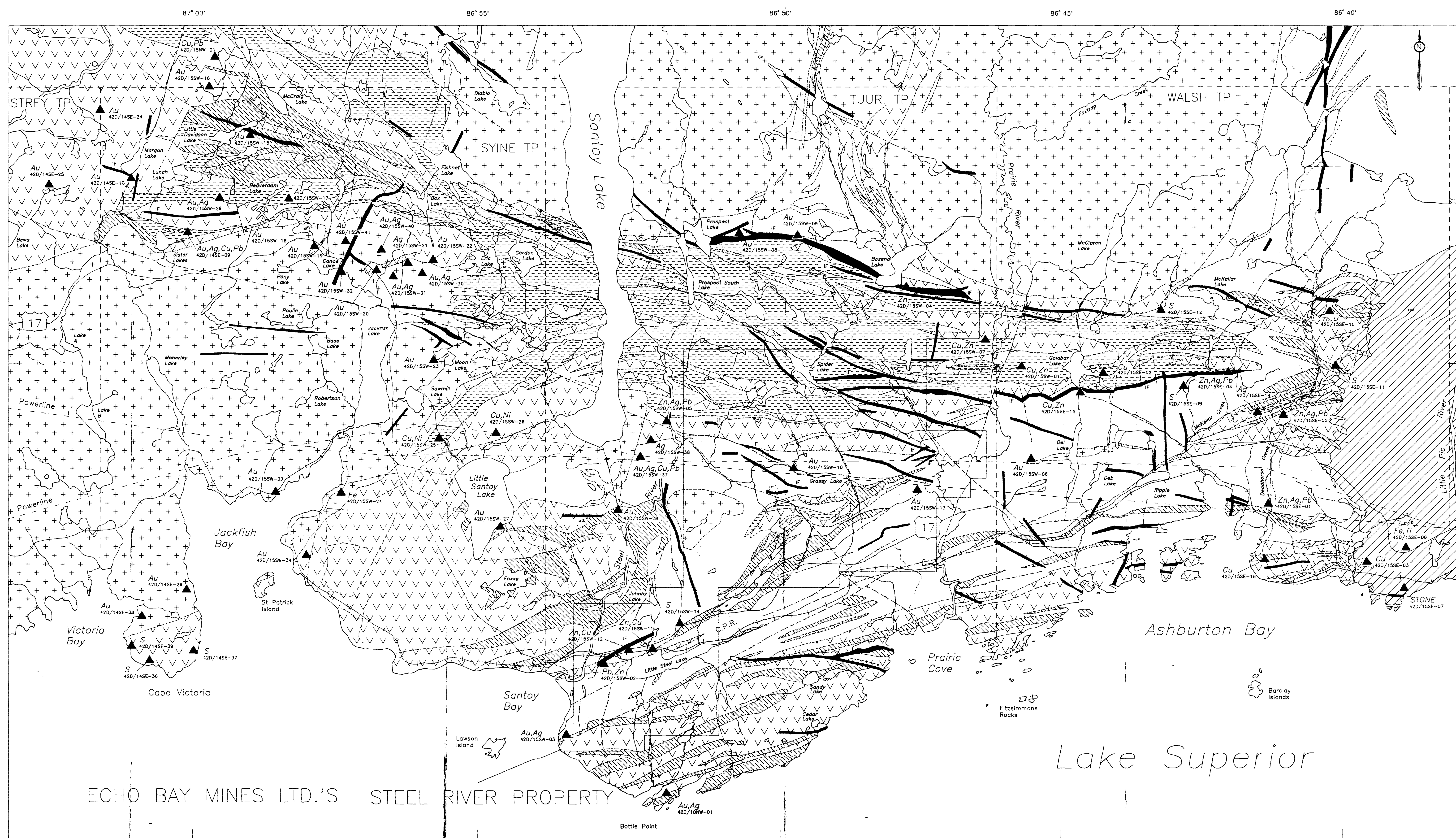
Ministry of Natural Resources
Ontario
Land Management Branch

Date **MARCH 1982** Number
In Service JAN. 13/95.L.A. 8 MW **G-635**

Land under Lake Superior withdrawn from staking by O.C. dated April 30, 1912. SEE LANDROLL



MINERAL OCCURRENCES, PROSPECTS AND MINES IN THE SCHREIBER-HEMLO RESIDENT GEOLOGIST'S DISTRICT



- PROTEROZOIC**
- Diabase
 - Alkalic Intrusive Rocks (primarily syenitic)
- ARCHEAN**
- Felsic Intrusive Rocks
 - Granitic Gneiss
 - Mafic Intrusive Rocks
 - Metasedimentary Rocks (IF: Iron Formation)
 - Felsic to Intermediate Metavolcanic Rocks
 - Mafic to Intermediate Metavolcanic Rocks
- SYMBOLS**
- Geological Contact (defined and assumed)
 - Faults (defined and assumed)
 - Roads
 - Railway Line
 - Powerline
 - Township Boundary
 - Mineral Occurrences
- Ag - Silver
 Au - Gold
 Cu - Copper
 Lu - Lopper
 Fe - Iron
 Mn - Manganese
 Ni - Nickel
 Pb - Lead
- S - Sulphides (pyrite, pyrrhotite)
 STONE - Building/Dimension Stone
- Producing Mines
 Past Producing Mines
 420/165W-18 - Empress (Au)

RECEIVED
 JUL 9 1996
 MINING LANDS BRANCH

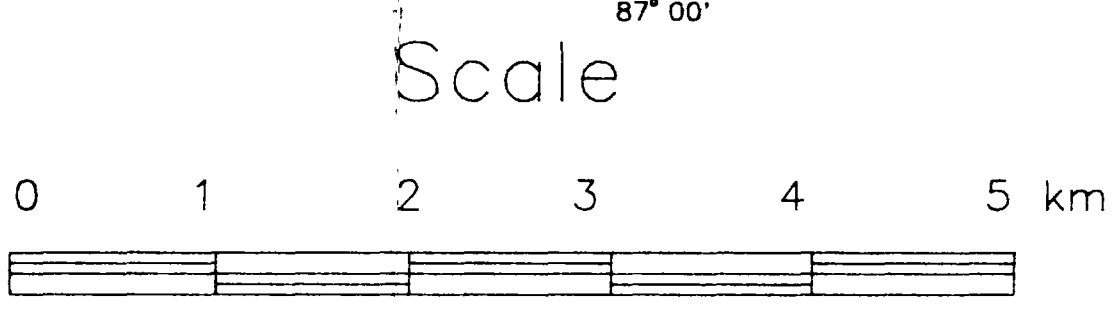
2.16658

Map 1

ECHO BAY MINES LTD.'S STEEL RIVER PROPERTY

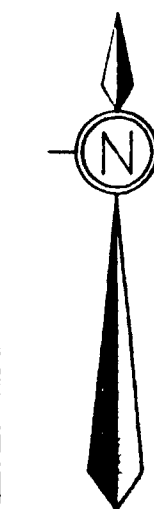
Jackfish-Middleton Area THUNDER BAY MINING DIVISION

Geological compilation and digital cartography by D.B. McKay
 Geology compiled and simplified from Ontario Geological Survey maps 2107, 2112 and 2191.
 Mineral occurrence location data obtained from several sources including Ontario Geological Survey maps 2107, 2112 and 2191,
 the mineral deposit files of the Schreiber-Hemlo District Resident Geologist, the assessment files for the Schreiber-
 Hemlo District, and the Ontario Geological Survey Mineral Deposit Inventory (MDI) database.
 Every possible effort has been made to ensure the accuracy of the information presented on this map; however, the Ontario
 Ministry of Northern Development and Mines does not assume liability. Users should verify critical information.

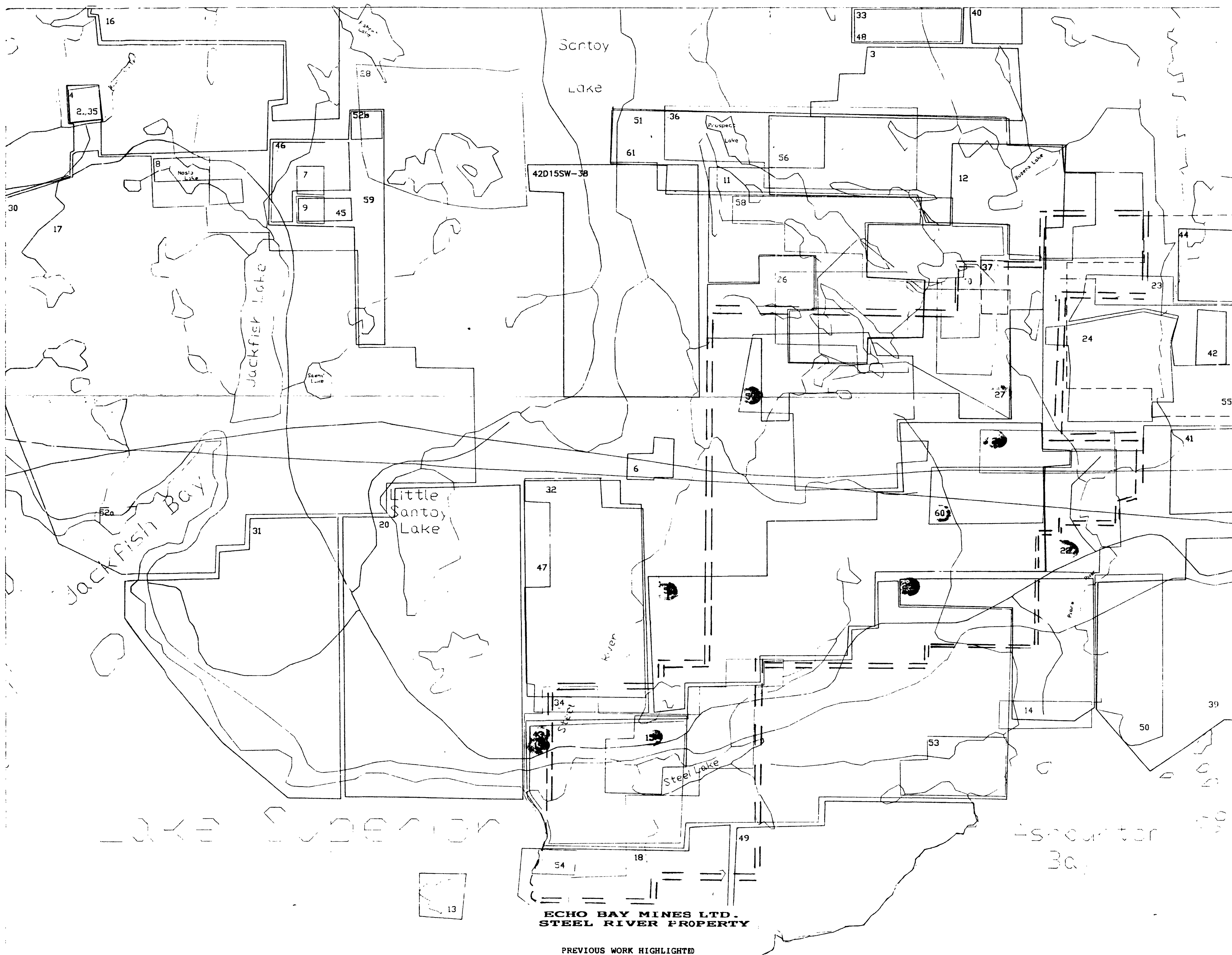


MINERAL EXPLORATION INVENTORY

42D15SW








Little Santoy Lake Area








LEGEND






MINERAL OCCURRENCES

-  Surface occurrence with reference number
-  Surface occurrence with reference number (exact location uncertain)
-  Shaft with reference number
-  Adit with reference number
-  Open pit with reference number

DRILL HOLES

-  Single drill hole with reference number
-  Multiple drill hole with reference number
-  Drill hole(s) with reference number (exact location uncertain)
-  Underground drill hole(s) with reference number
-  Reverse circulation drill hole(s)

MISCELLANEOUS DATA

-  Exploration area with reference number
-  Large exploration area with reference number
-  Trench
-  Pit
-  Stripped area

2.16658

RECEIVED
 JUL 9 1996
 MINING LANDS BRANCH

SCALE: 1 inch = 1/2 mile

MAP # 2



GEOLOGICAL LEGEND

- 1: mafic volcanic
 - a/ flow
 - b/ pillowed
 - c/ tuff
 - u/ ultramafic
 - uA/ altered ultramafic
- 2: intermediate volcanic
 - a/ flow
 - b/ tuff
 - c/ lapilli
- 3: felsic volcanic
 - a/ flow
 - b/ tuff
 - c/ lapilli
- 4: sediment
 - a/ phyllite
 - b/ greywacke
 - c/ argillite
 - d/ carbonate-chlorite schist
- 5: mafic-intermediate intrusive
 - a/ gabbro-diorite
 - b/ diorite
 - c/ gabbro
 - d/ intermediate dike
- 6: felsic intrusive
 - a/ granite
 - b/ quartz feldspar porphyry
 - c/ feldspar porphyry
- 8: diabase
- IF: iron formation
 - s/ sulfide

- cht: chert
- sch: schist
- chl: chlorite
- carb: carbonate
- QE'd: quartz eyed
- garn: garnet
- qtz: quartz
- xtal: crystal
- frag'l: fragmental
- tr: trace
- wk: weak
- hbl: hornblende
- ser: sericite
- py: pyrite
- po: pyrrotite
- cp: chalcopyrite
- graph: graphite
- vnlt: veinlets
- mag: magnetite
- goss: gossan
- grn: green
- QV: quartz vein
- str: strong

SYMBOLS

- younging
- bedding, dip
- foliation and dip
- plunge
- outcrop
- swamp
- HEPL Power Line
- road/highway
- claim-line, post claim number

182201(12,46,3,1,75)

sample number Au(ppb),Cu(ppm),Ag(ppm), Pb(ppm),Zn(ppm)

2.16658

RECEIVED
JUL 9 1996
MINING LANDS BRANCH

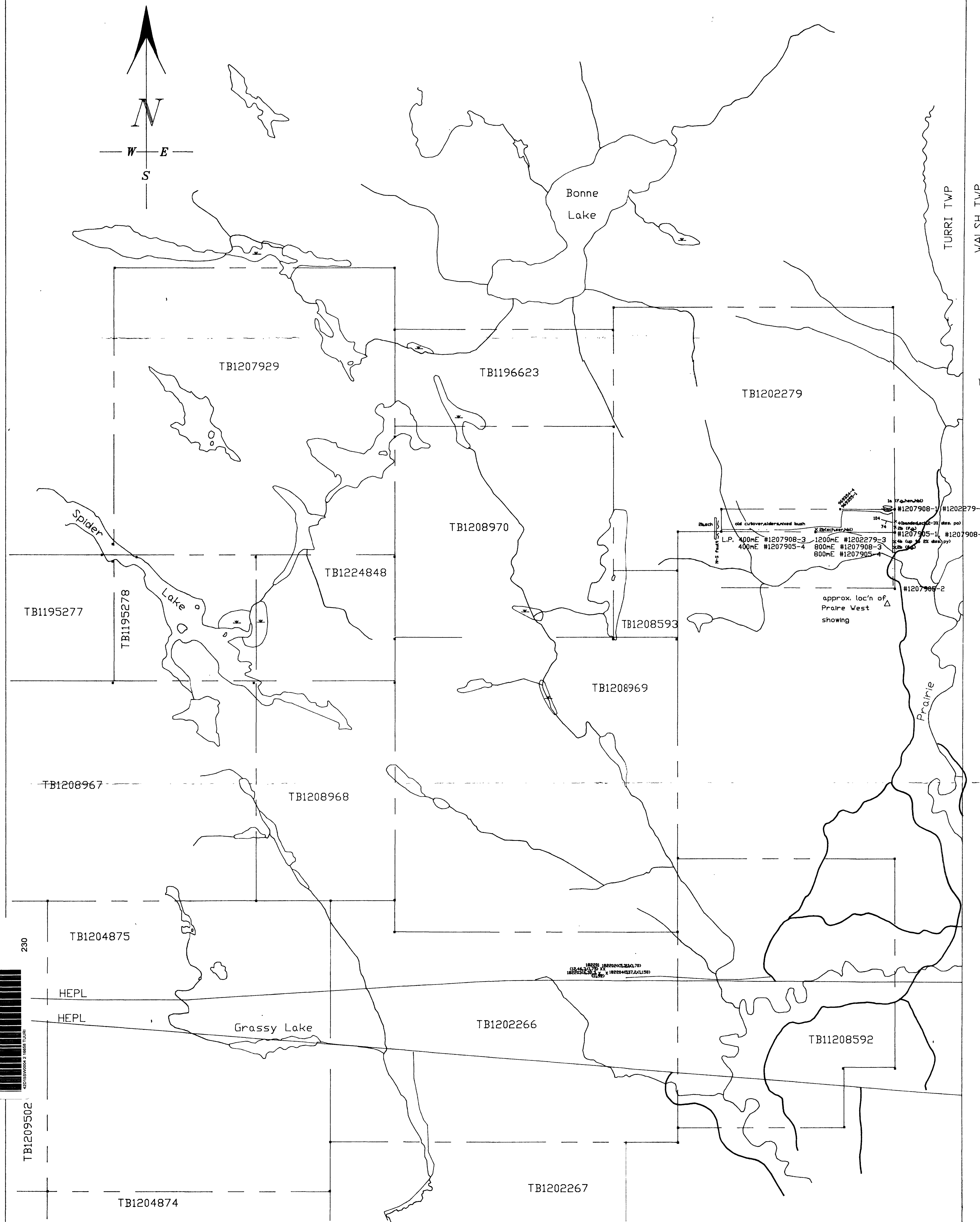
0 1.0
KILOMETRES

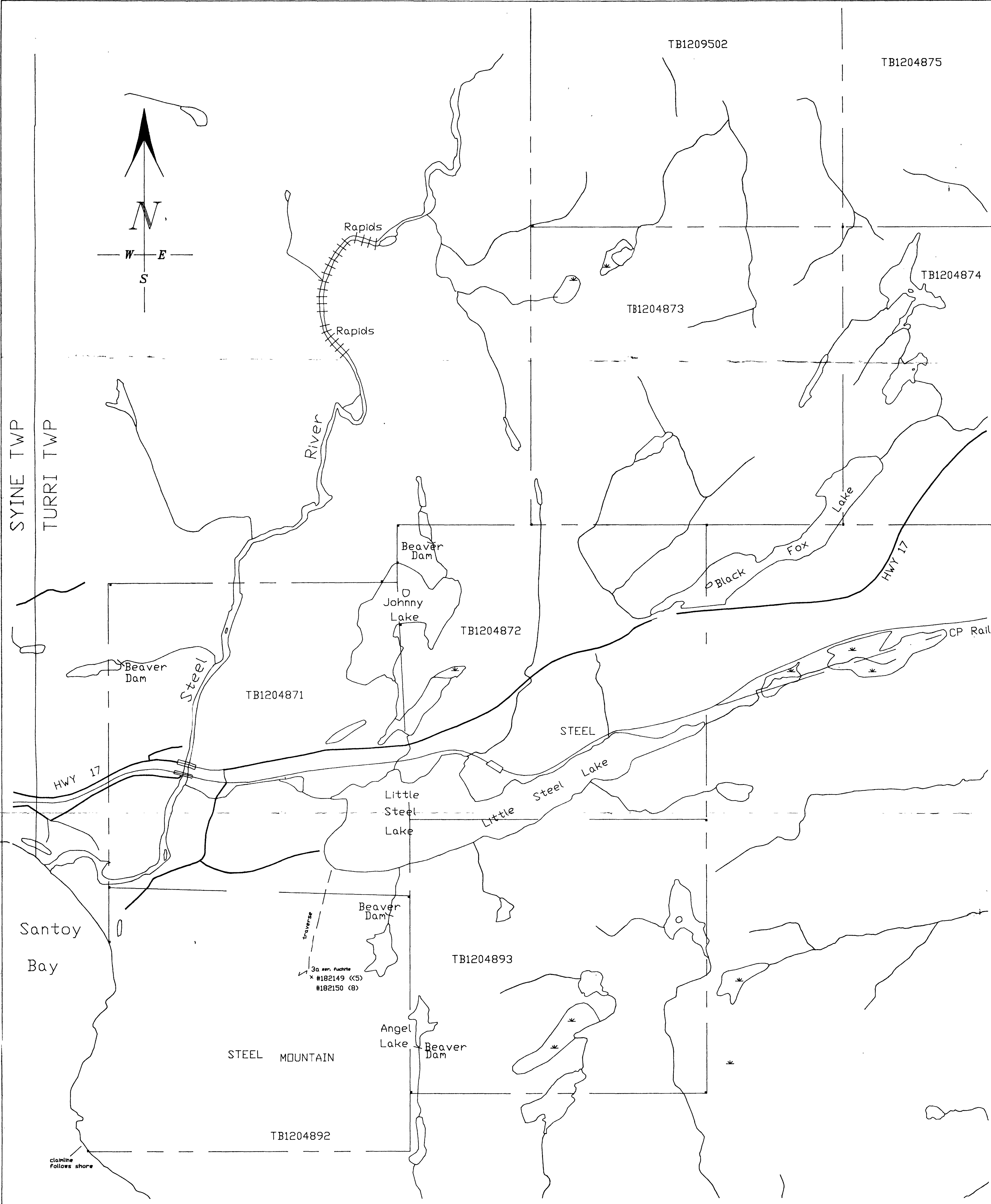
ECHO BAY MINES LTD.

GEOLOGY AND CLAIMS
STEEL RIVER PROPERTY
NORTH EAST SHEET

DATE: SCALE:
REVISED: DWG NO: MAP 4

CLARK-EVELEIGH CONSULTING





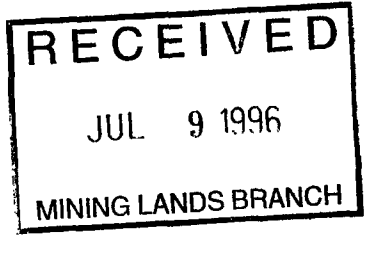
GEOLOGICAL LEGEND

- 1: mafic volcanic
 - a/ flow
 - b/ pillowed
 - c/ tuff
 - u/ ultramafic
 - uA/ altered ultramafic
 - 2: intermediate volcanic
 - a/ flow
 - b/ tuff
 - c/ lapilli
 - 3: felsic volcanic
 - a/ flow
 - b/ tuff
 - c/ lapilli
 - 4: sediment
 - a/ phyllite
 - b/ greywacke
 - c/ argillite
 - d/ carbonate-chlorite schist
 - 5: mafic-intermediate intrusive
 - a/ gabbro-diorite
 - b/ diorite
 - c/ gabbro
 - d/ intermediate dike
 - 6: felsic intrusive
 - a/ granite
 - b/ quartz feldspar porphyry
 - c/ feldspar porphyry
 - 8: diabase
 - IF: iron formation
 - s/ sulfide
-
- cht: chert
 - sch: schist
 - chor: chlorite
 - carb: carbonate
 - QE: quartz eyed
 - garn: garnet
 - qtz: quartz
 - xtal: crystal
 - frag: fragmental
 - tr: trace
 - wk: weak
 - ser: sericite
 - py: pyrite
 - po: pyrrhotite
 - cp: chalcopyrite
 - graph: graphite
 - vnlt: veinlets
 - mag: magnetite
 - goss: gossan
 - grn: green
 - QV: quartz vein
 - str: strong

SYMBOLS

- younging
- bedding, dip
- foliation and dip
- plunge
- outcrop
- 7867 sample number
- swamp
- HEPL Power Line
- road/highway
- TB196623 claim-line, post claim number

2.16658



Fowler + Shuman

GEOLOGY AND CLAIMS
 STEEL RIVER PROPERTY
 SOUTH WEST SHEET

DATE: _____ SCALE: _____
 REVISED: _____ DWG NO: MAP 5
 CLARK-EVELEIGH CONSULTING

