

KENNETH H. DARKE CONSULTANTS LIMITED

338 SPRUCE STREET NORTH
TIMMINS, ONTARIO
P4N 6N5
TELEPHONE (705) 264-1910
RESIDENCE 264-7403



42A05NW8529 63.5991 WHITESIDES

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SUMMARY EXPLORATION REPORT

on the

HARDIMAN BAY PROPERTY

HORWOOD TOWNSHIP, ONTARIO

Porcupine Mining Division
District of Sudbury

for

ROGER C. DENOMME

K.H. Darke, P.Eng.

KENNETH H. DARKE CONSULTANTS LIMITED

October 5, 1990



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INTRODUCTION:

The Hardiman Bay Property described in this summary report consists of 33, contiguous, unpatented mining claims all located in Horwood Township, Ontario. The subject property is situated in the northern part of the Swayze Gold Belt approximately 51 air-miles to the southwest of the city of Timmins, Ontario which is the major settlement & distribution centre in the region.

Horwood Township is situated within the "Abitibi Greenstone Belt" that includes the Timmins-Porcupine Region and the Swayze Gold Area. Said Greenstone Belt consists essentially of Early to Middle Precambrian (Archean-age) metamorphosed volcanic & sedimentary rocks that have been intruded by felsic plutons and mafic/ultramafic stocks & plugs. All the aforementioned rock types have been cut by younger (Proterozoic-age) mafic dikes (diabase, olivine diabase).

The regional geology within such Greenstone Belts can be generalized as consisting of a group of contemporaneous volcanic piles and related sediments all of which have been intensely folded, faulted, eroded, and intruded by rocks of mafic to felsic composition.

Much of the bedrock in the region is masked by a pervasive cover of younger Pleistocene-age glaciofluvial/lacustrine deposits (sand & gravel, clay). The low-lying areas are covered further by recent alder & muskeg swamp.

The main rock types present on the Hardiman Bay Property consist of schistose metavolcanics (mafic-intermediate, felsic), felsic intrusives (biotite trondhjemite), metasediments (grey-wacke), siliceous iron formation, ultramafic intrusives (serpentine), and an olivine diabase dike.

Recent exploration completed on the Hardiman Bay Property has located a number of sulphide showings (pyrrhotite, pyrite) with associated base metal (copper, zinc) mineralization. Two of these showings are coincident with VLF-EM conductive zones that parallel the local stratigraphy.

Results of an Ontario government sponsored Airborne Geophysical Survey that included Horwood Township were just recently released (Oct. 4th/90). Said survey shows that an extensive & strong A.E.M. Conductive Horizon extends southward from the aforementioned sulphide showings. The cause of these A.E.M. anomalies is currently unknown.

PURPOSE & SCOPE:

The purpose of this report is to briefly describe the regional & economic geology of the Horwood Township Area; and to summarize the results of a Preliminary Exploration Program recently completed by R. Denomme et al on the subject Hardiman Bay Property.

This Summary Report is accompanied by geological & geophysical maps that constitute an integral & significant part of said report.

SOURCES OF INFORMATION:

This report is based upon extensive personal knowledge of the Horwood Township Area gained while conducting regional exploration programs throughout the Swayze Gold Belt; upon numerous property evaluations & exploration programs in Horwood Township itself; and upon a personal examination of the subject Hardiman Bay Property conducted on September 22, 1990 accompanied by Mr. R.C. Denomme.

PROPERTY DESCRIPTION:

The Hardiman Bay Property described in this report consists of 33, contiguous, unpatented mining claims (40 acres per claim; total area of approximately 1,320 acres) that form an irregular-shaped block located in Horwood Township, Porcupine Mining Division, District of Sudbury, Ontario; and further described as follows: ...

<u>Claim Nos.:</u>	<u>No. of Claims:</u>
P.1131527-30 inclusive	4
P.1158069	1
P.1158322	1
P.1158341-44 inclusive	4
P.1159165-71 "	7
P.1159736 & 37	2
P.1159746-50 inclusive	5
P.1159761-65 "	5
P.1160285-88 "	4
	<u>33</u> claims

LOCATION & ACCESS:

The Hardiman Bay Property is located in the southeast quadrant of Horwood Township at approximately Longitude 82°15'W / Latitude 48°00'N; or 20 airmiles southeast of the village of Foleyet. The major population centres of the region are Timmins, Ont. located 51 airmiles to the northeast of the property, and Sudbury, Ont. situated 120 airmiles to the southeast.

A major line of Canadian National Railway that extends north-westerly from Sudbury through Foleyet and beyond passes through the area seven airmiles northeast of the Hardiman Bay Property. Regional Highway 101 that connects Timmins with Foleyet and points west extends through the area 14 airmiles north of the property.

Access to the Hardiman Bay Property is readily gained via Highway 101 to a road junction in Sewell Township 38 miles (61 km) west of Timmins; and thence southward 24 miles (40 km) via gravelled, lumbering access roads to the property itself. The main access road crosses the CNR line nine miles northeast of the Hardiman Bay Property. Refer to the accompanying maps for details as to location & access.

TOPOGRAPHY & DRAINAGE:

Terrain on the property is relatively flat and typical of the heavily glaciated Precambrian Shield. Relief is generally moderate with low rounded hills and ridges/bluffs that rise 50 to 200 feet above the local drainage. The overburden cover in the region is extensive but relatively thin and consists essentially of fine sands and other glaciolacustrine deposits with the low-lying areas consisting of muskeg & alder swamps.

Drainage in the region forms part of the Arctic watershed ... streams flow in a general northerly direction and empty into James Bay. The subject claim group extends for four miles in a northeasterly direction along the southeast shore of Hardiman Bay which forms part of Horwood Lake. The southwestern claim abuts on the north end of Great Pike Lake which drains northward into Hardiman Bay of Horwood Lake and thence into the Groundhog River system.

HISTORY OF THE PROPERTY:

The general area encompassing the subject Hardiman Bay Claim Group has a long history of exploration, principally for gold, dating back to the 1930's.

Although portions of the current Hardiman Bay Property had previously been staked by others there is no evidence that any detailed ground evaluation of said claims other than prospecting & limited sampling of rock outcrops had ever been undertaken.

In September 1990, R. Denomme et al completed linecutting & geophysical surveys (VLF-EM, Magnetometer) covering a portion of three contiguous claims (P.1158341-43 inclusive); and cleared/blasted/sampled two sulphide showings (Pit Nos. 1 & 2) in the same area; and pit Nos. 3 & 4 on adjacent Claim P.1158344.

GEOLOGY:

The geology of the Swayze Gold Area was first reported on in the 1930's by the Ontario Department of Mines. Subsequent publications covering the area have included Regional Aeromagnetic Maps (1963) and Regional Geological Compilation Maps (1965 & 76). A Preliminary Geological Map of Horwood Township incorporating assessment work data was published in 1972; and was followed in 1975 by coloured Geological Map 2329, Horwood Lake; at a scale of one inch to one-half mile. In 1978 the Ontario Geological Survey published Report 169, Geology of the Horwood Lake Area by F.W. Breaks, accompanied by aforementioned Map 2329. The more prominent mineral occurrences in the township and surrounding area are described in detail in Ontario Geological Survey publication "Gold Deposits of Ontario, Part 2 (1979)".

On October 4, 1990 the Ontario Geological Survey released results of a regional airborne geophysical survey (E.M., Total Magnetic) covering the North Swayze-Montcalm Area. The Hardiman Bay Property is covered by OGS Geophysical Map 81387; Scale 1 : 20 000.

1. Regional Geology:

All the consolidated rocks in the Horwood Township Region, located in the northern part of the Swayze Gold Camp, are of Precambrian age ... they constitute part of the "Abitibi Greenstone Belt" of the Superior Structural Province of the Precambrian Shield that underlies much of northern Ontario and Quebec.

As indicated on Geological Compilation Map Nos. 2205 and 2221, a complex assemblage of Mafic to Felsic Metavolcanics with associated Metasediments (Greenstone Belt) extends southwest from the Timmins Area through the Horwood Lake Region and on through the Swayze Gold Area. This highly folded volcanic-sedimentary sequence has been intruded locally by Quartz-feldspar porphyries, gabbro, peridotite & diorite. This aforementioned belt is bounded by large masses of syntectonic trondhjemitic gneiss and younger plutons of massive granodiorite. All these rocks are Early Precambrian

(Archean) age. Subsequently the whole area was intruded by diabase dike swarms of Early to Middle Precambrian age. Regional considerations indicate that the stratigraphy in the Horwood Lake Region is equivalent to the Tisdale Group located to the northeast in the Timmins Area. The regional geology can be generalized as consisting of a group of contemporaneous volcanic piles and related sediments all of which have been intensely folded, faulted, eroded, and intruded by rocks of mafic to felsic composition. The volcanism is cyclic in nature and consists of an initial ultramafic-mafic phase followed by more intermediate & felsic rock types with intercalated clastic sediments & exhalites, and ends with felsic pyroclastic-volcaniclastic material at the top. That is, major volcanic cycles as repeated throughout the Abitibi Greenstone Belt begin with ultramafic & mafic submarine activity (basaltic flows) at their base and end with more siliceous volcanism (rhyolitic pyroclastics) and penecontemporaneous sedimentation. These major volcanic piles are generally flanked by a contemporaneous assemblage of sediments-volcaniclastics deposited in adjacent restricted basins.

Reconnaissance geological mapping (ODM Map 2329) has indicated that the Hardiman Bay Property straddles the contact between metavolcanics on the west and felsic intrusives (Biotite Trondhjemite) on the east. This contact strikes at approximately N40°E along the central axis of the extensive northeasterly-trending claim group.

The metavolcanics consist predominantly of northeasterly-striking, schistose, mafic to intermediate composition (flows, tuffs, breccia) with intercalated felsic types (tuffs, lapillituff, pyroclastic-tuff).

The extreme northern claims also contain metasediments (greywacke) and highly altered ultramafic intrusives (serpentine, talc carbonate). A regional northeast-trending Olivine Diabase Dike (linear magnetic high) also cuts through the northern claims.

A pervasive schistosity on the property strikes at N30°-40°E, with variable 30°-75° dips to the northwest.

Regional faults that strike north, northeasterly, and/or northwesterly extend throughout the Horwood Township Area. The northwest-trending faults appear to be the youngest ... two such faults crosscut the Hardiman Bay Claim Group and displace all the stratigraphy including the Olivine Diabase Dike.

2. Economic Geology:

(a) Gold:

Horwood Township is located in the northern part of the Swayze Gold Area and has a long history of gold exploration. Gold mineralization is widely distributed throughout the Horwood Township and surrounding Region. Gold production has come from the Joburke Gold Mine (1973-75) located in adjacent Keith Township. Minor gold production also has come from the Tionaga Mine (1938-39) located three miles southwest of the subject property. The most significant gold occurrence in the area is the Orofino Resources Deposit (two gold-bearing zones) located on the Silk-Horwood Townships boundary approximately seven miles southwest of the Hardiman Bay Property.

Ore zones at the aforementioned mines consist of gold-bearing quartz-carbonate veins & complex stringer zones within highly altered (carbonatized, chloritized, albitized, variously silicified) metavolcanic and/or metagabbro host rocks. Sulphide mineralization associated with the gold zones consists of disseminated pyrite, lesser amounts of chalcopyrite, and minor galena & sphalerite.

(b) Asbestos, Talc-Magnesite; Nickel-Copper:

Significant past production of asbestos fibre and current production of talc has come from an highly altered (serpentinized) ultramafic intrusive located in Reeves Township approximately 15 miles northeast of the Hardiman Bay Property.

Other ultramafic intrusives in the area have significant associated nickel-copper mineralization; however, there has been no production to date.

(c) Copper, Zinc, Lead:

Because of the presence of geologically-favourable felsic volcanic centres the general Swayze Region has also been explored for polymetallic (copper, lead, zinc; gold, silver) volcanogenic massive sulphide-type deposits.

It should be noted that in the typical Precambrian Greenstone Belts the major Base Metal (copper, zinc) Deposits are associated with concentrations of massive sulphides (pyrite, pyrrhotite) that constitute strong to more moderate/weak Electromagnetic (E.M.) Conductive Zones. Therefore, any E.M. Conductors detected in an exploration program within the felsic metavolcanic stratigraphy of the Hardiman Bay Property would constitute prime exploration target areas.

PRELIMINARY EXPLORATION PROGRAM:

During the period Sept. 4th & 5th, 1990 a control grid was established by R. Denomme & three helpers on contiguous Claim Nos. P.1158341-43 located in the northern part of the Hardiman Bay Property. A Base Line striking N30°E was cut & chained from 1,400 ft. South to 800 ft. North; and cross-cutting, flagged, pace & compass lines were established at 200-foot intervals thereupon (lines 12+00S to 6+00N).

On Sept. 8th/90 the aforementioned control grid was covered by geophysical surveys (VLF-EM, Magnetometer).

The magnetic survey (Operator: G. Ross) showed a generally uniform background; that is, no obvious magnetic highs.

The VLF-EM Survey (Operator: R. Denomme) detected two, roughly parallel conductive horizons ("A" & "B") that trend northeast parallel to the local stratigraphy. These two conductive horizons appear to be offset along their strike length ... probably by northwest-trending fault zones.

Detailed prospecting had located four sulphide showings on and/or immediately south of the control grid. These sulphide showings were subsequently cleared, blasted, sampled and designated as Pit Nos. 1-4 inclusive ... refer to enclosed maps for details as to location.

Pit #1 was coincident with Conductive Zone "A"; Pit #2 was coincident with Conductive Zone "B"; and Pits #3 & #4 were south of the control grid surveyed.

Each of the pits contained blebs/stringers of pyrrhotite with disseminated chalcopyrite, sphalerite mineralization. The host rocks at Pit #1 are highly brecciated metavolcanics/siliceous iron formation that are cherty & carbonaceous in places. At Pit #2, #3 & #4 the host rocks appeared to be flat-lying siliceous iron formation; however, exposure of the mineralized zones is limited.

OGS Geophysical Map 81387 (released Oct. 4th/90) shows a strong A.E.M. Conductive Zone extends through the Hardiman Bay Property southward from the aforementioned control grid & sulphide pits. The cause of these A.E.M. anomalies is currently unknown.

* * * * *

October 5, 1990
TIMMINS, Ont.

K.H. Darke

K.H. Darke, P.Eng.
Consulting Geological Engineer



1. Detour Lake
2. Les Mines Selbaie
3. Inco-Golden Knight
4. Teck-Golden Hope
5. Joutel
6. Matagami Lake

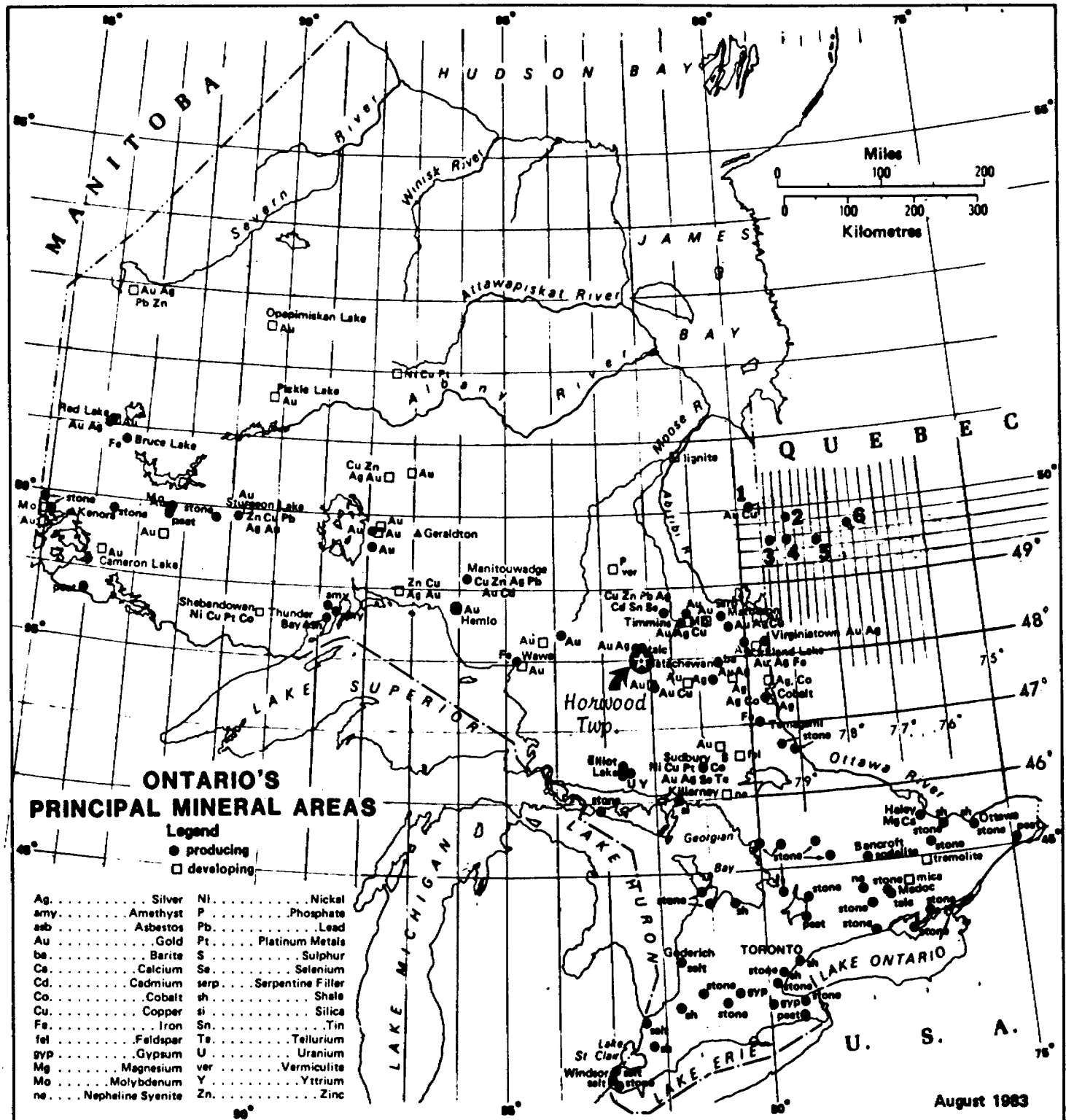
General Location Map

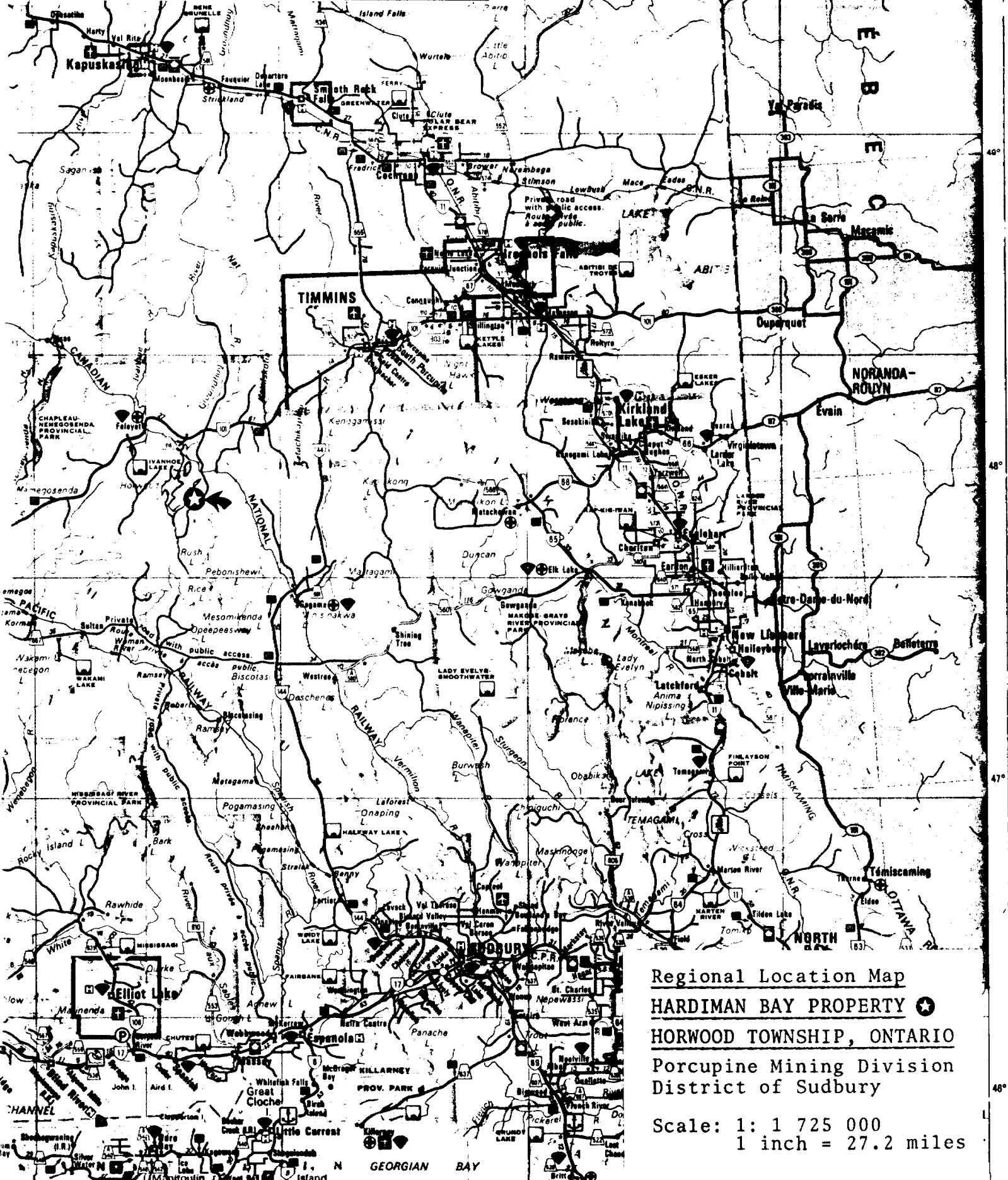
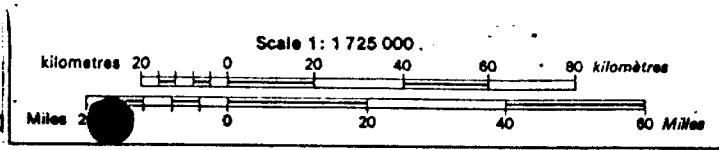
HARDIMAN BAY PROPERTY ★

HORWOOD TOWNSHIP, ONTARIO

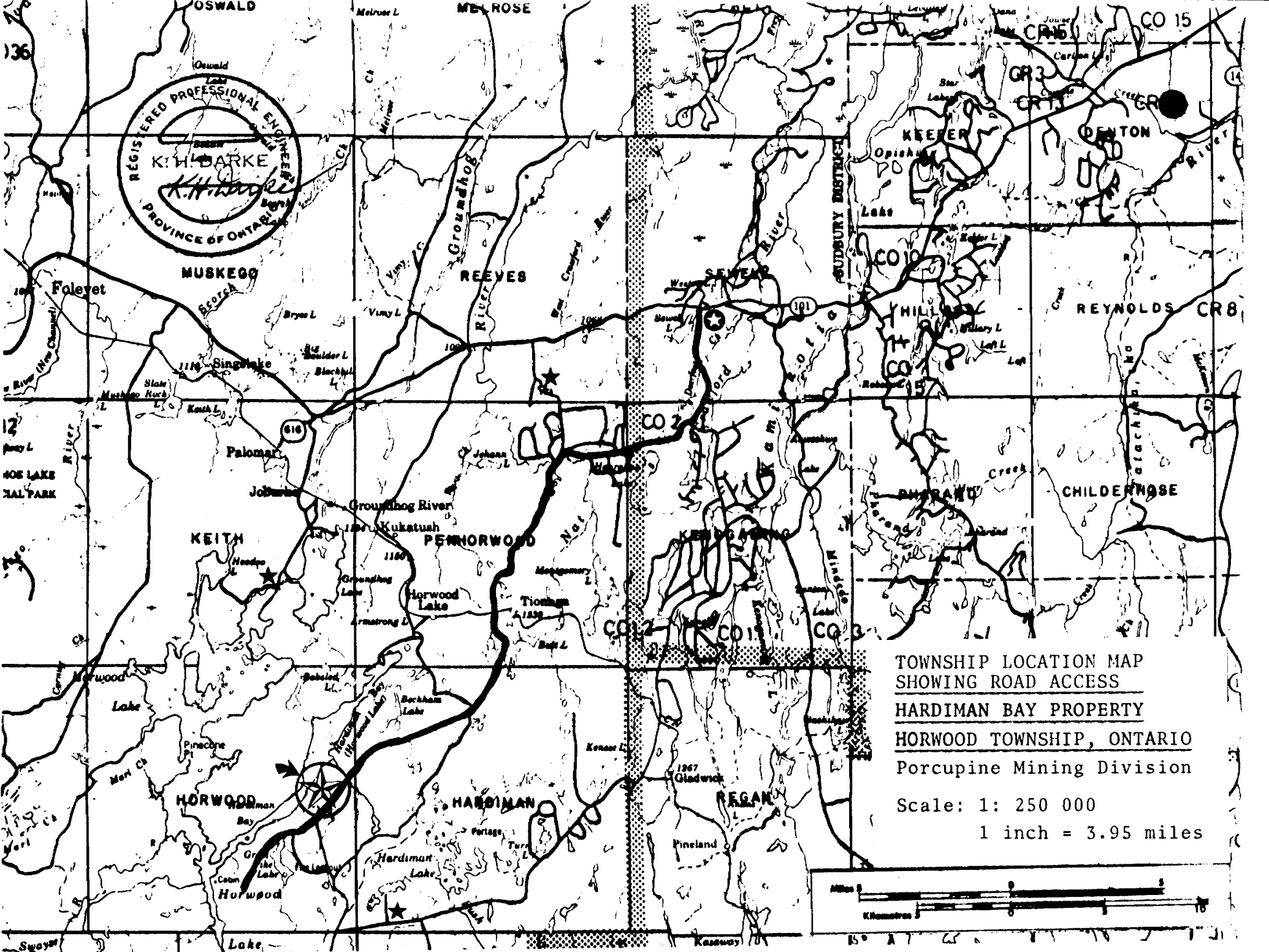
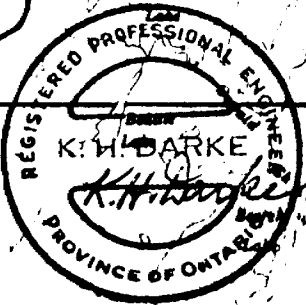
Porcupine Mining Division
District of Sudbury

Scale: 1 inch = 135 miles



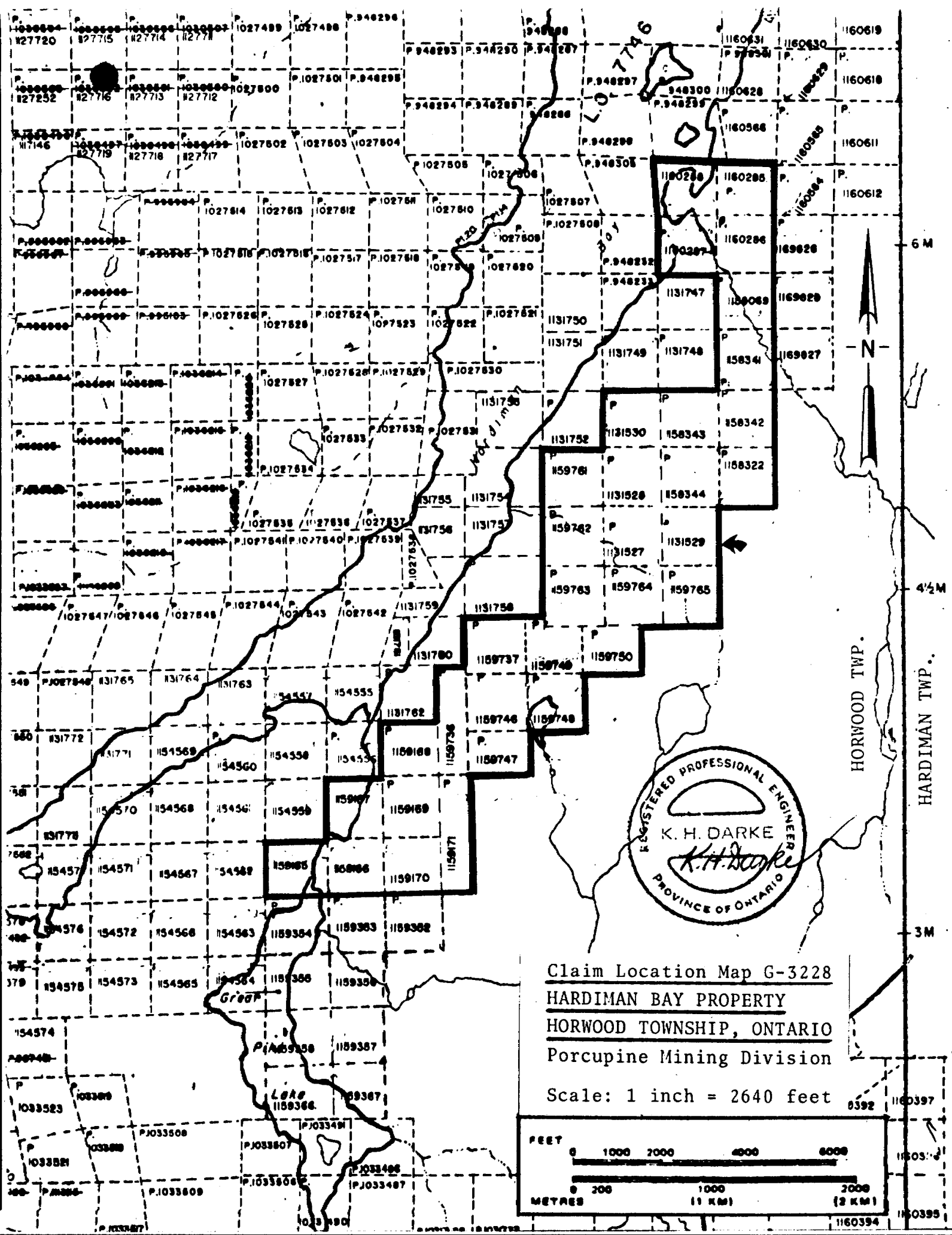


Regional Location Map
HARDIMAN BAY PROPERTY ★
HORWOOD TOWNSHIP, ONTARIO
 Porcupine Mining Division
 District of Sudbury
 Scale: 1: 1 725 000
 1 inch = 27.2 miles

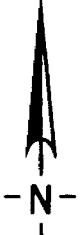
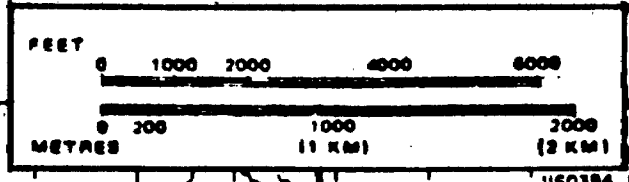


TOWNSHIP LOCATION MAP
SHOWING ROAD ACCESS
HARDIMAN BAY PROPERTY
HORWOOD TOWNSHIP, ONTARIO
Porcupine Mining Division
Scale: 1: 250 000
1 inch = 3.95 miles

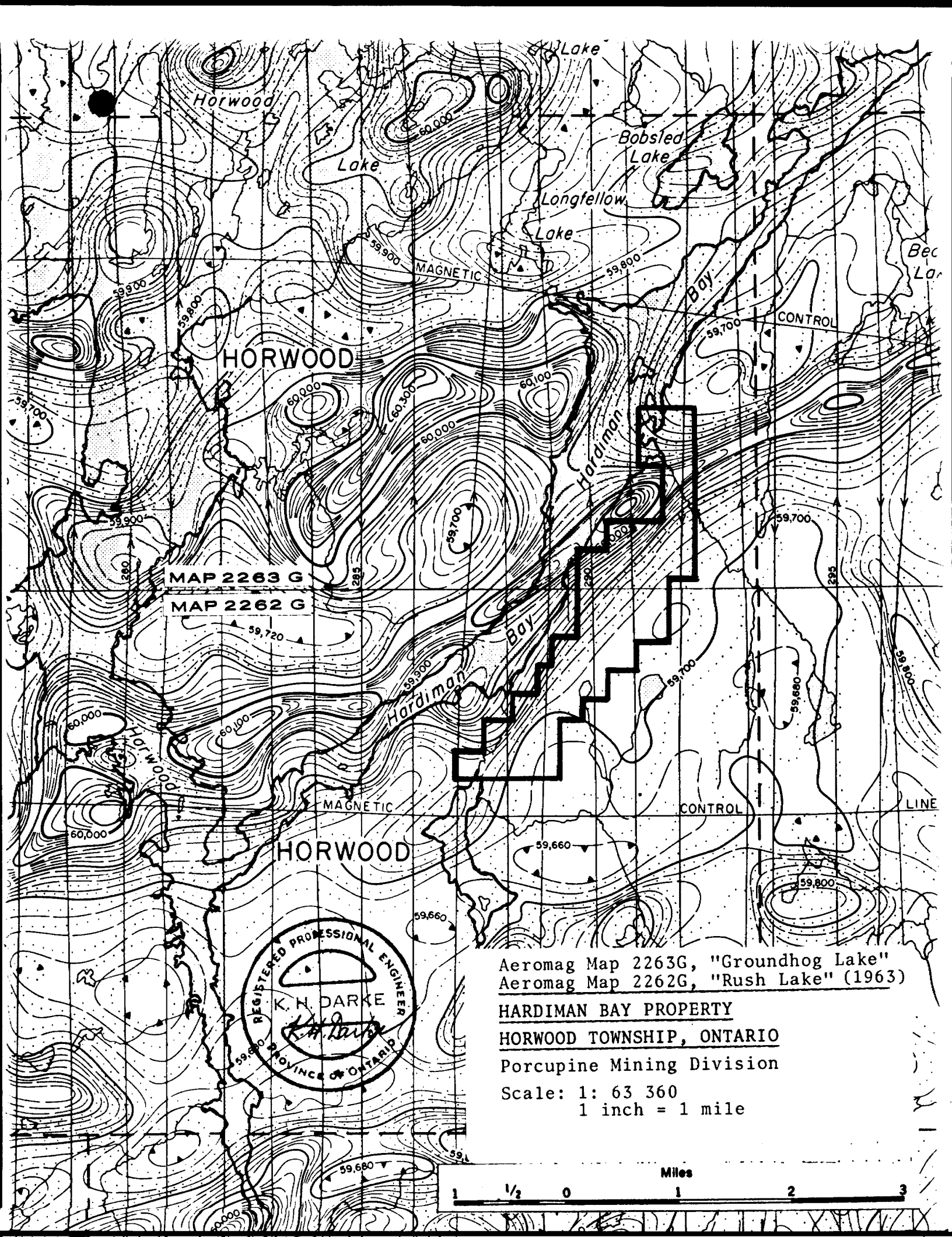




Claim Location Map G-3228
 HARDIMAN BAY PROPERTY
 HORWOOD TOWNSHIP, ONTARIO
 Porcupine Mining Division
 Scale: 1 inch = 2640 feet



HORWOOD TWP.
 HARDIMAN TWP.



MAP 2263 G

MAP 2262 G

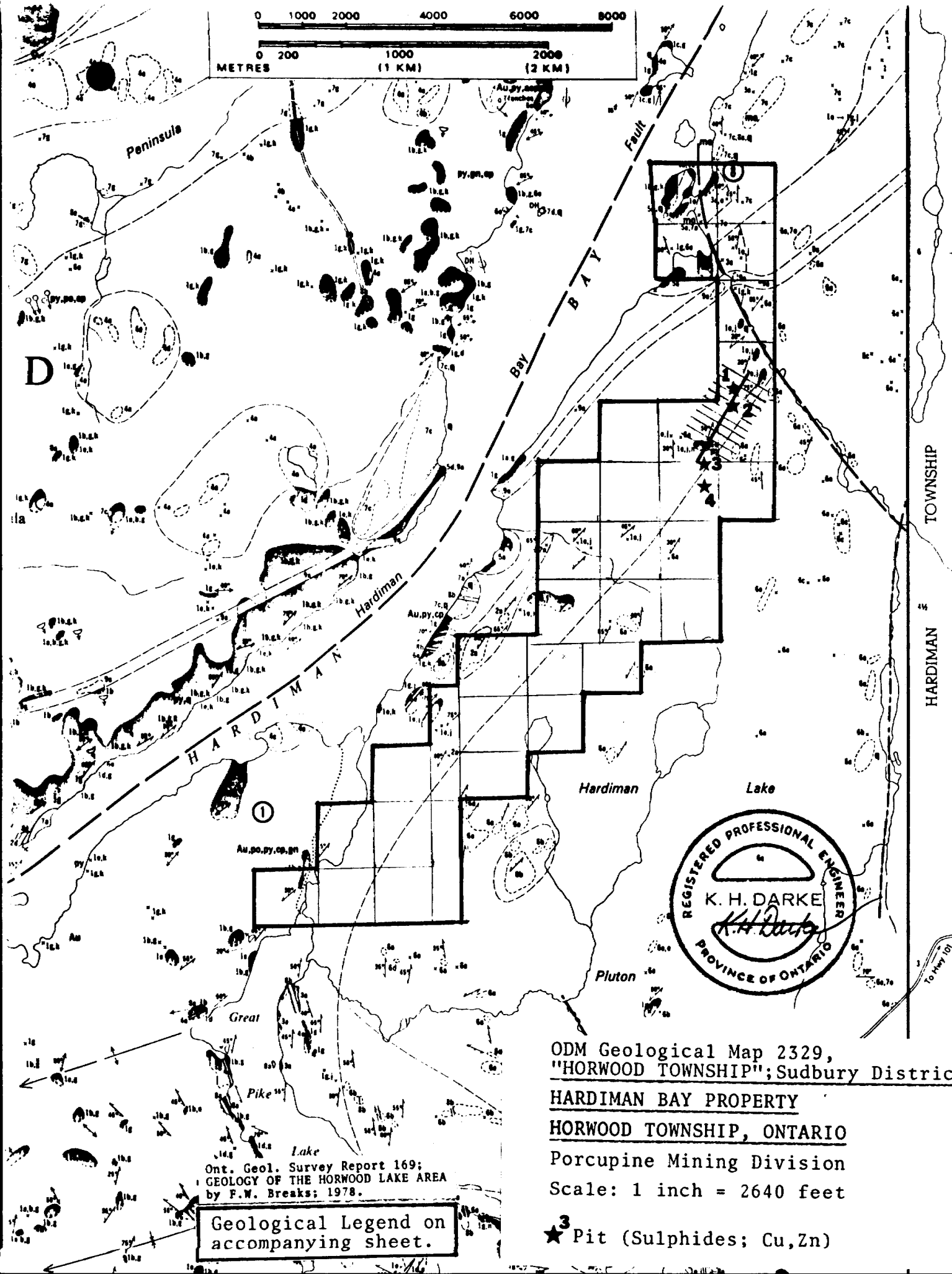
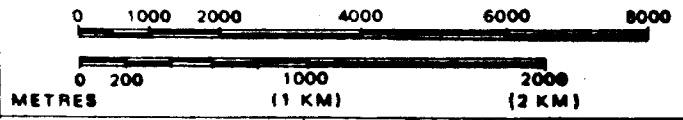


Aeromag Map 2263G, "Groundhog Lake"
Aeromag Map 2262G, "Rush Lake" (1963)

HARDIMAN BAY PROPERTY
HORWOOD TOWNSHIP, ONTARIO
Porcupine Mining Division

Scale: 1: 63 360
1 inch = 1 mile





ODM Geological Map 2329,
 "HORWOOD TOWNSHIP"; Sudbury District
HARDIMAN BAY PROPERTY
HORWOOD TOWNSHIP, ONTARIO
 Porcupine Mining Division
 Scale: 1 inch = 2640 feet

Ont. Geol. Survey Report 169;
 GEOLOGY OF THE HORWOOD LAKE AREA
 by F.W. Breaks; 1978.

Geological Legend on
 accompanying sheet.

★³ Pit (Sulphides; Cu, Zn)

LEGEND

CENOZOIC^a

QUATERNARY

RECENT

Lake, stream, and swamp deposits.

PLEISTOCENE





Glacial drift, sand, gravel, boulders, and varved clays.

UNCONFORMITY

PRECAMBRIAN^b

**MIDDLE TO LATE PRECAMBRIAN
(PROTEROZOIC)**













MAFIC INTRUSIVE ROCKS

-  9 *Diabase, unsubdivided.*
-  9a *Olivine diabase dikes (Abitibi-type).*
-  8a *Quartz diabase dikes.*
-  8b *Porphyritic quartz diabase dikes.*

INTRUSIVE CONTACT







EARLY PRECAMBRIAN (ARCHEAN)

**LATE FELSIC TO INTERMEDIATE
INTRUSIVE ROCKS**

-  7 *Unsubdivided.*
-  7a *Equigranular biotite granodiorite.*
-  7b *Porphyritic biotite granodiorite.*
-  7c *Porphyritic to equigranular biotite quartz monzonite.*
-  7d *Muscovite granodiorite.*
-  7e *Aplite dikes.*
-  7f *Xenolithic granitic rocks.*
-  7g *Biotite-hornblende quartz diorite.*
-  7h *Hornblende monzonite.*
-  7j *Hornblende quartz monzonite.*
-  7k *Hornblende granodiorite.*
-  7m *Biotite-hornblende diorite.*

INTRUSIVE CONTACT

**EARLY FELSIC TO INTERMEDIATE
INTRUSIVE ROCKS**

-  6 *Unsubdivided.*
-  6a *Biotite trondhjemite.*
-  6b *Biotite-hornblende trondhjemite.*
-  6c *Biotite-hornblende diorite.*
-  6d *Migmatite.*
-  6e *Quartz porphyry, feldspar porphyry, and quartz-feldspar porphyry.*






INTRUSIVE CONTACT

**MAFIC AND ULTRAMAFIC INTRUSIVE
ROCKS**

ULTRAMAFIC INTRUSIVE ROCKS

-  5a *Dark green-black serpentinite.*
-  5b *Light blue-green serpentinite.*
-  5c *Talc-carbonate serpentinite.*
-  5d *Sheared serpentinite.*







MAFIC INTRUSIVE ROCKS

-  4a *Metagabbro.*
-  4b *Xenolithic metagabbro.*
-  4c *Porphyritic to equigranular diorite.*
-  4d *Hornblende.*
-  4e *Metagabbro dikes.*








INTRUSIVE CONTACT

**METAVOLCANICS AND
METASEDIMENTS**












METASEDIMENTS

-  3a *Greywacke.*
-  3b *Conglomerate.*
-  3c *Chert, chert breccia.*
-  3d *Quartzite.*
-  3e *Arkose.*
-  3f *Slate.*

**FELSIC TO INTERMEDIATE
METAVOLCANICS**

-  2 *Unsubdivided.*
-  2a *Tuff, lapilli-tuff.*
-  2b *Tuff-breccia, pyroclastic breccia.*
-  2c *Felsic flows.*
-  2d *Quartz-feldspar crystal tuffs.*
-  2e *Feldspar and/or quartz porphyry subvolcanic rocks.*
-  2f *Mirolitic subvolcanic rocks.*

**MAFIC TO INTERMEDIATE
METAVOLCANICS**

-  1 *Unsubdivided.*
-  1a *Amygdaloidal metavolcanics.*
-  1b *Pillowed metavolcanics.*
-  1c *Crenulated metavolcanics.*
-  1d *Laminated (possibly mafic tuffs in part) metavolcanics.*
-  1e *Medium-to coarse-grained metavolcanics.*
-  1g *Fine-grained metavolcanics.*
-  1h *Mafic breccia.*
-  1j *Amphibolitized metavolcanics.*
-  1k *Massive metavolcanics.*
-  1m *Garnetiferous metavolcanics.*
- 1n *Variolitic metavolcanics.*
- 1p *Porphyritic andesite.*
- 1q *Migmatized metavolcanics.*

- Ag *Silver*
- asp *Arsenopyrite*
- Au *Gold*
- cp *Chalcopyrite*
- gn *Galena*
- mo *Molybdenite*
- py *Pyrrhotite*
- py *Pyrite*
- q *Quartz*
- sp *Sphalerite*

GEOTEM Peak Response Symbols

ANOMALY	DECAY INTERVAL CLASSIFICATION	
☼	1-2 Channel (393, 549 microseconds)	
⊙	3-4 Channel (705, 862 microseconds)	
⊖	5-6 Channel (1018, 1174 microseconds)	
⊕	7-8 Channel (1330, 1487 microseconds)	
⊗	9-10 Channel (1643, 1799 microseconds)	
⊘	11-12 Channel (1955, 2112 microseconds)	

Magnetic Contours

	10 Gamma Contour Line
	50 Gamma Contour Line
	250 Gamma Contour Line

Magnetic Depression

1 Nanotesla (nT) = 1 Gamma

Note: Responses clearly identifiable as overburden are not represented on this map

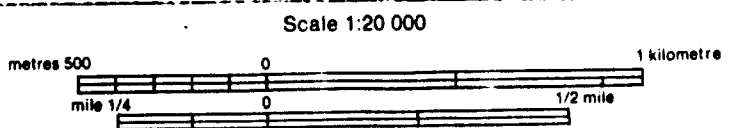
Mean magnetometer sensor altitude 120 metres
 Mean electromagnetic sensor altitude 40 metres
 Mean flight line spacing 200 metres
 Flight lines 250 N

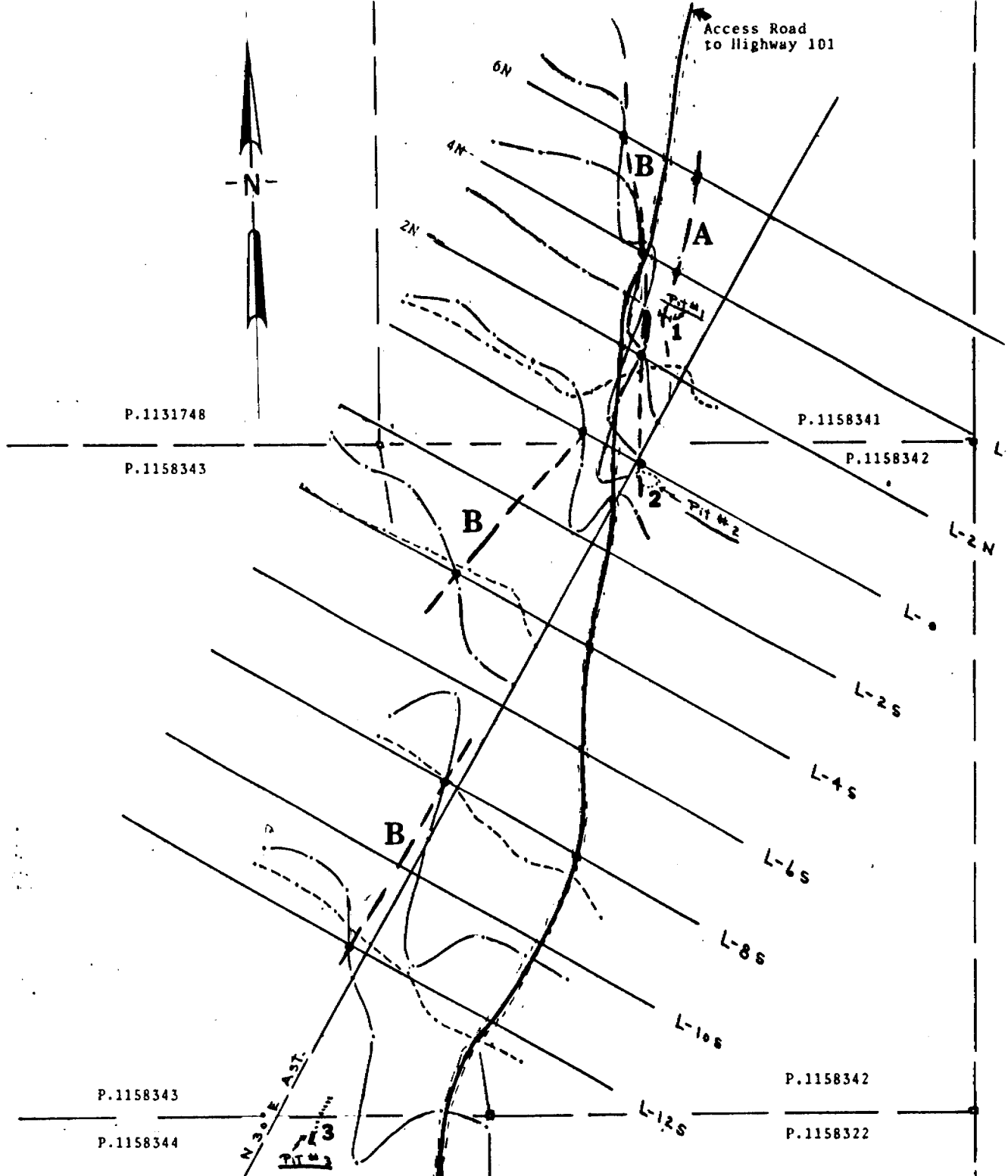
417S
418N
419S



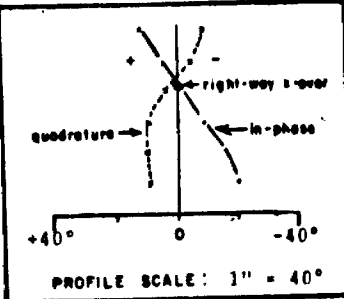
OGS Geophysical Map 81387 (1990)
 Airborne E.M./Total Mag.
 NORTH SWAYZE-MONTCALM AREA

HARDIMAN BAY PROPERTY
HORWOOD TOWNSHIP, ONTARIO
 Porcupine Mining Division





Instrumentation : Geonics EM-16
 Transmitter : NSS Annapolis, Maryland
 Date of survey : Sept. 8, 1990



VLF-EM SURVEY
 HARDIMAN BAY PROPERTY
 HORWOOD TOWNSHIP, ONTARIO
 Porcupine Mining Division
 Scale: 1 inch = 200 feet
 Drawn By: R. Denomme

3.0 STRUCTURAL GEOLOGY

All of the volcanic and sedimentary rocks are isoclinally folded and trend fairly uniformly N-NE throughout the property. Drag folding is localized.

The ODM have interpreted a south plunging anticlinal axis oriented N-S in the vicinity of Stangiff Lake. The writer found little evidence in support or dispute of this view. Faulting on the property appears to have economic importance and the writer has inferred most of the faults from air photo interpretation.

The Orofino deposit occurs at the locus of the junction of two regional fracture zones; the E-NE trending Hardiman Bay fault and a N-S fracture zone named the Orofino fault.

This same structural feature repeats itself at Stangiff Lake and at the Horwood Lake-Hardiman Bay junction. These latter areas deserve further attention for gold exploration.

4.0 ECONOMIC GEOLOGY AND RECOMMENDATIONS

Outside of the Orofino deposit itself, and the Gifford prospect, no other areas of economic gold mineralization were found during the course of this summer's mapping. However, the results of a humus sampling programme carried out by the writer has yielded some anomalous results which indicate the possibility that new gold mineralized zones do occur.

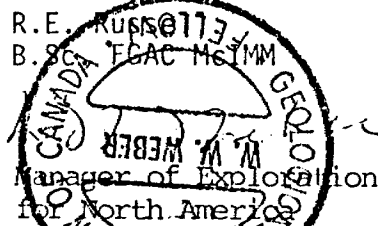
The writer favours the ground to the north of the present drilling activity as both gabbro, quartz and pyrite were found 400 metres north of the shaft area during the course of trenching a humus gold anomaly.

Anomalous gold in stream sediments also occur in this vicinity. The writer also feels that further humus sampling and lake bottom sediment sampling should be carried out around Stangiff Lake. In addition a similar programme of lake bottom sediment sampling should be carried out in the vicinity of the junction of the Horwood Lake-Hardiman Bay faults.

Respectfully,

R. E. Russell

R. E. Russell
B.Sc. FGAC McIMM
W. W. WEBER
Manager of Exploration
for North America

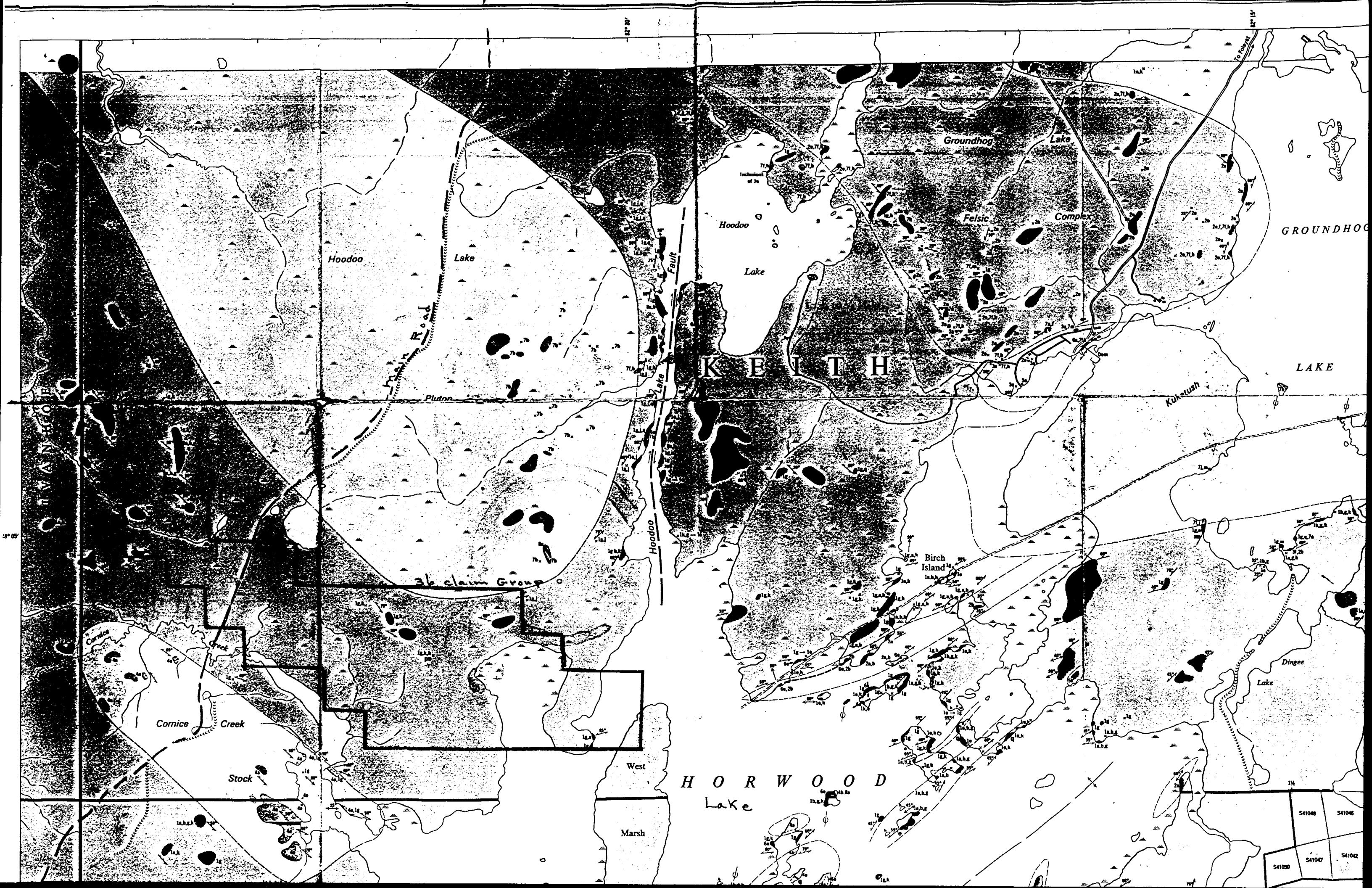




Prospecting with the aid of a VLF-EM 16 instrument in the South-West part of Keith Twp., following the release of Gov't. Airborne maps, has help in locating only one outcrop containing mineralization. The area in question is near a small lake. Locally the rock is banded green mafic tuff with narrow seams of fine grained pyrite. Assayed for gold... results: Nil. Instrument indicated strong zone south but no outcrop located.

An attempt was made to locate the pyrrhotite outcrop as shown on geologic map # 2329 (Hawood Lake) but were unsuccessful. E.M-16 instrument was used on several traverses and revealed a moderate anomaly covered by overburden.

36 mining claims were staked to cover this favorable area which may contain potential mineral deposit. Assessment files indicate that no work was ever performed or at least never recorded or filed to cover that area. Our staking was cut-off on the East by crews staking on behalf of Falconbridge. To the West, in Ivanhoe Twp., crews were staking for Noranda Expl.



Hoodoo

Lake

Main Road

Pluton

36 claim Group

Cornice Creek

Stock

West

Marsh

Hoodoo

Lake

KEITH

Groundhog

Lake

Felsic

Complex

Birch

Island

HORWOOD
Lake

GROUNDHOG

LAKE

Kukatush

Dingee

Lake

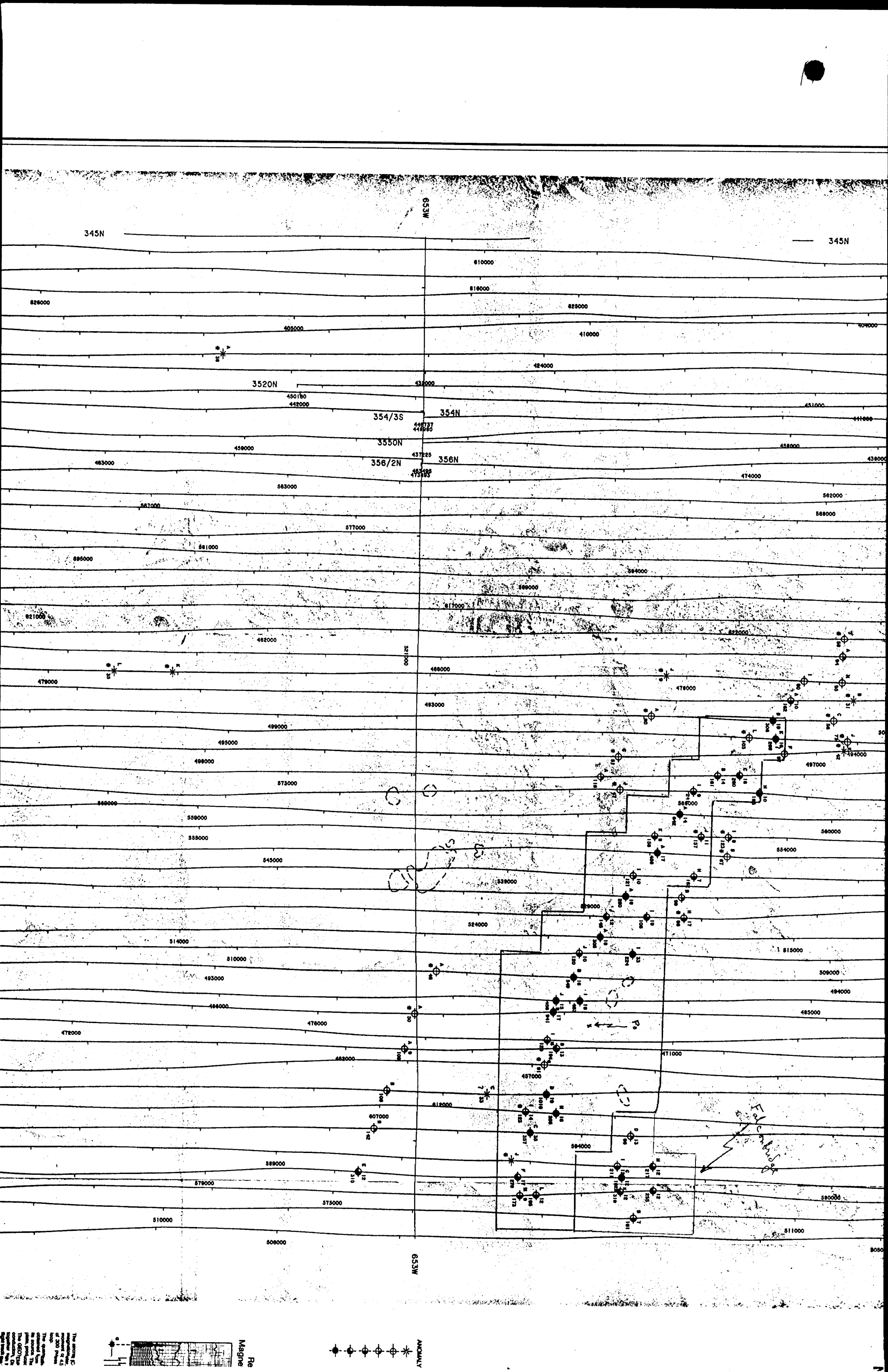
S4108

S4106

S4109

S4107

S4102



345N

345N

633W

633W

605W

The magnetic intensity contours are based on a magnetic field of 250 Gauss. The magnetic intensity contours are based on a magnetic field of 250 Gauss. The magnetic intensity contours are based on a magnetic field of 250 Gauss.

ANOMALY

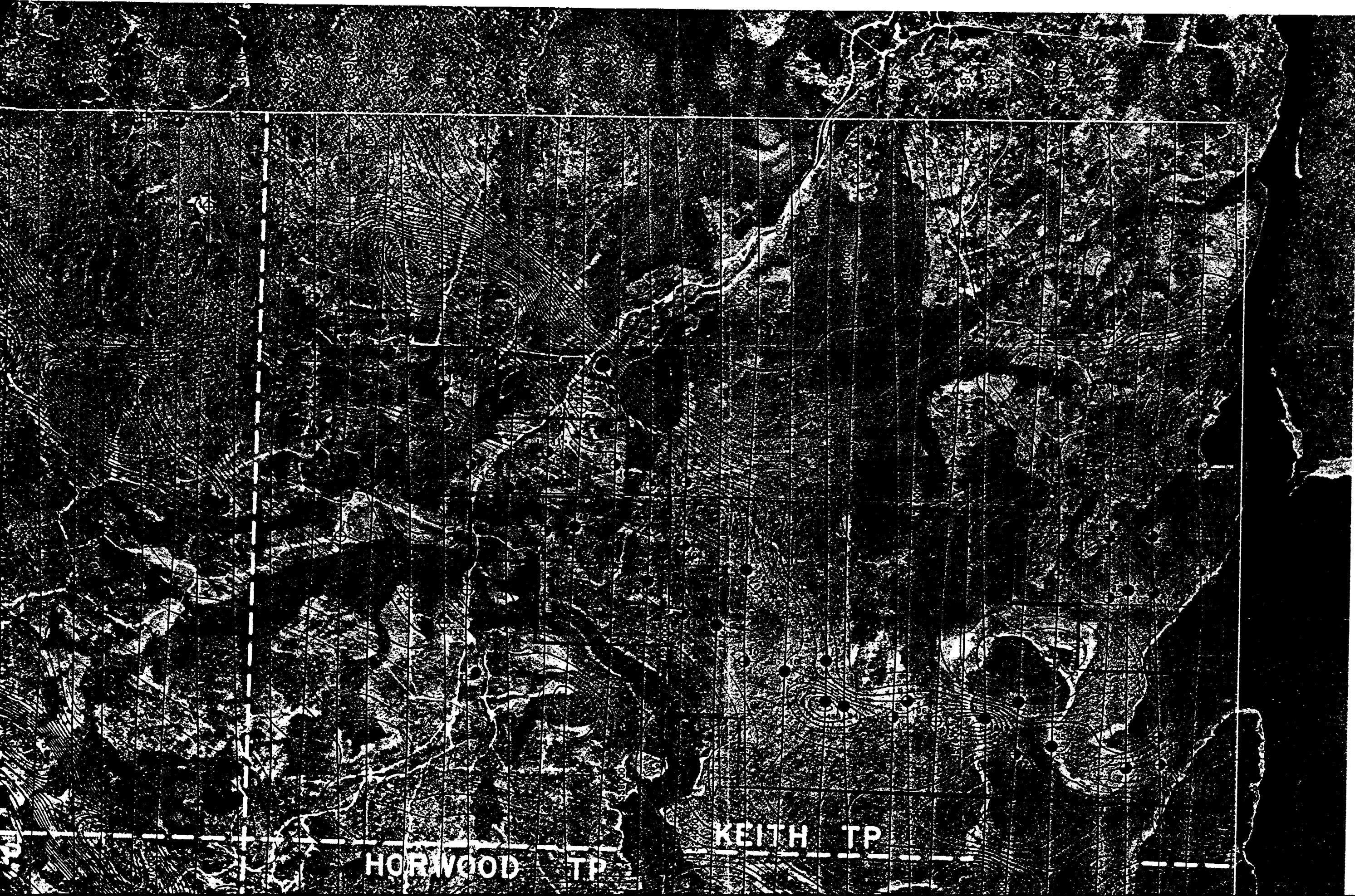
Fe-Cr bodies

P0

352N
450150
442000
354/3S
448737
446980
355N
437225
356/2N
463185
473193

Handwritten annotations and symbols, including a large 'C' and a dashed circle.

Thick black line outlining a complex magnetic anomaly pattern in the lower right quadrant of the map.



N

45

30

48°

3.0 M

1.5 M

7.5 M

6.0 M

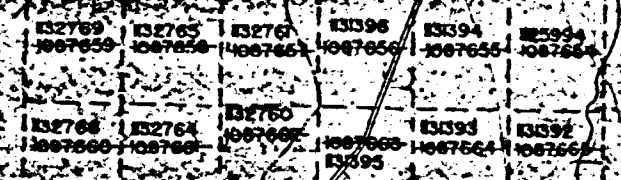
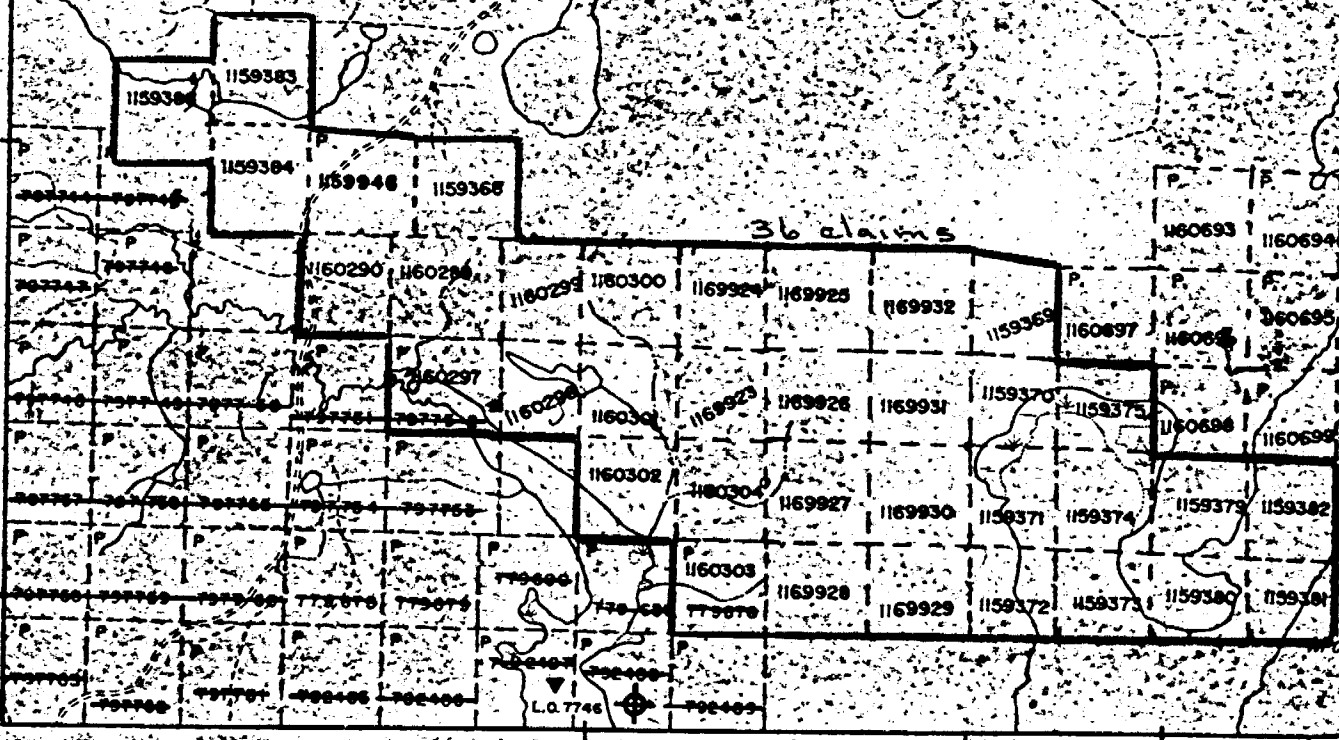
4.5 M

3.0 M

1.5 M

HORWOOD TWP

36 claims



Hooded Lake 7746

Horwood

Birch

L.O. 7746

L.O. 7746

Ground

Lake

Potato

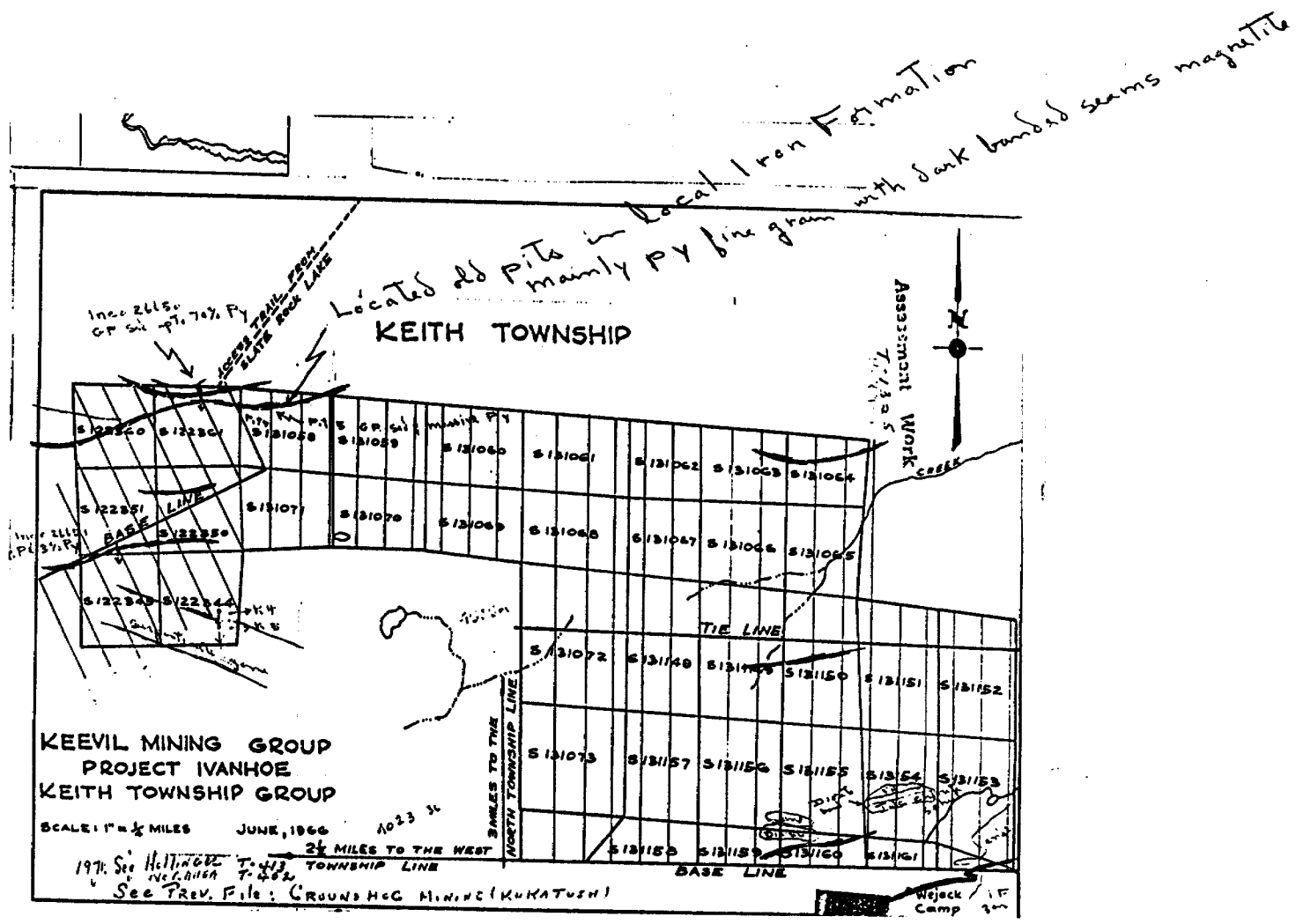
Dingee Lake

St

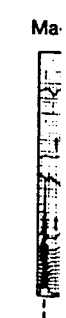
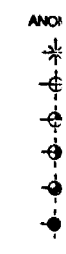
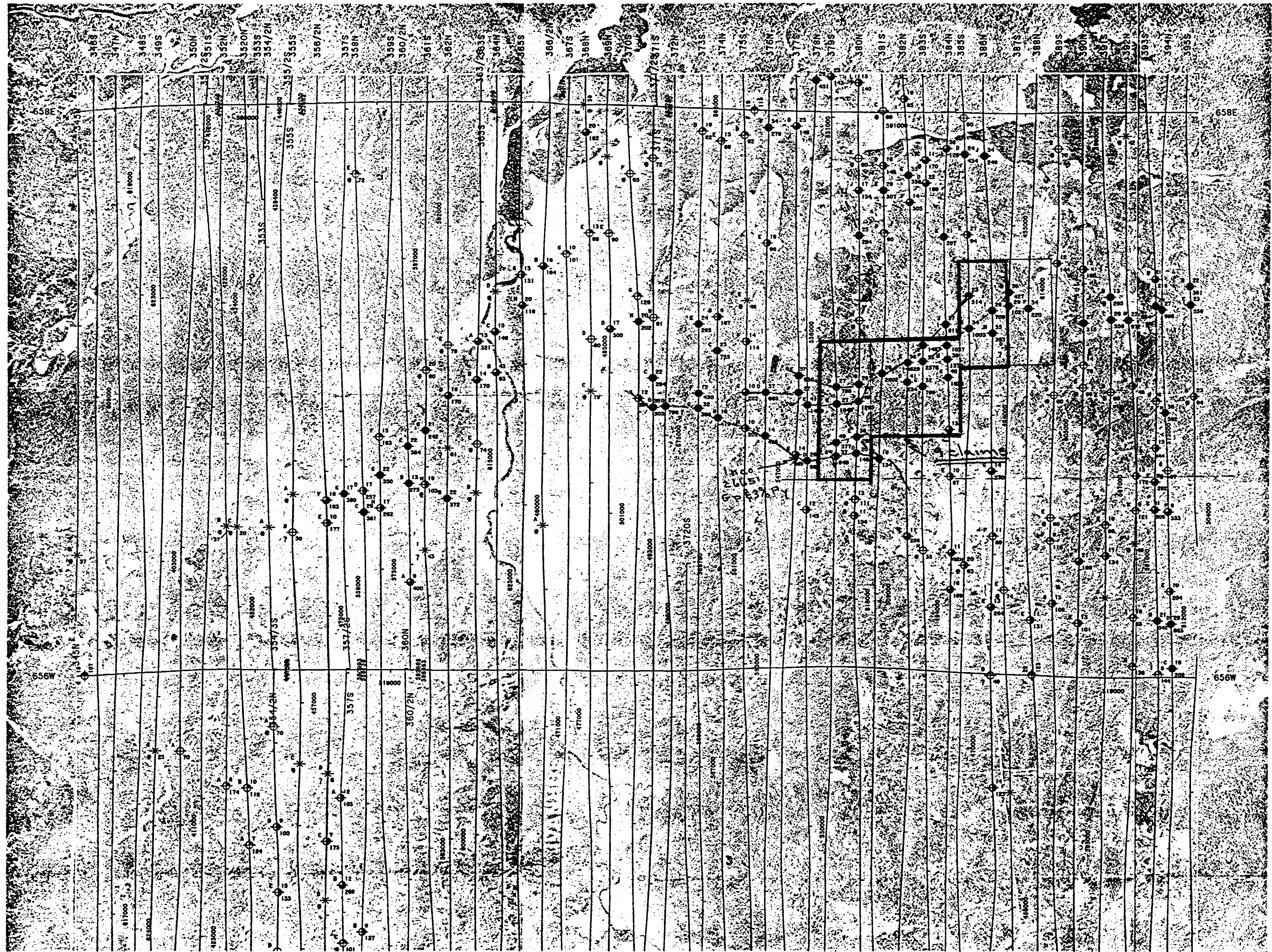
Keith Twp.

Prospecting with VLF EM-16 in the North-West Keith Twp. area, using Gov't Airborne E.M. Maps, revealed the presence of two, and possibly three, separate zones of anomalous readings. Research of assessment files in Timmins Office indicated old test pits in that area were dug by Kevil Mining in 1966. Three of these pits were located in the field and appear to straddle a long linear anomaly indicating the presence of an Iron Formation.

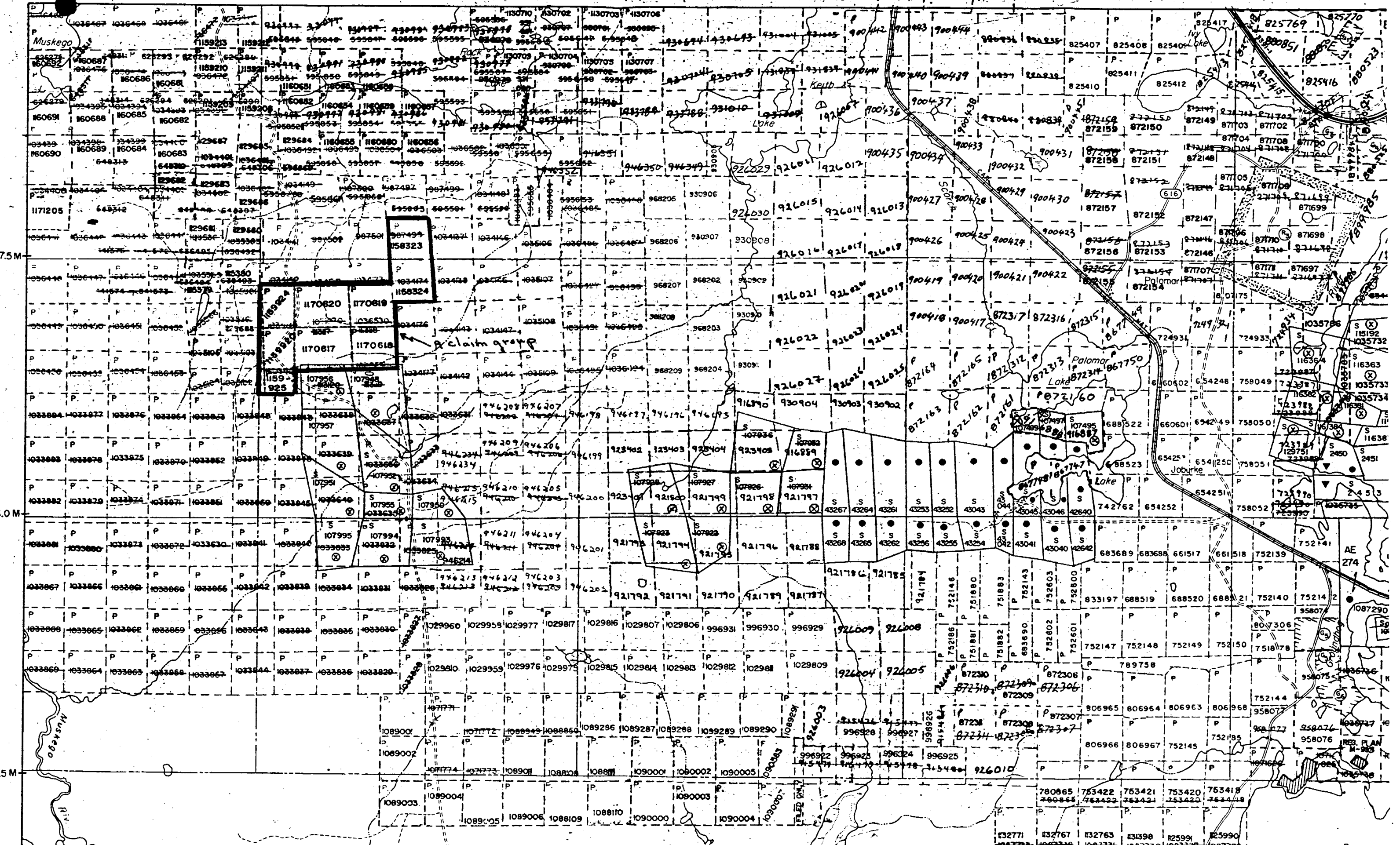
A zone 200 ft. north of the above mentioned I.F. was traced and traversed with the E.M.-16 but no outcrop or pits located. Another anomalous zone was identified near the main road at mileage 6 and appears to be a parallel zone of banded I.F. (iron formation). These zones were not drilled or sampled due to overburden. Nine mining claims were subsequently staked.



1" = 1/2 mile



MUSKEGO TWP.





Established 1928

Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Assay Certificate

0W-1231-RA1

Company: **PLACER DOME**
 Project: **205**
 Attn: **J. GARDINER**

Date: **AUG-27-90**
 Copy 1. BOX 670, SOUTH PORCUPINE POND III

We hereby certify the following Assay of 19 ROCK samples submitted AUG-23-90 by .

Sample Number	Au g/tonne	Au check g/tonne	Pt g/tonne	Pd g/tonne
12707	0.02			
12708	1.46	1.17		
12709	0.02			
12710	1.37	1.27		
12711	0.04			
12712	0.01			
12713	0.56			
12714	0.09			
12715	Nil			
12716	0.01			
12717	1.51	1.92		
12718	0.01		<0.01	<0.005
12719	0.01		<0.01	<0.005
12720	1.72			
12721	0.22			
12722	0.02			
12723	0.06			
12724	0.04			
12725	0.01			

COPY
















Certified by _____

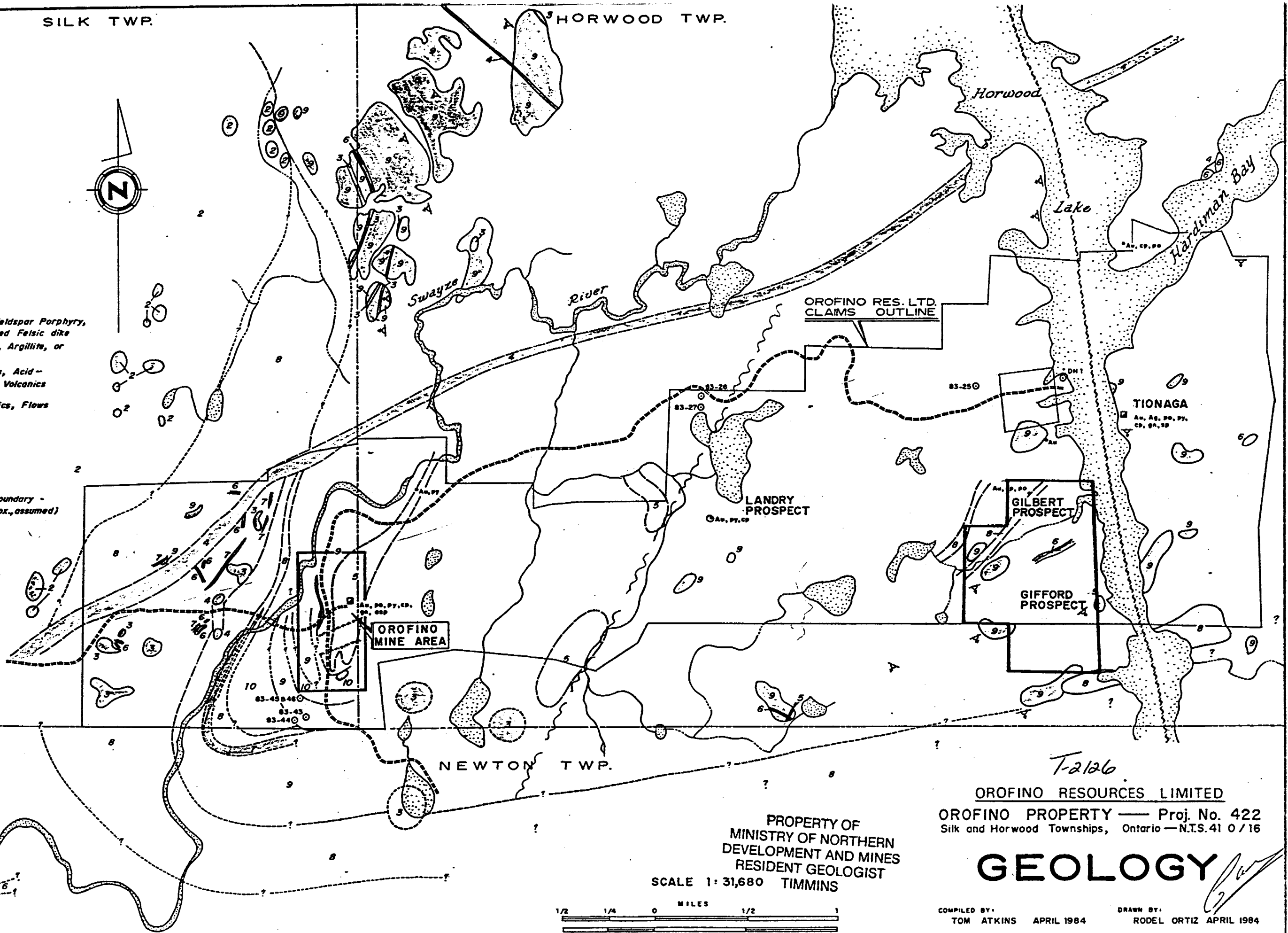
G. Lebel / Manager

SILK TWP.

HORWOOD TWP.

LEGEND:

-  Quartz Vein
-  Granite
-  Gabbro
-  Diabase
-  Diorite
-  QFP, FQP, Feldspar Porphyry, or unsubdivided felsic dike
-  Chert, Shale, Argillite, or Greywackes
-  Metavolcanics, Acid-Intermediate Volcanics
-  Basic Volcanics, Flows
-  Tuffs
-  Drill hole
-  Outcrop
-  Geological boundary - (defined, approx., assumed)
-  Fault
-  Pillow



KENTY NORTH

NEWTON TWP.

PROPERTY OF
 MINISTRY OF NORTHERN
 DEVELOPMENT AND MINES
 RESIDENT GEOLOGIST
 SCALE 1:31,680 TIMMINS



T-2126
 OROFINO RESOURCES LIMITED
 OROFINO PROPERTY — Proj. No. 422
 Silk and Horwood Townships, Ontario — N.T.S. 41 O / 16

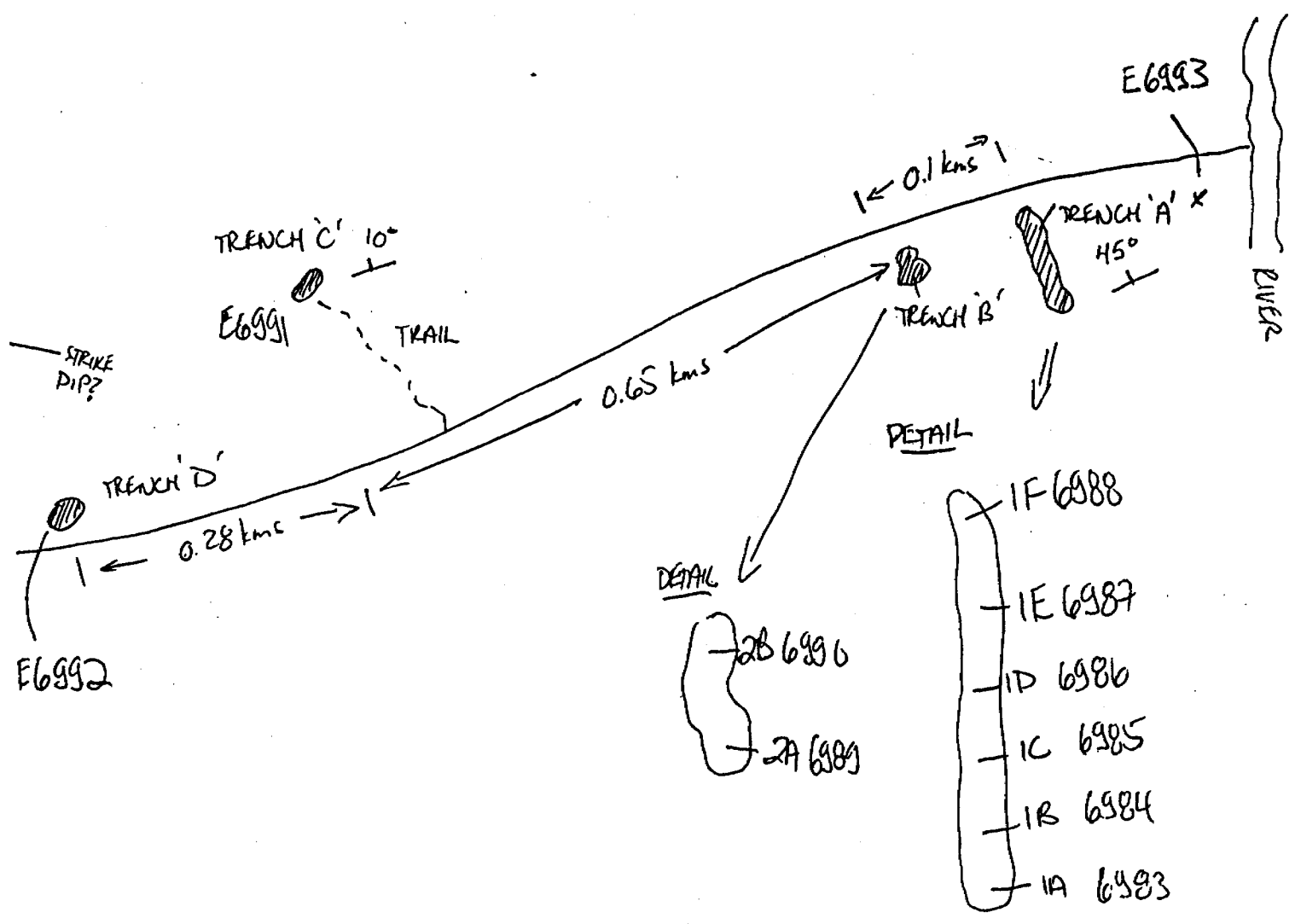
GEOLOGY

COMPILED BY: TOM ATKINS APRIL 1984
 DRAWN BY: RODEL ORTIZ APRIL 1984

SAMPLING SKETCH
 ROGER DENOMEE
 HORWOOD TWP.

Sept 24th 1990

↑ NORTH



Sample descriptions

Pb, Cu, Zn, Pb, Pt, Ni

Sample #	Description
E6983	Schistose mafic volcanic 10% Qtz vein, 10% Py, Pb Heavily oxidized Contact (south) of sulphide zone
E6984	30% massive Pb, 1% Cpy as splashes. - 10% quartz frag' and intensely sericitic groundmass
E6985	a.a. but with 1.5% Cpy. Abot graphite. in matrix - 2% sphalerite
E6986	70% massive Pb with 30% Qtz + mafic breccia frag'. 1% Cpy in sulphide fraction, sph.
E-6987	aa. but with 4% graphite intensely brecciated appearance
E6988	mafic dyke - Traces of hem and pyrite in mafic volcanics surrounding dyke.
E6989	15% Pb and 1% Cpy. Intensely silicified and sericitized groundmass. abot FeO
E6990	5% quartz vein, 10% Pb groundmass silicified.

Samples (continued)

II

E6991

Iron Formation "intensely banded". 49%
pyrite + Po. Chert bands and
FeO. Py recrystallized.

E6992

15% Pyrite + Po (l) in banded
chert iron formation. Traces ($\leq 1\%$) Cop.
? bornite.

E6993

80% milky white quartz - 10% chloritic
wall rock ffg', H's pyrite - H's sericite
(? Mo, Barite or Graphite?)



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Page 1 of 2

OW-1453-RA1

Assay Certificate

Company: **PLACER DOME INC.**
 Project: 205
 Attn: J. GARDINER

Date: OCT-01-90

Copy 1. C.P. 670, SOUTH PORCUPINE, ONT. TON 1H0
 2. FAX TO 233-5044

We hereby certify the following Assay of 42 GRAB samples submitted SEP-25-90 by J. GARDINER.

Sample Number	Au Au check g/tonne	Ag g/tonne	Cu %	Mn %	Ni %	Pb %	W %	Zn %	Pt ppb
E-6801	Nil	32.2	1.53			0.03		0.03	
E-6802	0.01	39.6	1.83			0.02		0.01	
E-6803	Nil	34.6	1.62			0.07		0.02	
E-6804	0.51	0.48	177.2	1.47		3.28		1.78	
E-6805	0.02		0.03			0.11		0.00	
E-6806	0.01		0.03			0.005		0.005	
E-6807	Nil		0.02			0.01		0.01	
E-6808	0.02		0.02			0.02		0.01	
E-6809	Nil		0.01			0.005		0.01	
E-6810	Nil		0.005			0.005		0.005	
E-6812	Nil								
E-6813	0.01								
E-6814	0.01								
E-6815	0.01								
E-6816	0.02								
E-6817	Nil								
E-6818	0.01								
E-6819	0.02								
E-6820	0.10								
E-6821	0.12	0.12							
E-6822	0.13								
E-6823	0.09								
E-6824	0.05								
E-6825	0.08								
E-6826	0.07								
E-6827	0.02								
E-6828	0.04								
E-6829	Nil								
E-6983	0.03		0.02		0.005	0.03			<10
E-6984	0.03		0.18		0.01	0.01			<10

Certified by G. Lebel
 G. Lebel / Manager



Established 1928

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Assaying - Consulting - Representation

Page 2 of 2

0W-1453-RA1

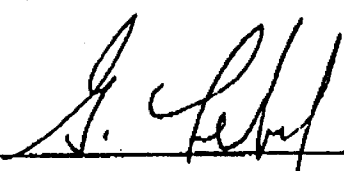
Assay Certificate

Company: **PLACER DOME INC.**
 Project: **205**
 Attn: **J. GARDINER**

Date: **OCT-01-90**
 Copy 1. C.P. 670, SOUTH PORCUPINE, ONT. P0N 1H0
 2. FAX TO 235-5044

We hereby certify the following Assay of 42 GRAB samples submitted SEP-25-90 by J. GARDINER.

Sample Number	Au g/tonne	Au check g/tonne	Ag g/tonne	Cu %	Mn %	Ni %	Pb %	W %	Zn %	Pt ppb
E-6985	0.03			0.16		0.01	0.02			<10
E-6986	0.03			0.21		0.01	0.01			<10
E-6987	0.02	0.02		0.10		0.01	0.04			<10
E-6988	0.01			0.02		0.005	0.03			<10
E-6989	0.01			0.06		0.01	0.005			<10
E-6990	0.01			0.08		0.01	0.01			<10
E-6991	0.01			0.13		0.02	0.005			<10
E-6992	Nil			0.03		0.02	0.005			<10
E-6993	Nil				0.005		0.01			
E-6994	Nil									
E-6995	0.02									
E-6996	0.02									

Certified by 
 G. Lebel / Manager

MIN-BN LABS — ICP REPORT

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
 (604)980-5814 OR (604)988-4524

: BNP UTAH MINES
 : 1113
 : B.NIELL

MPLE MBER	AL2O3 %	BA %	BE %	CAO %	CO %	CR2O3 %	CU %	FE2O3 %	K2O %	HGO %	MNO2 %	MO %	NA2O %	NI %	P2O5 %	PB %	SI02 %	SR %	TIO2 %	V %	W %	ZN %	ZR %
1581	6.88	.010	.001	.21	.005	.02	.135	38.98	1.21	1.10	.02	.005	.68	.005	.14	.020	37.59	.01	.21	.005	.005	1.165	.005
1582	6.23	.010	.001	.29	.005	.03	.060	40.11	1.17	1.01	.03	.005	.69	.005	.14	.020	36.83	.01	.20	.005	.005	1.290	.005
1583	7.19	.005	.001	.12	.005	.02	.065	38.15	1.25	1.28	.04	.005	.52	.005	.09	.065	37.63	.01	.23	.005	.005	1.975	.005
1584	1.86	.005	.001	1.26	.005	.05	.080	23.12	.11	2.69	.05	.005	.15	.015	.28	.010	63.61	.01	.08	.005	.005	.030	.005
1585	15.27	.025	.001	10.24	.005	.06	.010	7.01	1.11	4.82	.14	.005	1.62	.015	.34	.010	56.08	.02	.64	.015	.005	.010	.010
1586	7.20	.015	.001	.45	.005	.03	.040	28.93	1.13	2.35	.06	.005	.95	.005	.17	.020	47.65	.01	.26	.005	.005	.935	.005
1587	7.87	.005	.001	.78	.005	.04	.070	22.01	.32	2.42	.72	.005	.20	.005	.18	.005	56.31	.01	.25	.005	.005	.370	.005

DENOMME SUBMITTAL - HOTWOOD TWP.

1581 - 1583 - GRAB SAMPLES OUT OF MAIN
 BLASTED TRENCH (PIT #1)

1584 - GRAB 21400' SOUTH OF PIT #1
 IN RUSTY SEDIMENT.

1585 - GRAB OF SEDIMENTS ON WEST SIDE
 OF ROAD 2900' S OF PIT 1

1586 - GRAB OF GOSSAN SULPHIDES 100' SOUTH
 OF PIT #1

1587 - GRAB PIT #1

1588 - GRAB OF MINERALIZED QZ MASS N. OF PIT #1



T S L LABORATORIES

DIVISION OF BURGENER TECHNICAL ENTERPRISES LIMITED

2031 RIVERSIDE DRIVE, UNIT #2
TIMMINS, ONTARIO
P4N 7C3

☎ (705) 268-4441 FAX: (705) 268-4420

CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM Falconbridge Exploration Ltd.
571 Moneta Ave.
P. O. Box 1140
Timmins, Ontario
P4N 7H9

REPORT No.
W4745

INVOICE #: 4709
P. O. :

SAMPLE(S) OF rock

Neil Provins
project 8127

Hardiman

	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm
AF03667	60	3.6	1930	310	13000	66
AF03668	10	2.4	945	115	5800	47
AF03669	10	0.8	475	25	420	140

COPIES TO: Neil Provins
INVOICE TO: Neil Provins

Oct 02/90

SIGNED _____

[Handwritten Signature]





Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Geochemical Analysis Certificate

OT-0614-RG1

Company: **ASARCO EXPL. LTD.**
 Project: **AQUARIUS MINE**
 Attn: **JOHN REDDICK**

Date: **OCT-03-90**
 Copy 1. P.O. BOX 130, PORCUPINE, ONT. P4N 1C0

We hereby certify the following Geochemical Analysis of 5 ROCK samples submitted OCT-02-90 by JOHN REDDICK.

Sample Number	Au ppb	Ag ppm	Cu ppm	Ni ppm	Pb ppm	Zn ppm
5001	58/55	2.8	921	153	4	50 #3
5002	Nil	0.8	952	205	1	151 #4
5003	34	2.6	1400	142	66	9260 } Muck #1
5004	34	2.8	1760	148	187	9480
5005	43	3.2	1560	161	188	13600

Part #1
Bottom

Certified by *G. Lebel*
 G. Lebel / Manager



Established 1928

Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Geochemical Analysis Certificate

01-0540-RG1

Company: **NORANDA EXPL. CO. LTD.**
 Project: **250**
 Area: **R. CALHOUN**

Date: **SEP-13-90**
 Copy 1. P.O. BOX 1205, TIMMINS, ONT. P4N 7J5
 2. FAX TO 268-9372

We hereby certify the following Geochemical Analysis of 4 ROCK samples submitted SEP-12-90 by R. CALHOUN.

Sample Number	Au pph	Ag ppm	Cu ppm	Zn ppm
22979	24/27	3.0	3470	18500
22980	7	2.8	2700	8390
22981	10	2.0	1480	809
22982	24	2.4	1580	31700

Ross Morin
Hardeman Bay

Certified by *G. Lebel*
 G. Lebel / Manager

P.O. Box 10, Swastika, Ontario P0K 1T0
 Telephone (705)642-3244 FAX (705)642-3300

Asarco Exploration

63.5991
OP90-549

R.S. Gray
Manager

October 23, 1990

Mr. Roger Denomme
387 Brousseau Avenue East
Timmins, Ontario
P4N 5Z2

Horwood Township Agreement

Dear Mr. Denomme,

Enclosed are seven copies of the agreement dated October 4th, 1990, concerning 33 mining claims in Horwood Township, plus a net proceeds royalty on 17 Asarco claims in the same township. Asarco has executed the agreement. When it has been executed by all four of the Optionors, please return three copies to Asarco and distribute one copy to each Optionor.

You will note that the final agreement has been changed from the draft agreement in six places. This incorporates the ceiling on interest rates which you requested, and the addition of your address for notice. The other changes clarify but do not change the intent expressed in the draft.

Thank you for attending to this matter promptly. We hope that Asarco's exploration program will produce favourable results for our mutual benefit.

Yours truly,



R.S. Gray

RSG:mi

Attach:

- 1) Letter from D.E. Hill Oct. 22/90
- 2) Seven Copies of Agreement

COMINCO LTD. TOR.

BASEMETAL GEN.

TL-20B

OCT4/90

ROCK

SAMPLE #		Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb
1 13409	Tr. 1	1300	186	14200	5	<10
2 13410	Tr. 3	2600	33	295	7	<10
3 13411	Tr. 4	397	30	131	3	<10
4 13412	Granite.	11	10	32	1	10

Howood - Hardiman Bay sulphide zone

cc Roger Dum.



T S L LABORATORIES

DIVISION OF BURGNER TECHNICAL ENTERPRISES LIMITED

2031 RIVERSIDE DRIVE, UNIT #2
TIMMINS, ONTARIO

P4N 7C3

☎ (705) 268-4441 FAX: (705) 268-4420

CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM Granges Inc.
136 Cedar Street South
Timmins, Ontario
P4N 2G9

REPORT No.
W4768

SAMPLE(S) OF rock

INVOICE #: 4730
P.O.:

Heather Miree
Prex05

~~XXXXXXXXXX~~ Howwood Twp

		Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm
Pit No 1	H - 1	15	0.6	355	68	6100
"	H - 2	25	2.4	1610	82	11500
Pit No 3	H - 4	25	4.0	2290	13	700
"	H - 6	60	5.6	4080	18	160

COPIES TO: Heather Miree
INVOICE TO: Heather Miree

Oct 04/90

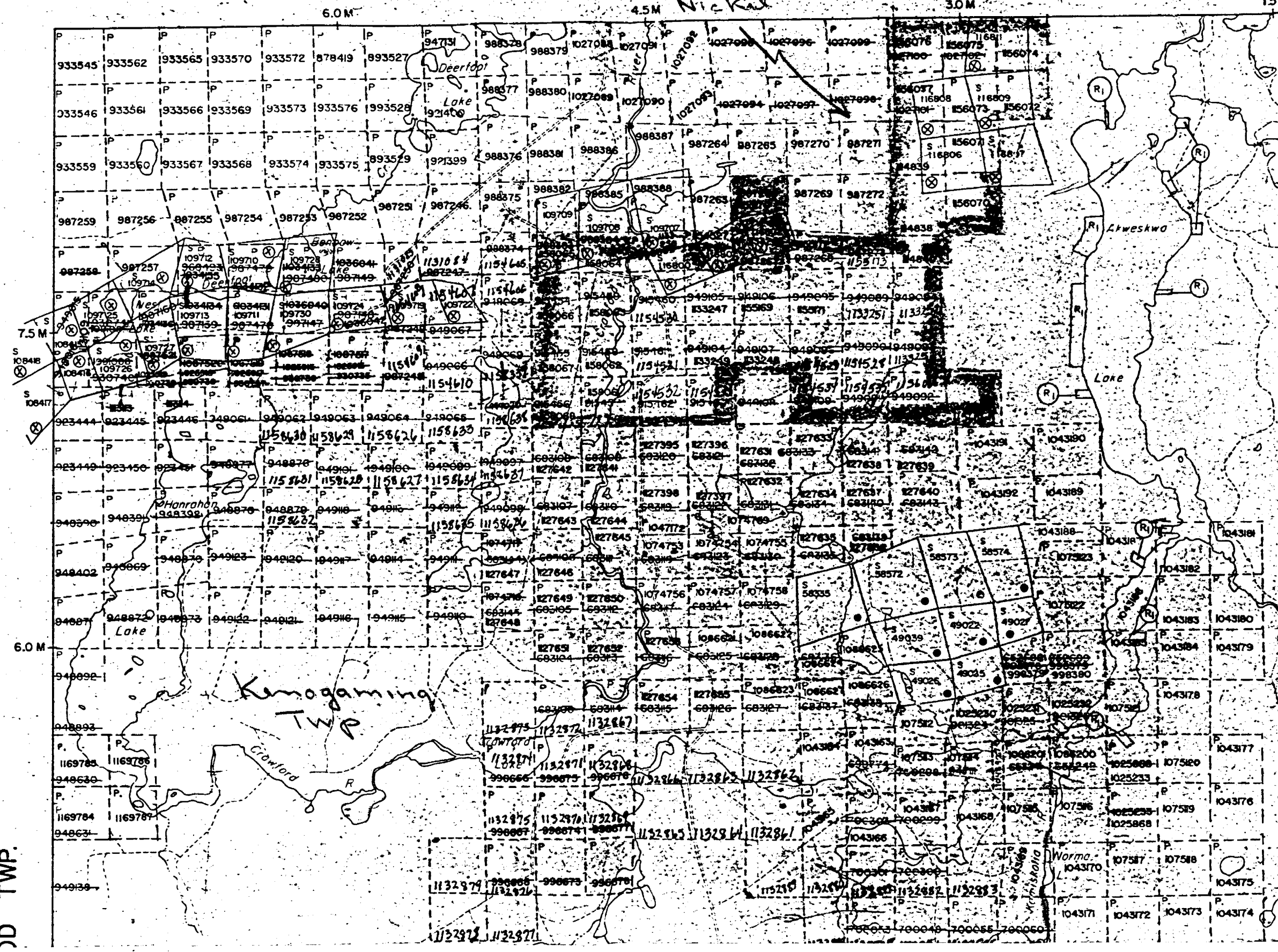
SIGNED _____



For enquiries on this report, please contact Customer Service Department.
Samples, Pulps and Rejects discarded two months from the date of this report.

Area optioned
To Timmins Nickel

SEWELL TWP



DD TWP.

Swayze Area

Prospecting in the Swayze "greenstone belt" area was concentrated in the townships of Dore, Garnet, Heenan and Benton. Access is by a logging road going south from Hwy. 101 approx 5 miles east of the town of Foleyet.

New logging roads in these townships have recently been constructed by E. B. Eddy Forest Products Ltd. and Foleyet Timber Ltd. These new secondary roads have virtually opened-up areas that were unaccessible by vehicle in past years. Also, road building equipment have stripped outcrops along these roads, making it easier to identify rock types and hopefully to locate new "showings"

With the aid of a VLF-EM 16 and Gov't Airborne maps along with geologic maps, the author and a helper attempted to locate gossan zones and/or quartz veins of economic values. Several traverses were made away from roads and skidding trails.

No new showing for base metal was uncovered nor any major quartz vein (Siliceous Ore) of any size in this area

The Massey Twp airborne anomaly will require a grid line control in order to perform a detail geophysical survey. The basic rocks encountered (gabbros) are not rusted on surface and would therefore indicate that the mineralization does not outcrop. The area is not too accessible. Two mile walk is required to reach the area in question.

T. C. Denman



WANTED

Siliceous Ore

FALCONBRIDGE
THE KIDD CREEK DIVISION OF FALCONBRIDGE
LIMITED SEEKS PRECIOUS METAL-BEARING
SILICEOUS ORE FOR SMELTER FLUX AT ITS
COPPER SMELTER, IN TIMMINS, ONTARIO.
FOR COMPLETE DETAILS CONTACT

FALCONBRIDGE LTD.
KIDD CREEK DIVISION

ATTN: HARVEY CARON
PURCHASING DEPARTMENT

P. O. BAG 2002 TIMMINS
ONTARIO
P4N 7K1

PHONE: (705) 235-7702

MAY 20 1978

AUG. 31/90	0047	EQUIP. RENTAL	250.00	T	250.00		ROGER DENOMME
AUG. 31/90	0047	" "			250.00	250.00	ROGER DENOMME
DATE	REF	DESCRIPTION	TOTAL CHARGES THIS INVOICE	CREDITS	BALANCE	PREVIOUS BALANCE	NAME

TRANS-CAMBRIAN EXPLORATION LTD.
 43 WILSON AVENUE
 TIMMINS, ONTARIO
 P4N 2S8

PLEASE PAY THIS AMOUNT

0047

TEL.: (705) 268-4313
 FAX: (705) 268-2517

Please act on this COMBINED INVOICE / STATEMENT
 as no other notice will be sent.

SOLD TO Roger Denomme
 387 Brousseau Ave
 Timmins, ON
 P4N 5Z2

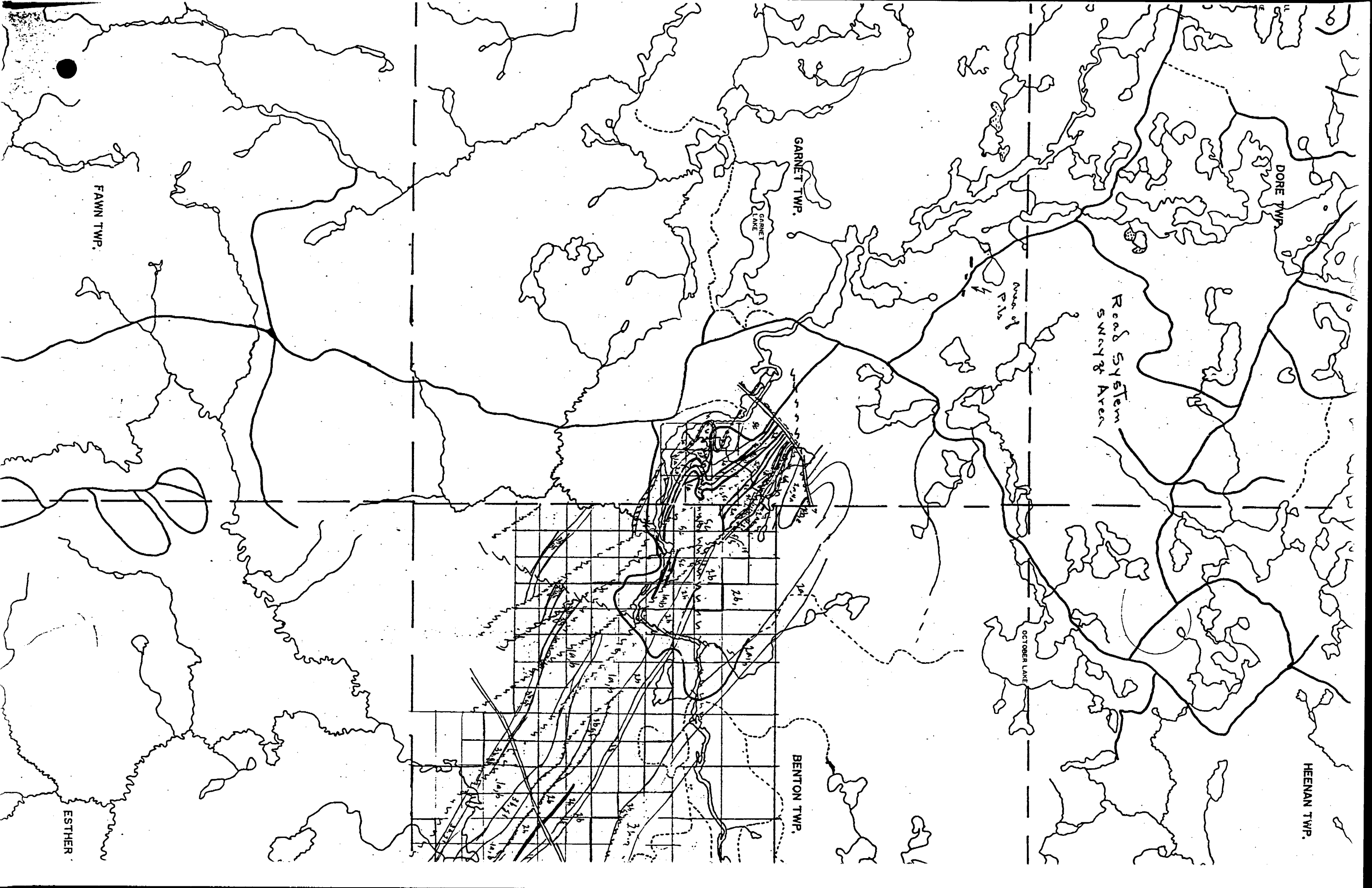
SHIP TO Rental - EM 16

DATE SHIPPED VIA ORDER NUMBER

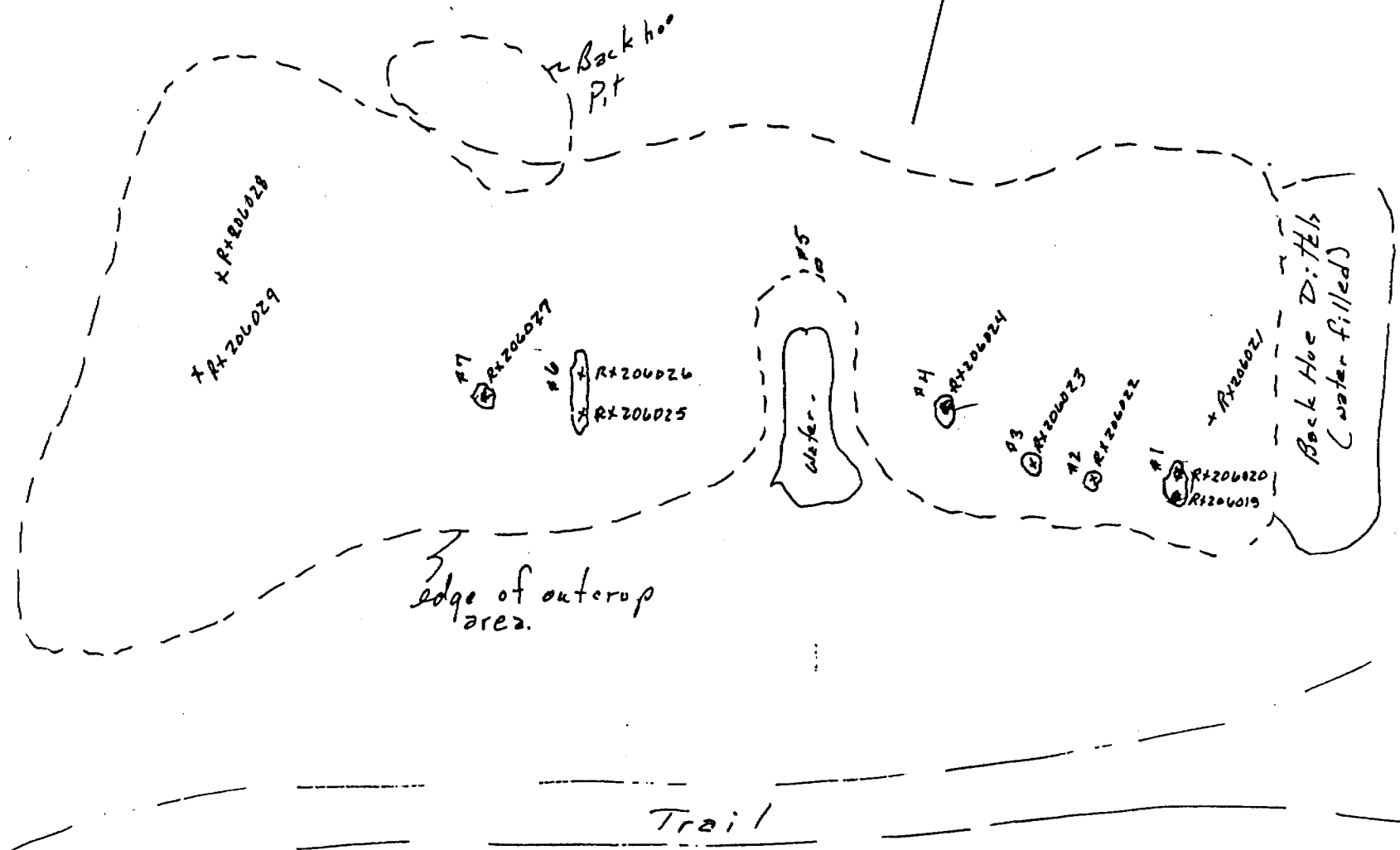
DATE	QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT
Aug. 31/90		Rental of Equipment (1) Geonics EM-16 Aug. 20 to Aug. 25/90 5 days @ \$50.00		\$ 250 00

CLAIM STAKING - LINE CUTTING.
 GEOPHYSICAL SURVEYS
 CONTRACT MANAGEMENT
 DRAFTING SERVICES.

SUB-TOTAL		
TOTAL THIS INVOICE		\$ 250 00



claim # P-1154527



○ #1 Pit outline & Number
 x Rock Sample Location
 R206019 Sample Number

INCO EXPLORATION
 Denomme "Ni" Property
 Sample Location Map
 Scale: 1:250
 NTS: 42-A-4

Exp/JP/WOM.

R. Denomme Property
Keweenaw Twp 42-A-4

FIELD EXP GEOL RESEARCH

ANALYZED ON: 1990-8-8
TO: R. DUTCHBURN
ANALYSIS IN: %

FILE: 01900808.AST

60301-50001
Rx 206019-029 - ICP + PM's @ cccc

SPLE NO.	SPLE. IDENTIFICATION	Cu	Ni	Co	Fe	S
RX206019	FIELD EXPLORATION	0.109	1.06	0.0417	10.6	3.17
RX206020	FIELD EXPLORATION	0.152	1.07	0.0439	13.1	3.53
RX206021	FIELD EXPLORATION	0.0266	0.0791	0.0150	8.65	0.590
RX206022	FIELD EXPLORATION	0.121	0.566	0.0320	11.1	2.16
RX206023	FIELD EXPLORATION	0.0209	0.235	0.0111	7.61	0.303
RX206024	FIELD EXPLORATION	0.302	1.46	0.0545	11.7	4.45
RX206025	FIELD EXPLORATION	0.194	0.446	0.0219	11.0	0.916
RX206026	FIELD EXPLORATION	0.0786	0.234	0.0158	8.42	0.893
RX206027	FIELD EXPLORATION	0.0960	0.934	0.0344	8.25	1.85
RX206028	FIELD EXPLORATION	0.0487	0.112	0.0165	8.73	0.676
RX206029	FIELD EXPLORATION	0.0532	0.213	0.0121	7.89	0.219

? ? ?

August 16, 1990

Mr. R. Denomme
387 Brousseau Avenue
Timmins, Ontario
P4N 5Z2

Dear Mr. Denomme:

Re: Kenogaming Township Nickel Prospect, NTS: 42-A-4

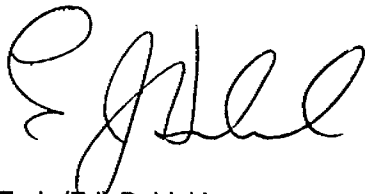
We have completed our evaluation of the nickel prospect, located in Kenogaming Township, Ontario. Regretfully, we have concluded that this property is not of interest to Inco Exploration and Technical Services, Inc. at this time.

A copy of the Sample Location Map and the assay results are attached.

Thank you for bringing the property to our attention and allowing us the opportunity to carry out our evaluation. We wish you every success in the continued exploration of the Kenogaming property.

If you have other properties which you feel may be of interest to Inco Exploration, we would welcome the submission of these properties.

Yours truly,



E. J. (Ed) Debicki
Manager of Exploration - Ontario

JP/mc

Attachments:

INCO EXPLORATION AND TECHNICAL SERVICES INC.

Field Exploration Office
Highway 17 West, Copper Cliff, Ontario P0M 1N0 • (705) 682-8451

MAGNETOMETER SURVEY

B. Results and Interpretation

The ultramafic rocks have a consistently high magnetic susceptibility, but slightly lower than the banded iron formation. Their continuity between outcrops is excellently displayed from the magnetic results. The contacts of the ultramafic belt which appear to strike in a predominantly east-west direction were extended between outcrop areas with the use of the magnetic data. Their high magnetic susceptibility is due to magnetic content in the silicate matrix of the ultramafics which are dunitic in composition. Magnetite content is also increased from a talc carbonate alteration which ultramafics have suffered. The product of this alteration is polygonal joints containing talc, magnesite, alteration halos along the joints with magnetite veins in the joint mid sections. This has led to an increase in magnetite content and thus magnetic susceptibility of the rock. The magnetic data was extremely helpful in determining that the ultramafics were in some cases of an intrusive nature. They appear to cross cut local bedding strike west of Chabot Lake. Rock types amphibole gabbro and diabase had less magnetic susceptibility and appeared less distinct on the magnetic contour plans. Interpretation over these rock types is not as straight forward and more restrictive in scope. The rock types of lowest magnetic susceptibility, granite, and the volcanics, were interpreted mainly from bedrock information. Areas of low magnetic susceptibility near granite and volcanic outcrops were assumed to be underlain by these rocks.



Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

RECEIVED

JUL 8 1990

NORANDA EXPLORATION
CO. LTD.
TIMMINS, ONT.

Assay Certificate

0W-0869-RA1

Company: **NORANDA EXPLORATION CO. LTD.**
Project: 250
Attn:

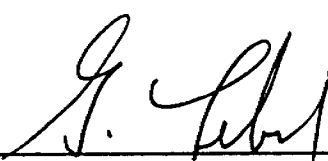
Date: JUN-27-90

Copy 1. BOX 1205, TIMMINS, ONT P4N 7J5
2. FAX TO 268-9572

We hereby certify the following Assay of 3 ROCK samples submitted JUN-22-90 by R. CALHOUN.

Sample Number	Au g/tonne	Au check g/tonne	Ag ppm	Cu ppm	Mo ppm	Ni ppm	
22925	0.03	0.03	1.4	.2650		14400	1.44%
22926	0.01		0.5		.5310		} East
22927	0.01		0.3		.1750		

Certified by


G. Lebel / Manager

P.O. Box 10, Swastika, Ontario P0K 1T0
Telephone (705) 642-3244 FAX (705) 642-3300

TP

SEWELL TP

LEWIS TP

Outcrop Area
"New Ni showing"

51

52N
52S

52N
52S

540N



Timmins Nickel, Inc.

Timmins Nickel, Inc.
205-155 University Ave.
Toronto, Ontario M5H 3B7
(416) 367-9545
FAX: (416) 367-8965

July 31, 1990

Mr. George Ross
Young Street,
Foleyet, Ontario P0M 1T0

Mr. Denis Morin,
14 Young Street,
Foleyet, Ontario P0M 1T0

Mr. Frederick Ross,
958 Park Avenue,
Timmins, Ont.

Mr. Roger Denomme,
387 Brousseau Ave.,
Timmins, Ont. P4N 5Z1

Dear Sirs,

The purpose of this letter is to document the following agreement between Timmins Nickel, Inc. ("TNI") and Messrs. George Ross, Denis Morin, Frederick Ross and Roger Denomme ("Morin et al."):

1. Morin et al. warrants that they have 43 unpatented claims in good standing in Kenogaming Township, of the Porcupine Mining Division of the Province of Ontario, listed in Schedule "A" (the "RossMor Property").
2. Upon the execution of this letter agreement, TNI shall have the exclusive right and option to acquire a 100% undivided interest in the RossMor Property.
3. In order to acquire the interest set out in clause (2), TNI agrees to:
 - a) make a payment of \$10,000 to Morin et al. on signing of this agreement;
 - b) make a payment of 40,000 freely tradeable common shares of TNI immediately upon obtaining regulatory approval;
 - c) make a payment of \$50,000 in cash or its equivalent in freely tradeable stock, at TNI's option, on or before the first anniversary of this agreement;
 - d) make exploration expenditures on the RossMor Property totalling at least \$50,000 prior to the first anniversary of this agreement;
 - e) make a payment of \$50,000 in cash or its equivalent in freely tradeable stock, at TNI's option, on or before the second anniversary of this agreement;

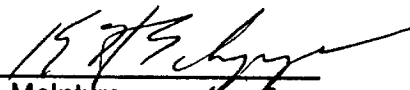
To Morin et al.:

Dennis Morin,
14 Young Street,
Foleyet, Ontario P0M 1T0

If the above terms are satisfactory to you, please so indicate by signing below in the spaces indicated.

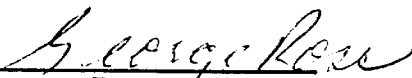
Yours truly,

TIMMINS NICKEL, INC.

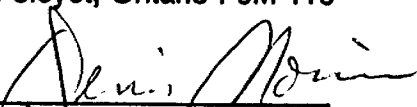


Stephen McIntyre,
President


Acknowledged and agreed to this
16th day of Aug, 1990



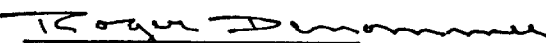
George Ross
Young Street,
Foleyet, Ontario P0M 1T0



Denis Morin,
14 Young Stret,
Foleyet, Ontario P0M 1T0



Frederick Ross,
958 Park Avenue,
Timmins, Ont.

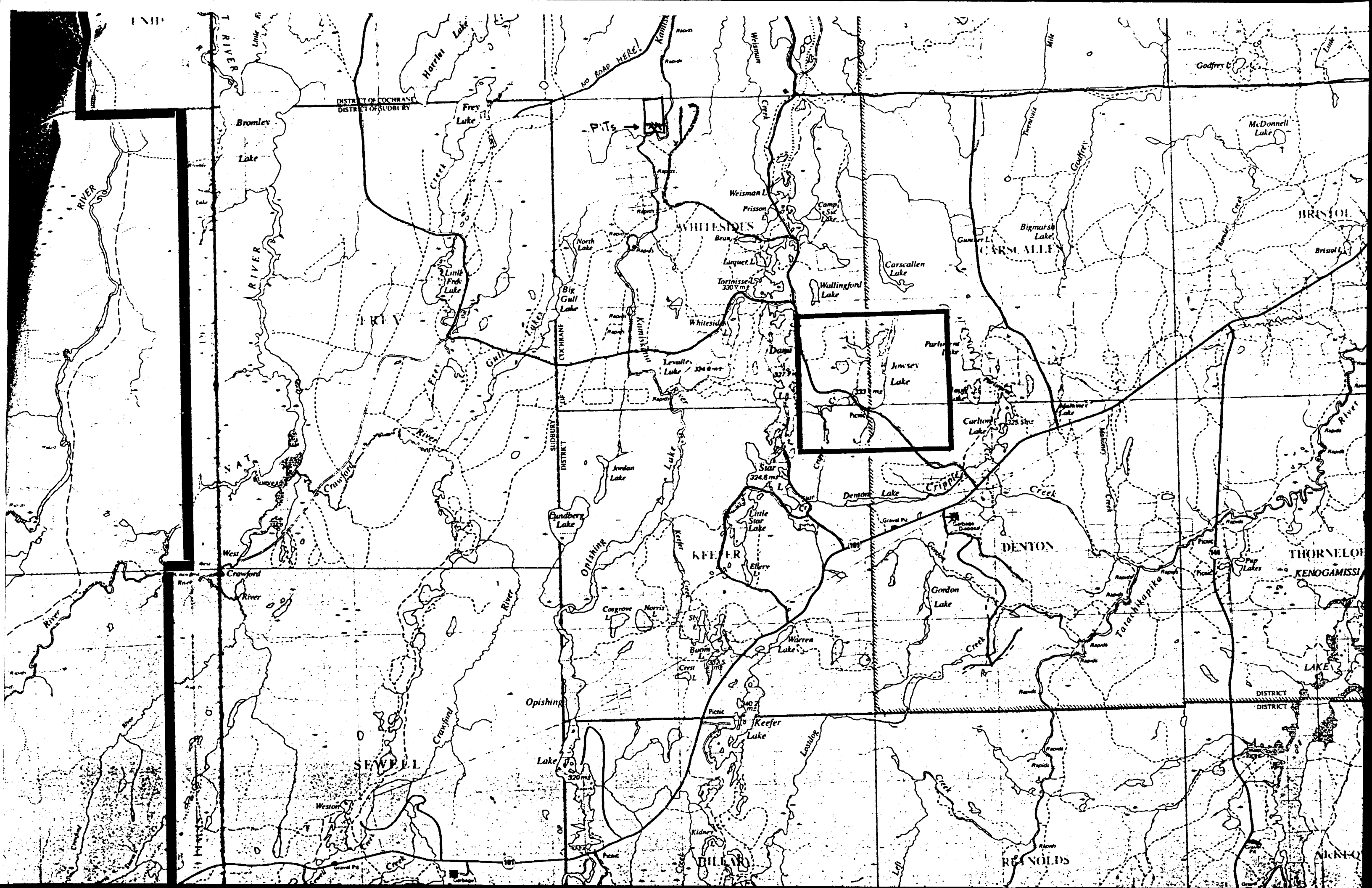


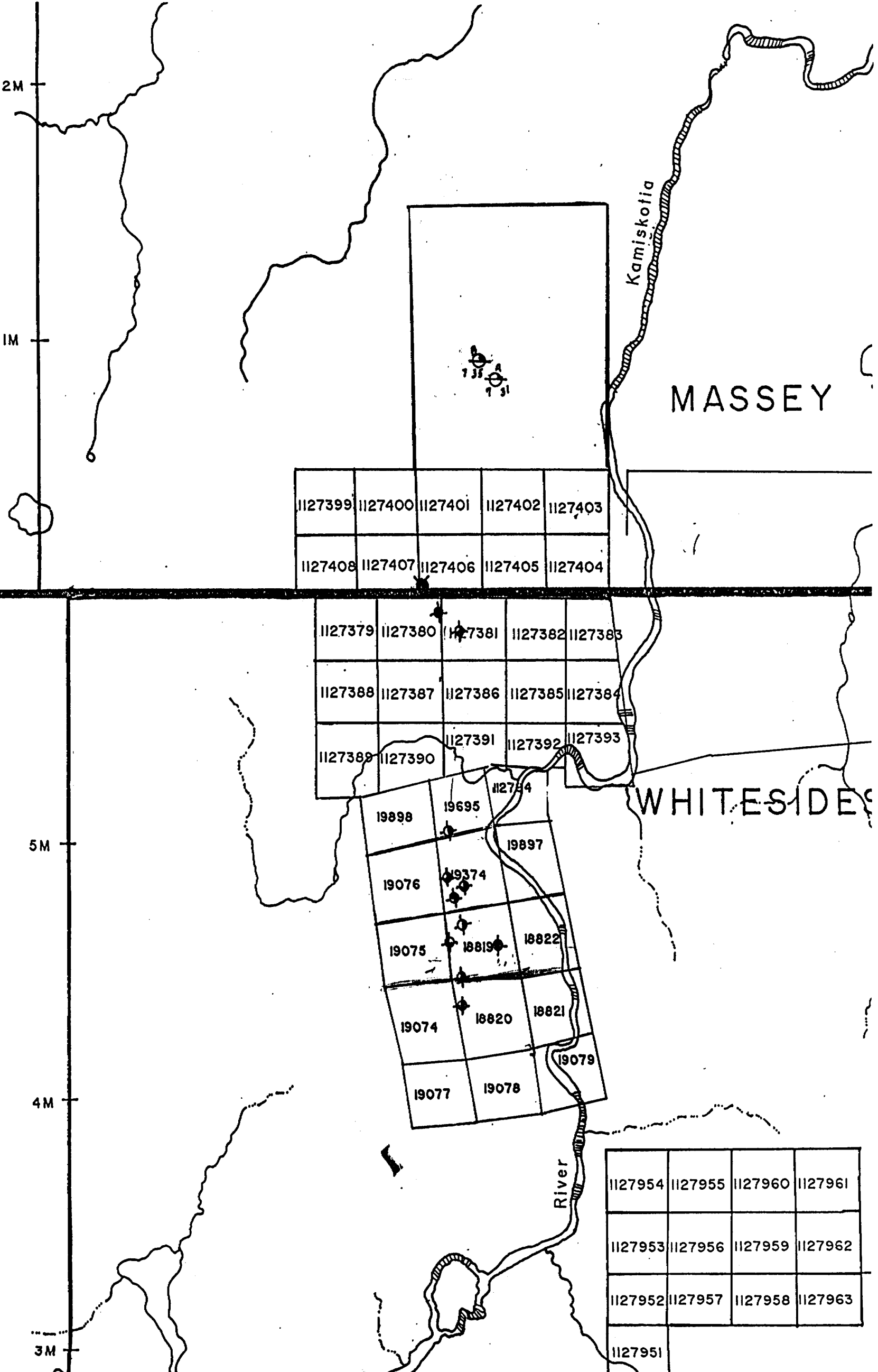
Roger Denomme,
387 Brousseau Ave.,
Timmins, Ont. P4N 5Z1

SCHEDULE "A"

RossMor Property

P1133248	P1154529	P1114838
P1133246	P1154527	P1114840
P1133247	P1154528	P1114839
P1133249	P1154530	
P1133250	P1154531	
P1133251	P1154532	
P1133252	P1154533	
P1133253	P1154534	
P1155169	P1154535	
P1155170	P1156068	
P1155171	P1156069	
P1155172	P1156070	
P1155173	P1156071	
P1158061	P1156072	
P1158062	P1156073	
P1158063	P1156074	
P1158064	P1156075	
P1158065	P1156076	
P1158066	P1156077	
P1158067		
P1158068		





MASSEY

WHITESIDES

1127954	1127955	1127960	1127961
1127953	1127956	1127959	1127962
1127952	1127957	1127958	1127963
1127951			

1127399	1127400	1127401	1127402	1127403
1127408	1127407	1127406	1127405	1127404

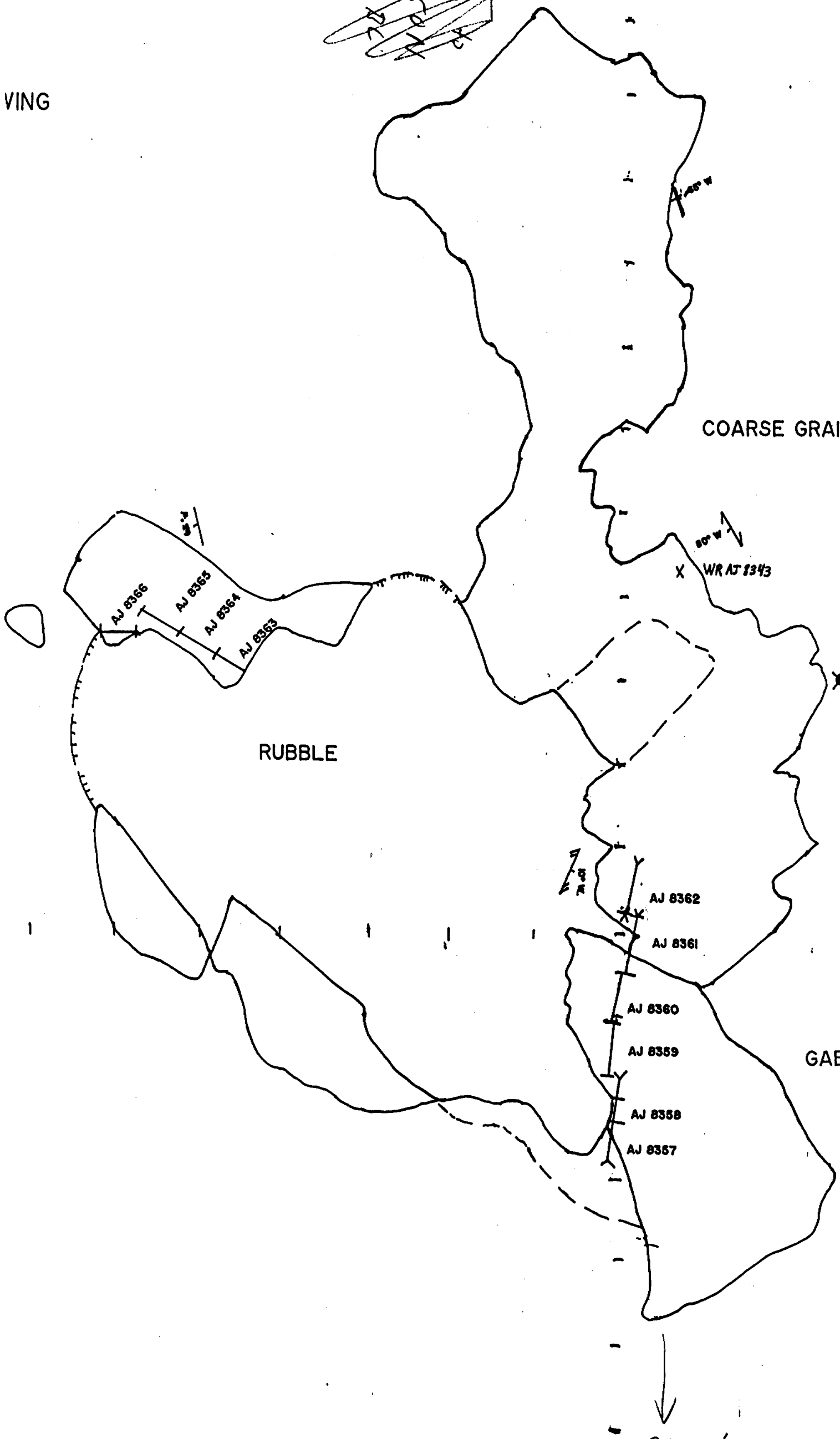
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1127388	1127387	1127386	1127385	1127384
1127389	1127390	1127391	1127392	1127393

19898	19695	1127384
19076	19374	19897
19075	18819	18822
19074	18820	18821
19077	19078	19079

1/p.

VING

~~50m to BL~~
~~Scale~~
~~1cm = 0.5m~~
~~1:500~~



COARSE GRAINED GABBRO

RUBBLE

GABBRO

→ 50m to BL

SCALE
1cm = 0.5m
1:500

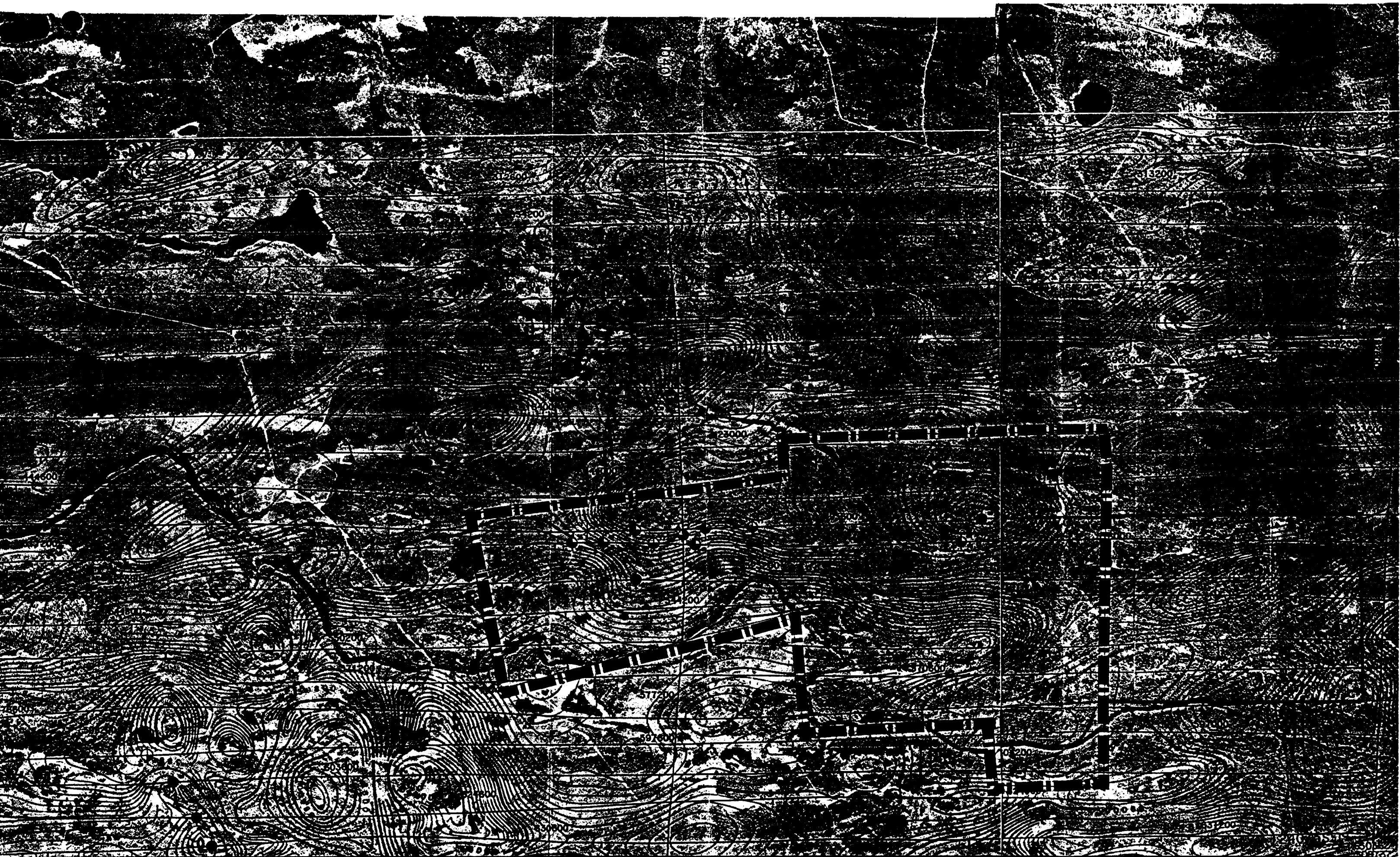
✕ UTM 5363800 439220

50m to
Line O+00N.

FALCONBRIDGE LIMITED	
Exploration Division	Timmins ONTARIO

WHITESIDES TWP TRENCH B	
----------------------------	--

TRACED: MDD	DATE: OCT 29/90	NTS:	PROJECT:
DRAWN: MDD	DATE: OCT 19	MAP NO:	FILE:
SCALE		1:500	



ENID TWP. - M.788

4M
3M
2M
1M

Harrie's Creek

P 1033031	P 1033032
P 1033033	P 1033034

P 1170606	P 1170607	P 1170716
P 1170609	P 1170610	P 1170611
P 1170614	P 1170615	P 1170612
P 1170615	P 1170616	P 1170717

R1127355	R127400	R127401	R1127402	R127403	R127590	R127591	R127592	R127593	R127594	R127595	R127596	R127597	R127598	R127599	R127600	R127601	R127602	R127603	R127604	R127605	R127606	R127607	R127608	R127609	R127610	R127611	R127612	R127613	R127614	R127615	R127616	R127617	R127618	R127619	R127620	R127621	R127622	R127623	R127624	R127625	R127626	R127627	R127628	R127629	R127630	R127631	R127632	R127633	R127634	R127635	R127636	R127637	R127638	R127639	R127640	R127641	R127642	R127643	R127644	R127645	R127646	R127647	R127648	R127649	R127650	R127651	R127652	R127653	R127654	R127655	R127656	R127657	R127658	R127659	R127660	R127661	R127662	R127663	R127664	R127665	R127666	R127667	R127668	R127669	R127670	R127671	R127672	R127673	R127674	R127675	R127676	R127677	R127678	R127679	R127680	R127681	R127682	R127683	R127684	R127685	R127686	R127687	R127688	R127689	R127690	R127691	R127692	R127693	R127694	R127695	R127696	R127697	R127698	R127699	R127700	R127701	R127702	R127703	R127704	R127705	R127706	R127707	R127708	R127709	R127710	R127711	R127712	R127713	R127714	R127715	R127716	R127717	R127718	R127719	R127720	R127721	R127722	R127723	R127724	R127725	R127726	R127727	R127728	R127729	R127730	R127731	R127732	R127733	R127734	R127735	R127736	R127737	R127738	R127739	R127740	R127741	R127742	R127743	R127744	R127745	R127746	R127747	R127748	R127749	R127750	R127751	R127752	R127753	R127754	R127755	R127756	R127757	R127758	R127759	R127760	R127761	R127762	R127763	R127764	R127765	R127766	R127767	R127768	R127769	R127770	R127771	R127772	R127773	R127774	R127775	R127776	R127777	R127778	R127779	R127780	R127781	R127782	R127783	R127784	R127785	R127786	R127787	R127788	R127789	R127790	R127791	R127792	R127793	R127794	R127795	R127796	R127797	R127798	R127799	R127800	R127801	R127802	R127803	R127804	R127805	R127806	R127807	R127808	R127809	R127810	R127811	R127812	R127813	R127814	R127815	R127816	R127817	R127818	R127819	R127820	R127821	R127822	R127823	R127824	R127825	R127826	R127827	R127828	R127829	R127830	R127831	R127832	R127833	R127834	R127835	R127836	R127837	R127838	R127839	R127840	R127841	R127842	R127843	R127844	R127845	R127846	R127847	R127848	R127849	R127850	R127851	R127852	R127853	R127854	R127855	R127856	R127857	R127858	R127859	R127860	R127861	R127862	R127863	R127864	R127865	R127866	R127867	R127868	R127869	R127870	R127871	R127872	R127873	R127874	R127875	R127876	R127877	R127878	R127879	R127880	R127881	R127882	R127883	R127884	R127885	R127886	R127887	R127888	R127889	R127890	R127891	R127892	R127893	R127894	R127895	R127896	R127897	R127898	R127899	R127900	R127901	R127902	R127903	R127904	R127905	R127906	R127907	R127908	R127909	R127910	R127911	R127912	R127913	R127914	R127915	R127916	R127917	R127918	R127919	R127920	R127921	R127922	R127923	R127924	R127925	R127926	R127927	R127928	R127929	R127930	R127931	R127932	R127933	R127934	R127935	R127936	R127937	R127938	R127939	R127940	R127941	R127942	R127943	R127944	R127945	R127946	R127947	R127948	R127949	R127950	R127951	R127952	R127953	R127954	R127955	R127956	R127957	R127958	R127959	R127960	R127961	R127962	R127963	R127964	R127965	R127966	R127967	R127968	R127969	R127970	R127971	R127972	R127973	R127974	R127975	R127976	R127977	R127978	R127979	R127980	R127981	R127982	R127983	R127984	R127985	R127986	R127987	R127988	R127989	R127990	R127991	R127992	R127993	R127994	R127995	R127996	R127997	R127998	R127999
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36M 35M 34M

1st Base Line

FORMATION THAT
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CCURACY IS NOT
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SHOWN HEREON.

WHITESIDE

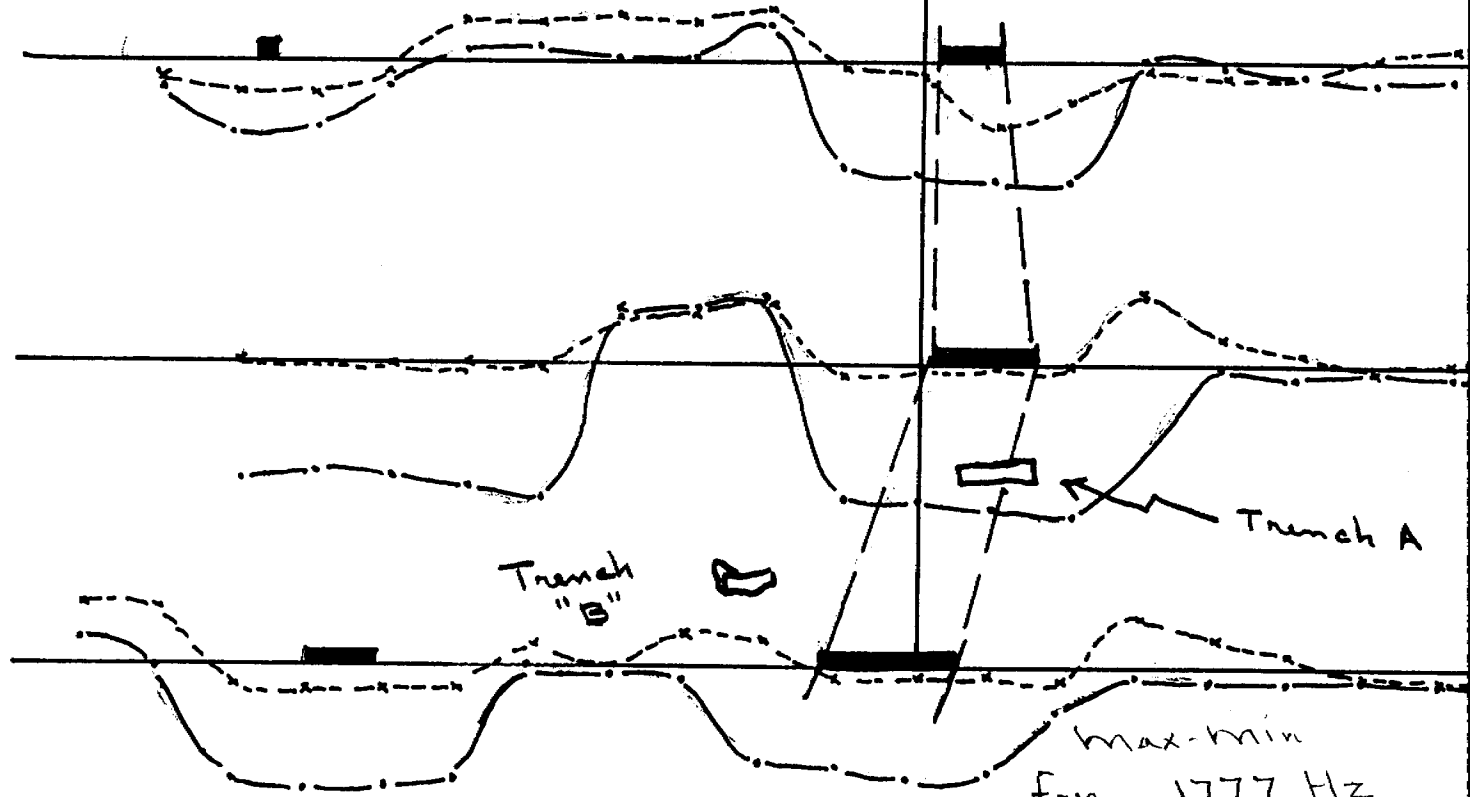
d.k.

h.2v.

h.1v

h.0.

Max. Min. 100 m cable



Trench "B"

Trench A

max-min
 freq. 1777 Hz
 100 m cal sep.
 1:50

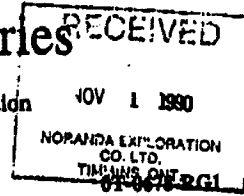
1.00.



Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation



Geochemical Analysis Certificate

Company: NORANDA EXPL. CO. LTD.
Project: 250
Attn: R. PRESSACCO

Date: OCT-29-90
Copy 1. P.O. BOX 1205, TIMMINS, ONT. M4N 1T5
2. FAX TO 268-9572

We hereby certify the following Geochemical Analysis of 10 ROCK samples submitted OCT-25-90 by R. PRESSACCO.

Sample Number	Au ppb	Au check ppb	Co ppm	Cu ppm	Ni ppm
68625	10		154	4260	1280
68626	17		140	5720	1370
68627	7		245	6780	1800
68628	267		263	4420	2190
68629	Nil		172	64900	1590
68630	Nil		171	2830	1070
68631	14		707	5440	6100

Sample	Location
68625	B Zone, 4.5m chip sample (1 of 2)
68626	B Zone, 4.5m chip sample (2 of 2)
68627	A Zone, 0.0 m chip sample
68628	A Zone, grab sample.
68629	B Zone, grab sample, Hi grade copy (10%)
68630	C Zone, grab sample from muck pile

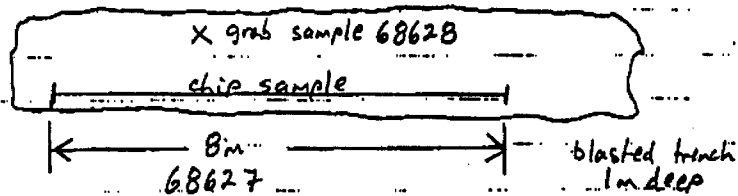
Average Grade:
0.499% Cu, 0.132% Ni
3.0m

Certified by Donna Gardner

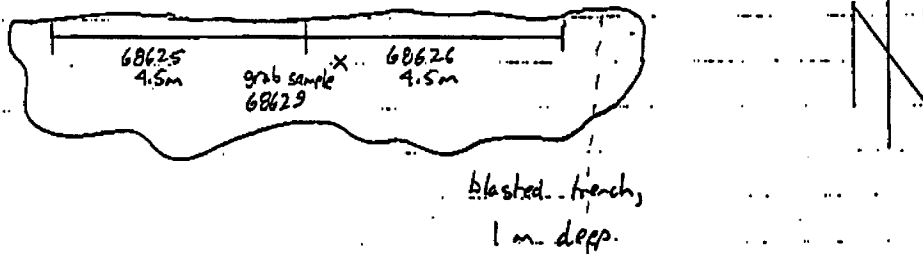
P.O. Box 10, Swastika, Ontario P0K 1T0
Telephone (705) 642-3244. FAX (705) 642-3300

Warren Patents

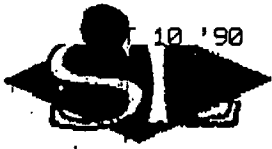
A. Zone Sampling



B. Zone Sampling



Scale 1cm = 1m.



10 '90 15:18

SWASTIKA LABS/TIM

SWASTIKA LABORATORIES

P. 02

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Established 1928

Assay Certificate

OT-0636-RA1

Company: **J.E. STEERS & ASSOCIATES**

Date: **OCT-10-90**

Project:

Copy 1. C/O ROBER DENOMMCE, 357 BROUSSEAU AVE,

Attn:

2. TIMMINS ONT.

We hereby certify the following Assay of 2 ROCK samples submitted OCT-05-90 by .

Sample Number	Au oz/ton	Ag oz/ton	Co %	Cu %	Ni %	Pt oz/ton	Pd oz/ton
0526	Nil	0.10	0.030	0.34	0.21	<0.005	<0.001
0527	Nil	0.09		1.06	0.79	<0.005	0.002

Certified by

G. Lebel / Manager



T S L LABORATORIES

DIVISION OF BURGNER TECHNICAL ENTERPRISES LIMITED

2031 RIVERSIDE DRIVE, UNIT #2

TIMMINS, ONTARIO

P4N 7C3

☎ (705) 268-4441 FAX: (705) 268-4420

CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM Falconbridge Exploration Ltd.
 571 Moneta Ave.
 P.O. Box 1140
 Timmins, Ontario
 P4N 7H9

REPORT No.

W4728

INVOICE #: 4691
 P.O.:

SAMPLE(S) OF rocks

Ian Liu
 project 8002

	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	
AJ08357	50	0.6	2440	3	52	925	50cm sample TRENCH B 3.0m width
AJ08358	75	8.2	22200	<2	275	2950	
AJ08359	30	1.0	3940	<2	81	1090	
AJ08360	25	1.2	2930	<2	27	3930	
AJ08361	25	1.8	4750	<2	36	3520	
AJ08362	15	0.4	1960	<2	31	1190	50cm sample TRENCH B 2m width
AJ08363	15	0.2	1220	3	45	935	
AJ08364	20	0.6	2280	<2	63	980	
AJ08365	25	0.6	2260	<2	50	1230	
AJ08366	20	1.0	3350	<2	58	1410	
AJ08367	50	1.4	1630	3	88	1390	1m sample TRENCH A 6m width
AJ08368	30	2.6	2890	4	89	1730	
AJ08369	30	1.6	1650	7	83	1410	
AJ08375	25	3.4	2880	8	74	1370	
AJ08376	75	2.8	3610	14	91	580	
AJ08377	35	3.4	3670	8	96	980	← carbonitized gr ← STANDARD.
AJ08378	20	<.2	180	<2	97	240	
AJ08379	-	0.4	810	2	50	15500	

RNC
 (STD)

COPIES TO: Stan Clemmer
 INVOICE TO: Stan Clemmer

Sep 27/90

SIGNED _____





T S L LABORATORIES

DIVISION OF BURGNER TECHNICAL ENTERPRISES LIMITED

2031 RIVERSIDE DRIVE, UNIT #2

TIMMINS, ONTARIO

P4N 7C3

☎ (705) 268-4441 FAX: (706) 288-4420

CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM **BHP Utah Mines
P.O. Box 1953
Timmins, Ontario**

REPORT No.
W5003

SAMPLE(S) OF **rejects**

INVOICE #: **4999**
P.O.:

Brian Hill

	Cu ppm	Ni ppm	Ni %	Co ppm
18589	450	1075		145
18590	310	>5000	0.87	835
18591	1240	1260		135
18592	1070	435		75

AQUA REGIA DIGESTION

A. A. ANALYSIS

Deni:

THE DIFFERENCE IN VALUES BETWEEN THESE AND THE MIN-EN SAMPLES SEEMS TO BE DUE TO ANALYTICAL METHOD. THESE RESULTS WILL BE MORE ACCURATE

BRIAN.

COPIES TO: **Brian Hill**
INVOICE TO: **Brian Hill**

Nov 29/90

SIGNED

Diane Richard Jas
Evelyn White





DMOP 90-549

THIS SUBMITTAL CONSISTED OF VARIOUS REPORTS, SOME OF WHICH HAVE BEEN CULLED FROM THIS FILE. THE CULLED MATERIAL HAD BEEN PREVIOUSLY SUBMITTED UNDER THE FOLLOWING RECORD SERIES (THE DOCUMENTS CAN BE VIEWED IN THESE SERIES):

Northgate Exploration Ltd. → see DD Report # 23
Diamond Drill Programme for Horwood Twp
Gifford Prospect by Peter Dadson,
July 2/1981.

Parts of the
Striping/Sampling/Assays → see file # 63.5980
OPAP # 90-475
• of Gifford Showing (Horwood Twp),
Massive Sulphide Showing (Horwood Twp)
• Nickel Showing (Kenogaming Twp),
Gold Property (Penhorwood Twp),
Zinc Property (Penhorwood Twp),
↑ 1990, by George Ross, Roger Denomme
and Hella Twp