



41N15NW0251 0011C1 LENDRUM

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THE ALGOMA STEEL CORPORATION, LIMITED

EXPLORATION DEPARTMENT

503 Queen Street East,
Sault Ste. Marie, Ontario

Central Lendrum Township

Claim Group

Wawa, District of Algoma

Geological Report

907 21347

RECEIVED
1981

RESIDENT GEOLOGIST
SAULT STE. MARIE

October 31, 1980

A. D. Hunter, M.Sc.
Geologist

QDM 2.3721

Introduction

This report deals with the geology of 8 claims (SSM 542608 - 542615 inclusive) owned by The Algoma Steel Corporation, Limited in Lendrum Township near Wawa, Ontario. Accompanying this report is a geological map of these claims. The mapping was done by the author over the period July 15 - August 6, 1980.

Location and Access

The Algoma Steel claims are situated at the approximate centre of Lendrum Township at the southeast corner of the Gros Cap Indian Reserve. The western boundary of the claim group coincides with the eastern limit of the surveyed Reserve.

Access is gained via the Trans-Canada Highway to a secondary gravel road about 3 km north of the entrance to the town of Wawa. The gravel road leads to Trembley Station on the railway about 1 km from the highway. A footpath leads from here to the claim group about 1 km distant.

Topography

The claims are situated in rough, irregular terrain. Stream valleys and extensive swamps alternate with prominent ridges of outcrop. Steep rock faces and cliffs are common throughout the claim group.

Exploration History

There is no previous documented exploration work on the claims or in the general area of these. Exploratory trenches or pits were not encountered during Algoma Steel's examination of the claims. There is also no evidence of old diamond drill set-ups.

Regional Geology

An examination of an Ontario government geological compilation map, P.640 (1971) shows the area to be underlain by mafic to intermediate volcanic rocks in contact with sedimentary rocks immediately north of the claim group. Iron formation is interpreted to occur near the volcanic-sediment contact. This iron formation is shown to be displaced northward by the Trembley Fault.

Detailed Geology

A variety of rock types were encountered while mapping the claims. The predominant lithology is mafic lava both pillowed and massive. These contain narrow sulphidic horizons. Intermediate and felsic pyroclastic rocks are exposed on the southern

edge of the claim group. Gabbro sills and plug-like bodies intrude the volcanics. The gabbro and volcanics are cut by diorite bodies and feldspar porphyry sills. All the aforementioned rock units are cut by west-northwest trending diabase dikes.

The predominant structural feature of the rocks is a northeasterly striking foliation which dips moderately to steeply toward the south. The foliation parallels the direction of outcrop ridges in general. It swings around to an easterly strike in the southwest corner of the claim group. Where the rocks have been dragged along the Trembley Fault the foliation turns more northerly to about 015° .

Pillows indicate a north-facing attitude for the lava based on about six such determinations. The volcanics are thus overturned toward the north. No folds are indicated but faults certainly are. A northeast striking fault occurs at the northwest edge of the claims; here the rocks are schistose. Other east and northeast striking structures are indicated in the southern part of the claim group. The most salient structural feature of the area is the Trembley Fault Zone. Tectonic breccias have been noted along this structure and a horizontal left-lateral displacement of about 3 km is evident on regional geological maps.

A description of the principal rock units follows.

Mafic Volcanics

These are very fine grained rocks which weather a greenish-brown colour and are a darker green colour on fresh surfaces. They are commonly pillowed and amygdaloidal structure is locally well developed. Some bedded mafic tuff was mapped near the north boundary of the claim group. Interflow siliceous tuffs sometimes carrying graphite and disseminated sulphides occur throughout the claim group. Locally these horizons carry trace amounts of chalcopyrite and sphalerite.

Intermediate and Felsic Volcanic Rocks

Owing to their siliceous nature and sericite content these rocks are pale yellow to straw coloured on weathered surfaces. Lapilli-tuff and tuff-breccia with up to 20% combined feldspar and quartz crystals represent the most common rocks of this group. A very distinct mappable unit of cherty tuff appears on the geology map. This is thinly bedded to laminated and locally stained and carrying up to 10% sulphides. The unit may be traced for approximately 0.7 km. It is locally chloritic and may be considered intermediate in composition.

Locally massive, flow-brecciated lava was mapped. This is associated with coarse pyroclastic rocks. The felsic rocks appear to be silicified locally.

Iron Formation

A few small outcrops of iron formation were mapped. These are carbonate and chert-rich rocks which carry some pyrite beds and minor pyrrhotite and magnetite. The results of a magnetic survey done by Algoma Steel indicate that iron formation extends southwest onto the Indian Reserve. No major unit of iron formation was encountered which is in contradiction to published regional geology maps.

Sedimentary Rocks

An outcrop of conglomerate was mapped in a stream bed north of the claim group. The conglomerate is comprised of a variety of volcanic and intrusive textured clasts. This sediment is very immature and displays an intact framework. Although no bedding was recognized, greywacke is also conspicuous in certain parts of the outcrop.

Intermediate Intrusive Rocks

Narrow sills, up to 1 km in strike length, were mapped. These are feldspar porphyritic and may carry some quartz phenocrysts. The phenocrysts are equant, subhedral and form up to 25% of the rock. They range from 2.0-5.0 mm across and are set in a fine grained matrix of quartz and feldspar. These rocks are leucocratic carrying only 2-3% biotite and minor epidote.

Probably akin to the porphyry sills are stock-like bodies of fine-medium grained equigranular and subporphyritic diorite. Locally 1.0-2.0 mm quartz phenocrysts were noted. These bodies contain large blocks of gabbro, clearly postdating the more mafic rock.

Mafic Intrusive Rocks

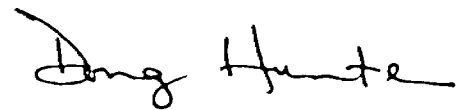
Medium to coarse grained equigranular gabbro sills occur within the volcanics. These rocks are massive and have a colour index of about 35-40 which makes them quite distinct from lighter coloured feldspar-rich diorite bodies.

Granitic Rocks

A quartz-feldspar porphyritic intrusion occupies a portion of the Trembley Fault Zone. It is a light pink, medium grained rock with phenocrysts up to 5.0 mm across. The mafic content is very low with only 2.0-5.0% biotite. Locally this rock is highly brecciated reflecting movement along the Trembley Fault after its emplacement.

Diabase

This is a medium to coarse grained gabbro with the characteristic texture from which its name is derived. This is a fresh looking rock due to the fact that it postdates regional metamorphism.

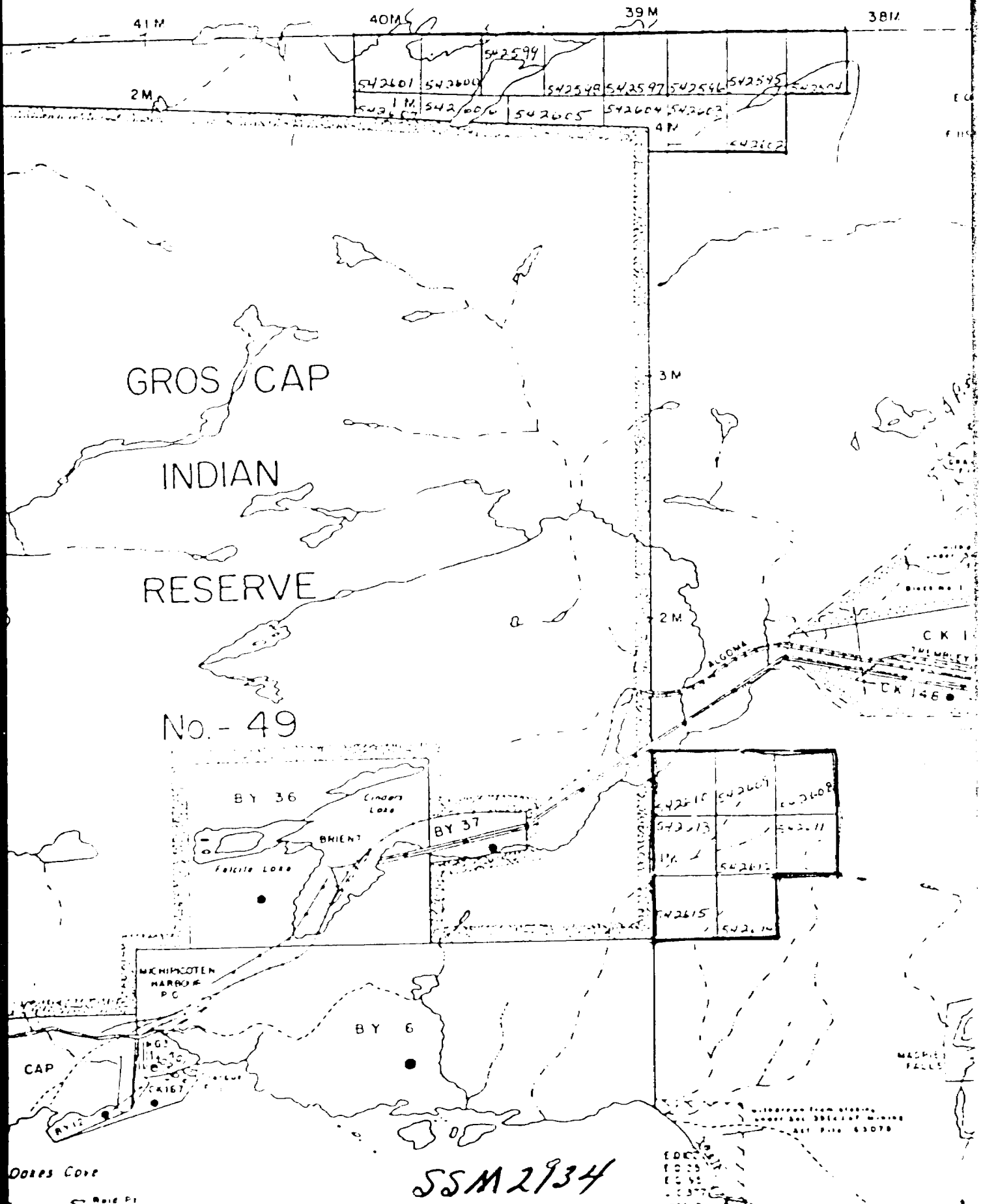
A handwritten signature in cursive script that reads "A. D. Hunter". The signature is written in dark ink and is positioned to the right of the typed name.

A. D. Hunter

October 31, 1980

Lenora Map. N. 1558
Recordings April 10/80
SSM 542594 - 615 incl.

BAILLOQUET Tp. M.1558



ALGOMA STEEL

The Algoma Steel
Corporation, Limited

Sault Ste. Marie
Ontario, Canada
P6A 5P2

November 12, 1980.

Mrs. Marion St. Jules,
Mining Recorder,
Lands Administration Branch,
Ministry of Natural Resources,
75 Elgin Street,
P. O. Box 669,
Sault Ste. Marie, Ontario
P6A 5H2

RECEIVED

NOV 14 1980

MINING LANDS SECT

Dear Madam:

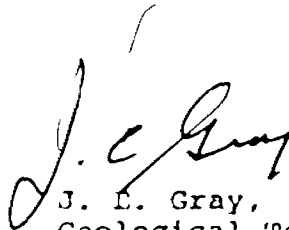
Enclosed please find two copies of the Mining Act report of work covering 240 geophysical assessment days under The Special Provisions Act to be applied against 6 claims located in Lendrum Township.

Abstracts are also enclosed for updating.

A cheque in the amount of \$1.50 is enclosed to cover the costs of updating.

Yours very truly,

THE ALGOMA STEEL CORPORATION, LIMITED



J. E. Gray,
Geological Technician,
Exploration.

JEG:TM
Encls.

c.c. / Mr. F. W. Mathews,
Supervisor, Projects Section,
Dept. of Mines & Northern Affairs,
Whitney Block, Queen's Park,
Toronto, Ontario.

SSM 2134

ALGOMA STEEL

The Algoma Steel
Corporation, Limited

Sault Ste. Marie
Ontario, Canada
P6A 5P2

February 3, 1981.

Mrs. Marion St. Jules,
Mining Recorder,
Ministry of Natural Resources,
75 Elgin Street,
P. O. Box 669,
Sault Ste. Marie, Ontario.
P6A 5N2

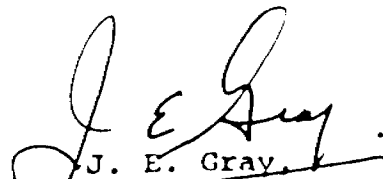
Dear Madam:

Enclosed please find duplicate copies of The Mining Act Report of Work covering 160 geological assessment days to be applied against 8 claims located in Lendrum Township, under The Special Provisions Act.

Reports and maps are being forwarded to Mr. F. W. Matthews in duplicate. Abstracts for this claim group are in your possession.

Yours very truly,

THE ALGOMA STEEL CORPORATION, LIMITED



J. E. Gray,
Geological Technician,
Exploration.

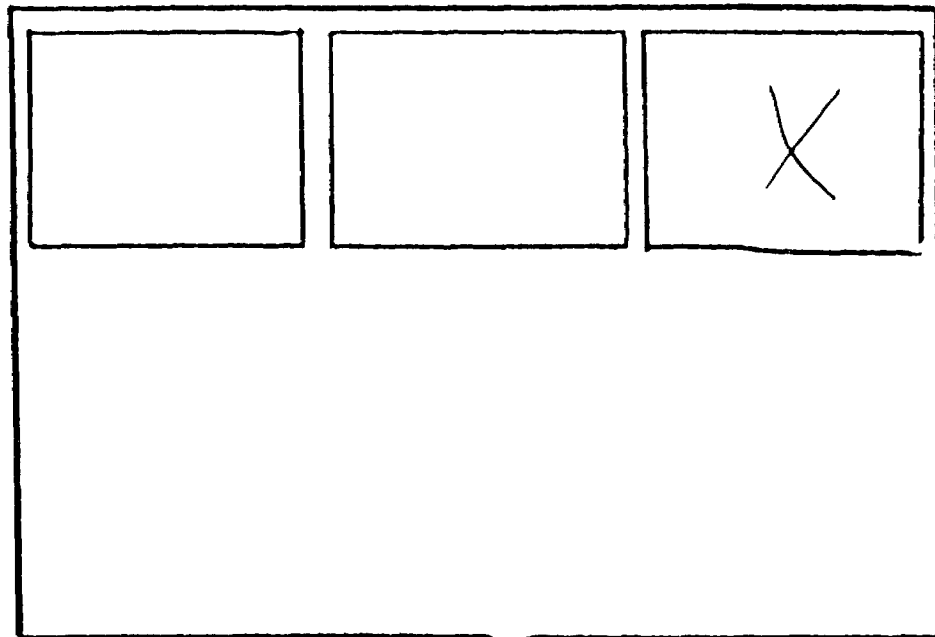
JEG:TM
Encls.

c.c. Mr. F. W. Matthews,
Ministry of Natural Resources,
Toronto, Ontario.

SEE ACCOMPANYING
MAP(S) IDENTIFIED AS

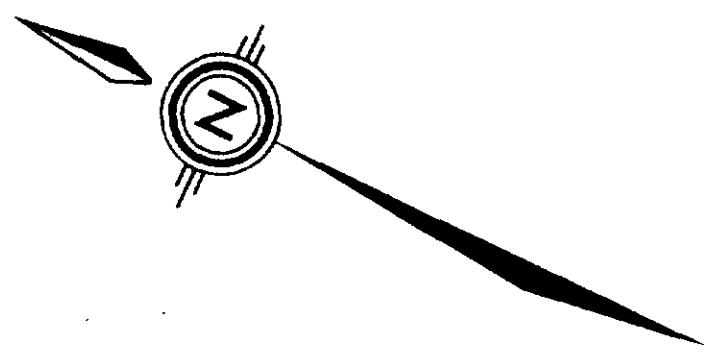
LENDRUM - 0011 - C1 #1

LOCATED IN THE MAP
CHANNEL IN THE FOLLOWING
SEQUENCE (X)



SPUR LINE

R. MICHIGIPIGOTEN

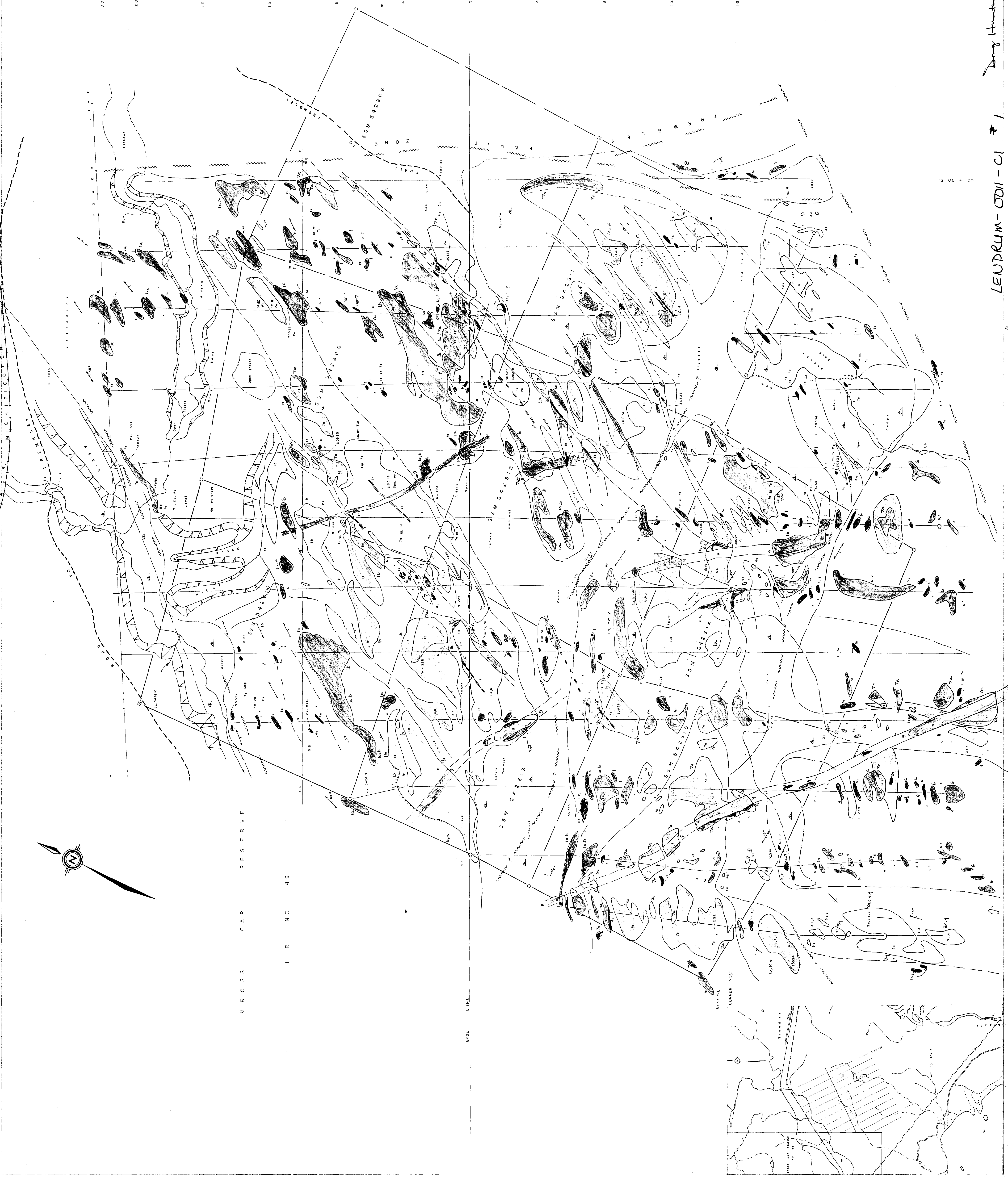


GROSS CAP RESERVE

I. R. NO 49

BASE LINE

22 + 00 N
20 + 00 N
16 + 00 N
12 + 00 N
8 + 00 N
4 + 00 N
0 + 00
4 + 00 S
8 + 00 S
12 + 00 S
16 + 00 S



- LEGEND
- 1. 1:100,000 Scale Geological Map
 - 2. 1:50,000 Scale Geological Map
 - 3. 1:25,000 Scale Geological Map
 - 4. 1:12,500 Scale Geological Map
 - 5. 1:6,250 Scale Geological Map
 - 6. 1:3,125 Scale Geological Map
 - 7. 1:1,562.5 Scale Geological Map
 - 8. 1:781.25 Scale Geological Map
 - 9. 1:390.625 Scale Geological Map
- SYMBOLS
- 1. Fault
 - 2. Fault Zone
 - 3. Fault Zone Boundary
 - 4. Fault Zone Boundary
 - 5. Fault Zone Boundary
 - 6. Fault Zone Boundary
 - 7. Fault Zone Boundary
 - 8. Fault Zone Boundary
 - 9. Fault Zone Boundary
- RELIEF
- 1. Contour Interval
 - 2. Contour Interval
 - 3. Contour Interval
 - 4. Contour Interval
 - 5. Contour Interval
 - 6. Contour Interval
 - 7. Contour Interval
 - 8. Contour Interval
 - 9. Contour Interval
- OTHER
- 1. Base Line
 - 2. Spur Line
 - 3. Gross Cap Reserve
 - 4. I. R. No. 49
 - 5. Reverse Corner Post
 - 6. Trembley
 - 7. Trembley
 - 8. Trembley
 - 9. Trembley

Doug Hunter

LEUDRUM-0011-C1 #1

2,372/

THE ALGOMA STEEL CORPORATION, LIMITED
EXPLORATION AND PROJECT
DEVELOPMENT DEPARTMENT

TREMBLEY GRID
ANOMALY NO. 6 & 6A
GEOLOGY SURVEY

SCALE 1" = 200'
DATE OCTOBER, 1962
DWS. NO.

PREPARED BY
D. HUNTER
CHECKED BY
G. J. TULLIBRACK
APPROVED

36 + 00 E
32 + 00 E
28 + 00 E
24 + 00 E
20 + 00 E
16 + 00 E
12 + 00 E
8 + 00 E
4 + 00 E
0 + 00
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