



42A03SE8378 2.14882 HUTT

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2.14882

GEOLOGICAL SURVEY REPORT
SUBMITTED FOR ASSESSMENT WORK CREDIT
SEMPLE and HUTT TOWNSHIPS
TIMMINS RESIDENT GEOLOGISTS DISTRICT, ONTARIO

RECEIVED

JAN 26 1993

MINING LANDS BRANCH

**Mike Noseworthy
Peter Harvey**

Royal Oak Mines Inc.

18 December, 1992



42A03SE8378 2.14882 HUTT

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I. INTRODUCTION and WORK DONE

Work consisting of linecutting and geological mapping was completed on a group of 28 claims within Semple and Hutt Townships held by Royal Oak Mines Inc. (1425 West Pender St., Vancouver, B.C., V6G 2S3) during the fall of 1992. A list of the claims is included in Appendix 1.

FORPRO Resources Ltd. of South Porcupine, Ontario, established a grid over the claim group between September 18 and October 8, 1992. A total of 44.8 km of lines were cut at 100 m intervals, with stations established at 25 m intervals to be used for locational control during the geological mapping.

M. Noseworthy of Royal Oak Mines Inc. supervised the linecutting work. Field work and geological surveys were completed on the claim group by P. Harvey and M. Noseworthy of Royal Oak Mines Inc. between September 11 and October 30, 1992.

II. LOCATION and ACCESS

The claims are located about 50 km south of South Porcupine, Ontario, and straddle the boundary between Semple and Hutt Townships near the northern portion of the townships. Refer to Figure 1 and Figure 2.

The area can be reached by travelling south from South Porcupine along the Langmuir Road to where it intersects the Wicks Road (Hwy 566), which extends west from Matachewan. The Langmuir Road continues south past the intersection to provide access to the eastern portion of the claims, and the Wicks Road provides access to the northern portion. Bush roads along, and branching off from, the Hydro Line Corridor provide access to the interior of the claim group.

III. REGIONAL GEOLOGY

Bright (1984) completed a map and report covering the claim group and surrounding area, the following is a summary taken from this work.

The area is in the west-central part of the Abitibi Metavolcanic-Metasedimentary Belt in the Superior Province of the Canadian Shield. The geology in and around the claim group consists of isoclinally folded mafic-felsic metavolcanics, with minor units of iron formation and ultramafics. Metamorphism is that of lower greenschist facies, and away from the claim group it reaches higher grades near granitic intrusions as seen in western Semple Township. Northwest-trending diabase dikes form the youngest bedrock in the area.

ADDENDUM

Lithologies Present in the Map Area

The stratigraphy is dominated by massive to pillowed high Fe-tholeiitic basalts which are variably tectonized and altered by varying degrees of chloritization, carbonitization and sericitization. Variolitic textures and local minor hyaloclastite-glass is developed in these medium to dark green mafic volcanics. Pink to white, fine to medium grained leucoxene is also locally exhibited in this lithologic unit. Locally dark phenocrysts of pyroxene (?) are present in the high Fe-tholeiite. These "spotted" units might represent high Mg-tholeiites. In areas of intense bleaching (ie. sericite and carbonate alteration), where no leucoxene is discernable, it is impossible to determine the exact nature of the protolith without wholerock geochemistry. Minor disseminated pyrite is locally present in this rock type.

A light grey-green mafic volcanic is locally present on the property. This unit locally exhibits amygdules and is essentially massive and uniform but variably tectonized. Local flow-breccia textures can be discerned in some of the limited outcrop exposure. This unit may be of a high Mg-tholeiitic composition.

Mafic-intermediate-felsic, fine grained tuffs and lapilli-tuffs (local stretched ghost-like fragments) occur near the south part of the property. These rocks are variably sericitized and locally pink-tinted (hematite and/or albite alteration) and exhibit variable modal percentages of quartz-eyes and albite phenocrysts. The albite may be green, green-yellow or white. Locally this unit exhibits a conchoidal fracture in areas of moderate to high silica and or albite content (ie. aphanitic albite). Local banding can be discerned in the rocks with conchoidal fracture. These latter rocks are mineralized with trace pyrite. Coarse pyrite fragments or clots with associated silicification are present in specimen no. 53. Agglomeratic-type textures are locally present in this intermediate-felsic package, however it is possible that the fragmental texture is tectonic in nature. This lithologic unit has also been subjected to folding and shearing as has the mafic volcanics located further to the north.

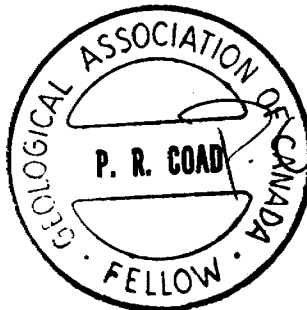
A diabase-gabbroic lithology was locally mapped and is marked by random stubby pyroxene crystals which float in a plagioclase-rich matrix. Weathered outcrop surfaces exhibit a weak orange-brown tint.

A syenite unit was mapped at the location of specimen no. 14. This unit is pink-red, medium grained and albitic. Local wisps of leucoxene are present and it is possible that this unit represents an albitized high Fe-tholeiite. This station is mineralized with 0.5% fine grained pyrite.

Recommendations for Future Work

Upon receipt of wholerock geochem data from X-ray Assay Laboratories in Toronto, it is recommended that the data be used to differentiate between the possible high Mg-tholeiite and high Fe-tholeiites to better define the stratigraphy on the property. The data should also be used to quantify the degree of alteration present in the

intermediate to felsic volcanics. At this time a decision will be made concerning the completion of a ground geophysical program.



March 2, 1993
Paul Coad

IV. GEOLOGY OF THE CLAIM GROUP

The claims are underlain by mafic-felsic metavolcanics, with bedding generally trending eastwards, changing to north-east in the western portion of the claims. This observation supports the fold closures off to the west of the claim group indicated by Bright (1984, Map 2291).

The bedrock contained within the claim group is predominantly mafic volcanics, being either pillowed or massive in texture. Intercalated with the mafic volcanics are mafic-intermediate and intermediate-felsic varieties. A few outcrops of weakly serpentinized ultramafics were also mapped.

The mafic to felsic volcanic sequence in the area appears to form a gradational succession, making contacts between units difficult to discern. This complication is further hampered by the common pervasive carbonate and silica alteration within the mafic volcanics, which tends to bleach the mafics to give them the look of an intermediate volcanic. Establishing contacts between these flows based only on field observations is therefore a subjective exercise.

Bright (1984, p. 6) encountered a similar problem, and notes that many of the units mapped in the field as dacite are, in reality, much more mafic in composition when additional work consisting of thin section examination and chemical analysis are performed on selected samples.

Previous work on the claim group consisted of packsack holes drilling by Hollinger in 1962-1963 to test the conductive pyritic-graphitic horizon located parallel to the creek and along the north shore of Marceau Lake. No significant gold or base metal values were reported from this horizon (Bright, 1984, p. 44). This pyritic-graphitic horizon is only indicated by drilling, and does not outcrop, and was therefore not examined in this mapping program.

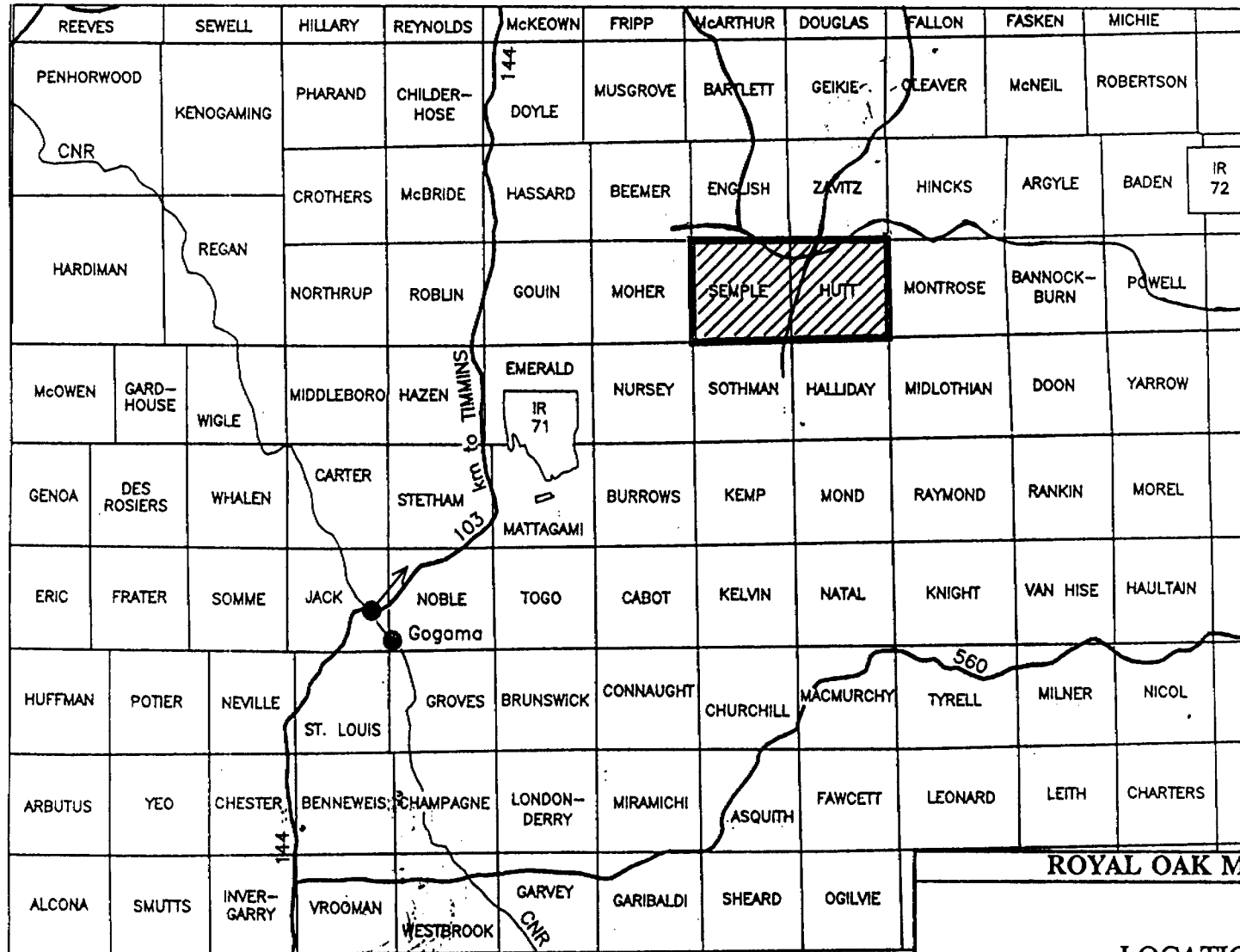
Bright (1984, p. 44) notes that quartz-stringer zones associated with pyritic felsic dikes located immediately west of Marceau Lake have been prospected for gold, but with no success. This area was mapped during the course of the program, but more detailed work (mechanical stripping, detailed mapping and sampling) would be required to fully evaluate this setting for its economic potential.

List of References

Bright, E.G.

- 1984: **Geology of the Ferrier Lake-Canoeshed Lake Area, District of Sudbury, Ontario.** Geological Survey Report 231, 60 p. Accompanied by Maps 2289, 2290, 2291, scale is 1:31680

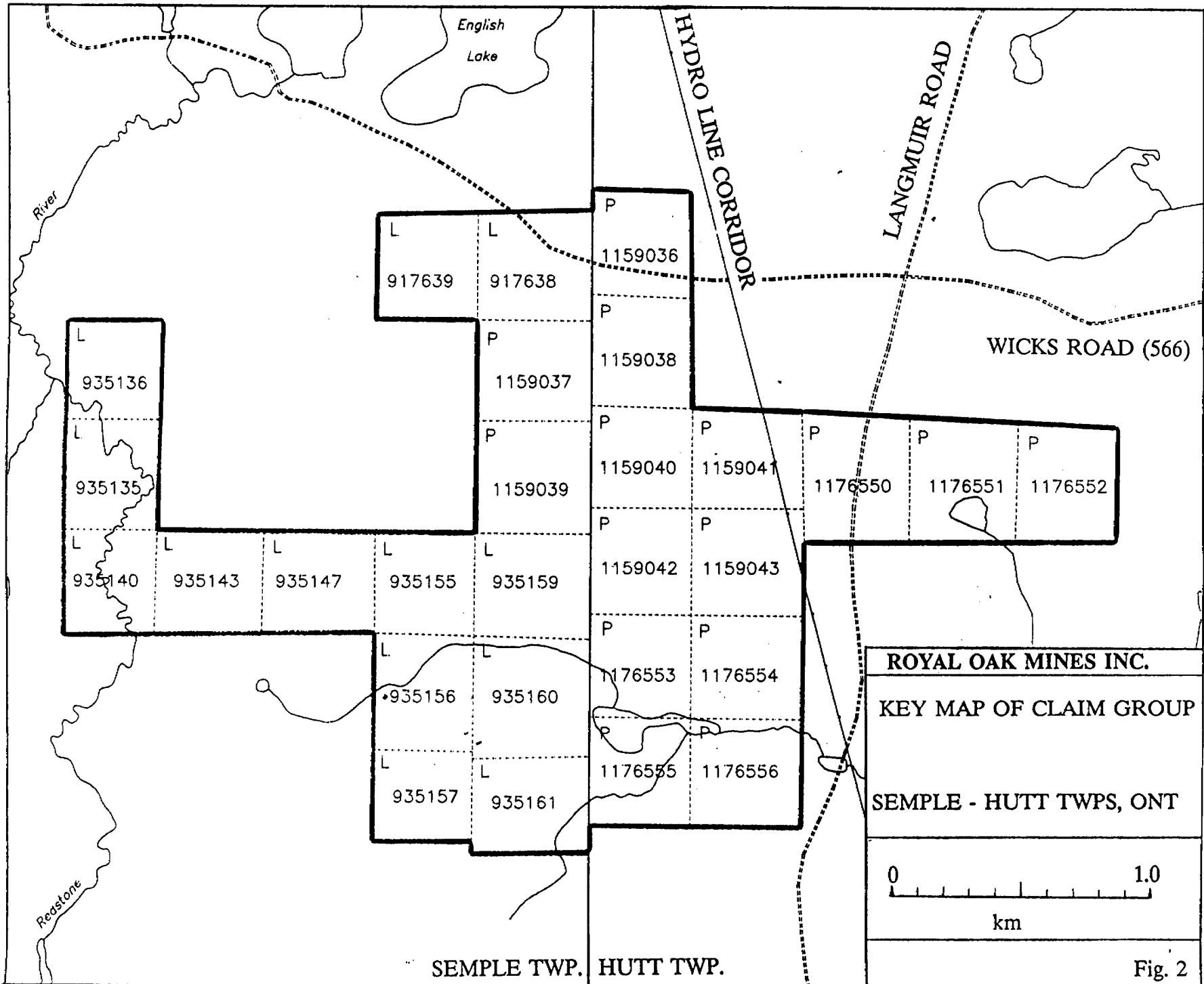
ILLUSTRATIONS



LOCATION MAP
SEMPLÉ - HUTT TOWNSHIPS
ONTARIO



Fig. 1



English
Lake

HYDRO LINE CORRIDOR

LANGMUIR ROAD

WICKS ROAD (566)

River

Peostone

L
935136
L
935135

L
917639
L
917638
P
1159037
P
1159039

P
1159036
P
1159038
P
1159040
P
1159042
P
1176553
P
1176555

P
1159041
P
1159043
P
1176554
P
1176556

P
1176550
P
1176551
P
1176552

L
935140
L
935143
L
935147
L
935155
L
935156
L
935157
L
935159
L
935160
L
935161

APPENDICES

APPENDIX 1

List of Claims

Semple Twp.

935136
935135
935140
935143
935147
935155
935156
935157
917639
917638
1159037
1159039
935159
935160
935161

15 claims

Hutt Twp.

1159036
1159038
1159040
1159042
1176553
1176555
1159041
1159043
1176554
1176556
1176550
1176551
1176552

13 claims

Total Group - 28 claims

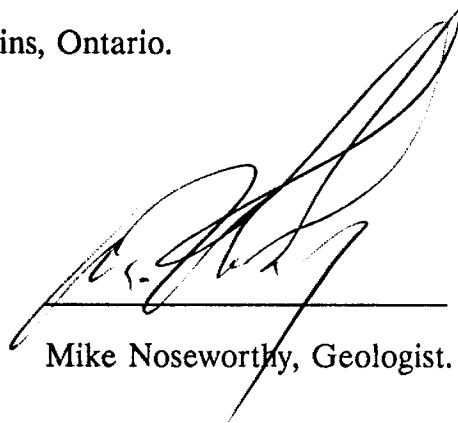
APPENDIX 2a

Statement of Qualifications

I, Mike Noseworthy, of the City of Timmins, Province of Ontario, do hereby certify that:

- 1) I received a B.Sc. degree, Geology Major, from Concordia University in 1987.
- 2) I have been employed as a geologist by various mining companies since 1987.
- 3) I am a co-author of this report.
- 4) I have no direct interest in, nor do I have any shares of any company exploring the properties described in this report, nor on any adjacent or surrounding properties.

Dated this 18 day of December, 1992, Timmins, Ontario.



A handwritten signature in black ink, appearing to read 'Mike Noseworthy', is written over a horizontal line. The signature is stylized and cursive.

Mike Noseworthy, Geologist.

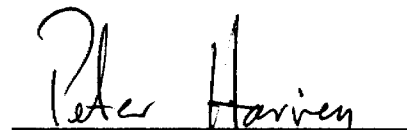
APPENDIX 2b

Statement of Qualifications

I, Peter Harvey, of the City of Timmins, Province of Ontario, do hereby certify that:

- 1) I received a B.Sc. degree (Honours) in Science, Geology Major, from Lakehead University in 1985.
- 2) I have been employed as a geologist by various mining companies since 1985.
- 3) I am a co-author of this report.
- 4) I have no direct interest in, nor do I have any shares of any company exploring the properties described in this report, nor on any adjacent or surrounding properties.

Dated this 18 day of December, 1992, Timmins, Ontario.

A handwritten signature in cursive script that reads "Peter Harvey". The signature is written in black ink and is positioned above a solid horizontal line.

Peter Harvey, Geologist.

APPENDIX 4

Geological Legend

LEGEND

12 OLIVINE DIABASE

11 QUARTZ DIABASE

10 HURONIAN SEDIMENTS

10a Arkose
10w Wacke
10Darg Argillite
10c Conglomerate

9 MATACHEWAN DIABASE

8 FELSIC INTRUSIVE ROCKS

8 Unsubdivided
8ap Quartz porphyry
8fp Feldspar porphyry
8fp Quartz feldspar porphyry
8f Felsite, p (porphyritic), qp (quartz-eye porphyritic), pp (plagioclase-porphyritic)
8hbt Hornblende-biotite trondhjemite
8pm Porphyritic monzonite
8pd Granodiorite
8pg Porphyritic granodiorite
8lg Leucocratic granodiorite
8hd Hornblende diorite
8ad Quartz diorite
8p Porphyry
8a Aplite
8s Syenite
8g Granite or quartz-rich syenite
8t Trachyte

7 MAFIC INTRUSIVE ROCKS

7 Unsubdivided
7a Anorthosite
7d Diorite
7g Gabbro
7gg Quartz gabbro
7pg Pegmatoidal gabbro
7l Lamprophyre
7ib Intrusive breccia
7n Nipissing-type diabase sills

6 ULTRAMAFIC INTRUSIVE ROCKS

6 Unsubdivided
6a Serpentinized diorite-peridotite
6ph Pyroxene-hornblende
6c Carbonatized
6tm Talc-magnetite

5 SEDIMENTS

5 Unsubdivided
5a Argillite
5c Conglomerate
5g Graywacke
5ai Slate
5p Porphyritic, qp (quartz-eye porphyritic), pp (plagioclase-porphyritic)
5d Debris flow
5q Quartzite
5qw Quartz wacke
5gr Graphite
5ch Chert
5ag Agglomerate
5t Turfaceous-sediment
5s Siltstone
5sa Sandstone
5sch Schist
5sh Shear
5sw Siltstone
5lap Quartz porphyritic tuff
5phyl Phyllite
GFZ Graphitic Fault Zone

K denotes Keewatin
T denotes Timiskaming

4 INTERMEDIATE-FELSIC VOLCANICS

4d Dacite
4rd Rhyodacite flows
4dt Dacite tuffs
4dp Dacite pyroclastics
4da Agglomerate-breccia conglomerate
4dit Dacite lapilli tuff
4dm Dacite massive flow
4p Intermediate-felsic pyroclastics
4r Rhyolite-undifferentiated
4ech Intermediate-felsic schist
4sh Shear
4rm Massive rhyolite
4rt Rhyolite tuff
4rit Rhyolite lapilli tuff
4ra Rhyolite agglomerate (quartz-eye porphyritic)
4p Plagioclase-porphyritic
4phyl Phyllite

P denotes Primitive
E denotes Evolved

3 CALC-ALKALIC MAFIC VOLCANICS (MAFIC-INTERMEDIATE VOLCANICS)

3 Unsubdivided
3a Andesite
3m Mafic
3p Pillow
3L3t Tuff, lapilli-tuff
3b Breccia
3c Carbonatized
3am Amphibolitized
3pb Pillow brx
3sh Shear

2 THOLEIITIC VOLCANICS

2 Unsubdivided
2m Massive
2p Pillow
2a Amygdaloidal
2apt Amygdaloidal pillow lava
2vt Volcanic tuff, lapilli-tuff
2b Breccia
2c Carbonatized
2pb Pillow Breccia
2h Hyaloclastite
2ag Agglomerate
2am Amphibolitized
2act Spherulitic, chicken-feed
2sch Schistose
2sh Shear
2F Dominantly Fe-tholeiite
2M Dominantly Mg-tholeiite
2AL Dominantly AL-tholeiite
2I Dominantly islandite

1 KOMATIITIC VOLCANICS

1 Unsubdivided
1a Serpentinized, massive, polysaturated, peridotitic komatiite
1ox Olivine-spinifex textured peridotitic komatiite flows
1px Pyroxene-spinifex textured basaltic komatiite flows
1mb Massive basaltic komatiite
1m Massive
1p Pillow
1c Carbonatized peridotitic komatiite
1t Talcose
1b Basaltic komatiite
1cb Carbonatized basaltic komatiite

IRON FORMATION

IFo Oxide
IFs Sulphide (py-po)
IFc Carbonate
IFj Jasper
BIF Bonded iron formation
IFCh Chlorite-rich
IFgr Graphitic

SULPHIDES

DS Disseminated sulphides
SS Stringer sulphides
MS Massive sulphides
SMS Semi-massive sulphides

OXIDES

MT Magnetite (80-100%)
QAV Quartz ankerite veining

ALTERATION

These abbreviations are used after lithology, if desired

3m,a	Would denote a massive calc-alkalic mafic volcanic which is sericitized
chl	Chloritic
chty	Cherty
s or sers	Sericitic
sil	Silicified
ank	Ankerite
cc	Calcite
c	Carbon
cb	Carbonate
h	Hematite
alb	Albitized
fu	Fuchsite
mt	Magnetite
sh	Sheared
tcb	Talc carbonate schist
tca	Talc chlorite schist
gr	Graphitic
arg	Argillaceous
sch	Schist
gt	Garnet
oxd	Oxidized
bl	Bleached
epd	Epidote
serp	Serpentinized
* where computer space permits, use sers	

TEXTURE

fg	Fine grained
mg	Medium grained
cg	Coarse grained
bx	Breccia
frag	Fragment
pf	Primary fragmentals
tf	Tectonic fragmentals
qp	Quartz phytic
qfp	Quartz feldspar phytic
fp	Feldspar phytic
pyr	Pyroclastics
bed	Banded
bnd	Banded

Report of Work Conducted After Recording Claim

Mining Act

Transaction Number
W9260.0017A

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) 670-7264.

2.14882

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



900

Recorded Holder(s) ROYAL OAK MINES INC.	Client No. 136226
Address P.O. Bag 2010, TIMMINS ONT P4N 7X7	Telephone No. 705-360-1141
Mining Division Porcupine	Township/Area Semple and Hutt Twps.
M or G Plan No. M-1100, G 3948	
Date Work Performed From: Sept 2, 1992	To: Dec 29, 1992

Work Performed (Check One Work Group Only)

Work Group	Type
<input checked="" type="checkbox"/> Geotechnical Survey	Geological Survey
<input type="checkbox"/> Physical Work, Including Drilling	
<input type="checkbox"/> Rehabilitation	
<input type="checkbox"/> Other Authorized Work	
<input type="checkbox"/> Assays	
<input type="checkbox"/> Assignment from Reserve	

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Total Assessment Work Claimed on the Attached Statement of Costs \$ 22,400 -

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)

Name	Address
Mike Noseworthy	c/o ROYAL OAK MINES INC - address above
Peter Harvey	"

RECORDED
DEC 30 1992
 Receipt _____

(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 Dec. 29 1992	Recorded Holder or Agent (Signature) Peter Harvey
--	-----------------------------	---

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 Peter Harvey c/o ROYAL OAK MINES INC - address above.		
Telephone No. 705-360-1141	Date Dec 29, 1992	Certified By (Signature) Peter Harvey.

For Office Use Only

Total Value Cr. Recorded \$22,400	Date Recorded DEC 30/92.	Mining Recorder <i>[Signature]</i>	Received Stamp RECEIVED COURTESY DEC 30 1992 1035 <i>[Signature]</i>
	Deemed Approval Date MAR. 30/93.	Date Approved <i>[Signature]</i>	
	Date Notice for Amendments Sent		



Statement of Costs for Assessment Credit

État des coûts aux fins du crédit d'évaluation

Mining Act/Loi sur les mines

Transaction No./N° de transaction
W 9260.00177

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	10,517	
	Field Supervision Supervision sur le terrain		10,517
Contractor's and Consultant's Fees Droits de l'entrepreneur et de l'expert-conseil	Type Linecutting	10,759	
Supplies Used Fournitures utilisées	Type Field Gear	98	
Equipment Rental Location de matériel	Type RECEIVED		
	JAN 26 1993		
	MINING LANDS BRANCH		
Total Direct Costs Total des coûts directs			

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 Vehicle Lease	1,026	
			1,026
Food and Lodging Nourriture et hébergement			
Mobilization and Demobilization Mobilisation et démobiliation			
Sub Total of Indirect Costs Total partiel des coûts indirects			
Amount Allowable (not greater than 20% of Direct Costs) Montant admissible (n'excedant pas 20 % des coûts directs)			
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)	

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

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

Total Value of Assessment Credit	Total Assessment Claimed
	× 0.50 =

Remises pour dépôt

- Les travaux déposés dans les deux ans suivant leur achèvement sont remboursés à 100 % de la valeur totale susmentionnée du crédit d'évaluation.
- Les travaux déposés trois, quatre ou cinq ans après leur achèvement sont remboursés à 50 % de la valeur totale du crédit d'évaluation susmentionné. Voir les calculs ci-dessous.

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

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 Peter Harvey, Geologist I am authorized (Recorded Holder, Agent, Position in Company)

to make this certification

Signature
DEC 30 1992

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 Peter Harvey *Date* Dec 29, 1992



Ontario

Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

Mining Lands Branch
Geoscience Approvals Section
933 Ramsey Lake Road
6th Floor
Sudbury, Ontario
P3E 6B5

Telephone: (705) 670-5853

Fax: (705) 670-5863

March 24, 1993

Our File: 2.14882

Transaction #W9260.00177

Mining Recorder
Ministry of Northern Development
and Mines
60 Wilson Avenue
1st Floor
Timmins, Ontario
P4N 2S7

Dear Sir/Madam:

**Subject: APPROVAL OF ASSESSMENT WORK CREDITS ON MINING CLAIMS
935136 ET AL. IN SEMPLE AND HUTT TOWNSHIPS**

The Deficiencies in the Geological Survey submitted in the above Report of Work have been rectified.

The Geological survey has been approved under section 12 of the Mining Act Regulations.

The assessment work credit form originally submitted has been approved as of March 9, 1993.

Please indicate this approval on your records.

If you have any questions regarding this correspondence contact Ted Anderson of the Mining Lands Branch at (705) 670-5856.

Yours sincerely,

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

TAA/jl

Enclosures:

cc: Resident Geologist
Thunder Bay, Ontario

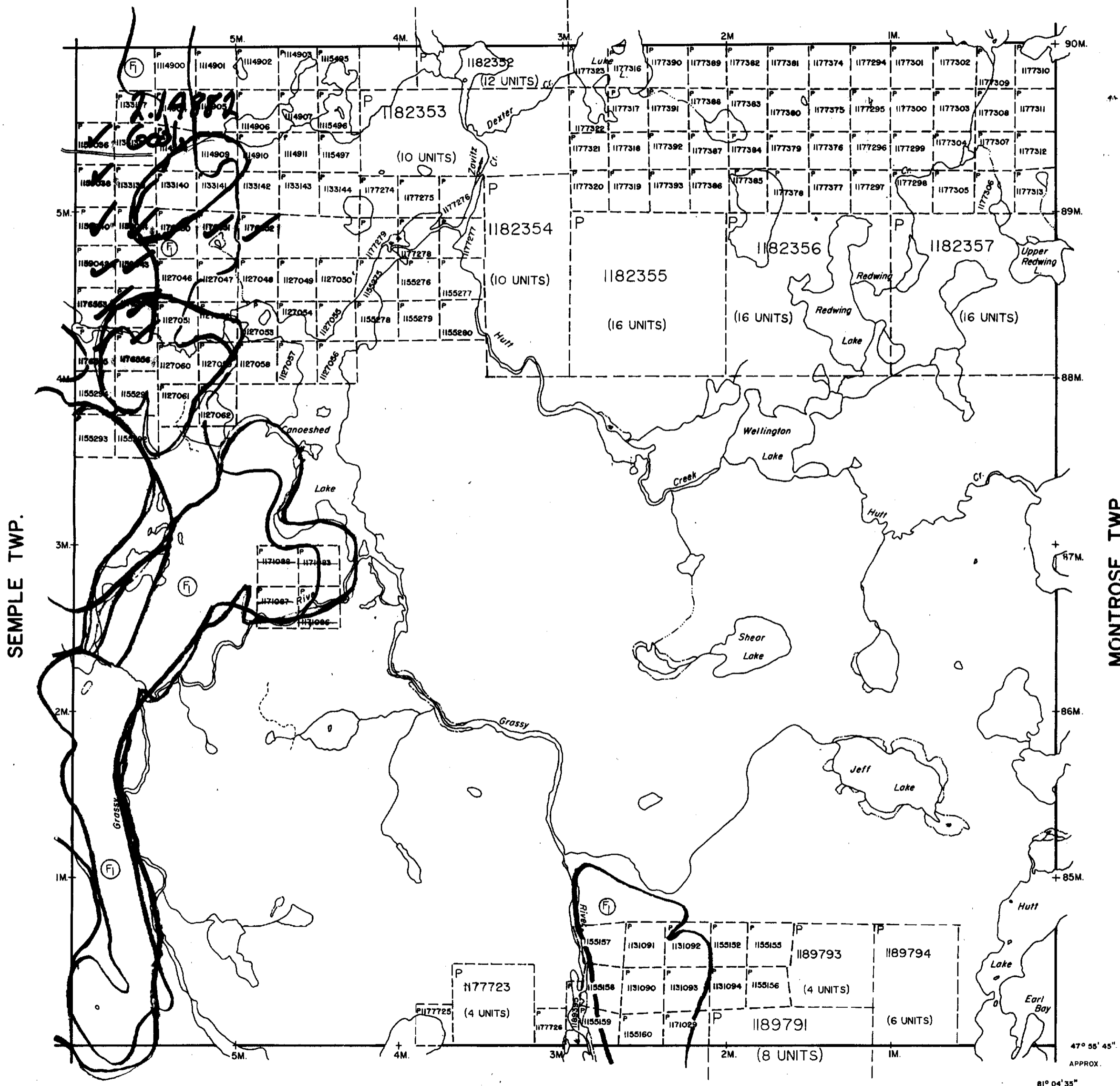
ONTARIO GEOLOGICAL SURVEY
GIS - ASSESSMENT FILES

MAR 30 1993

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Assessment Files Library
Toronto, Ontario

ZAVITZ TWP.



LEGEND

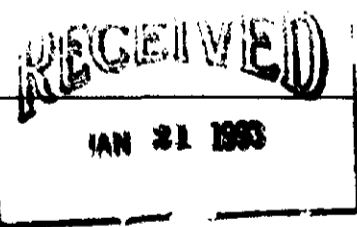
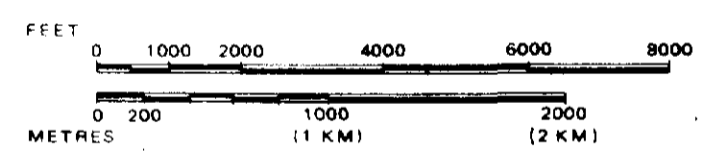
- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES:
 - TOWNSHIPS, BASE LINES, ETC.
 - LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES:
 - LOT LINES
 - PARCEL BOUNDARY
 - MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION OR COMPOSITE PLAN
- RESERVATIONS
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES
- TRAVERSE MONUMENT

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	●
" SURFACE RIGHTS ONLY	○
" MINING RIGHTS ONLY	◐
LEASE, SURFACE & MINING RIGHTS	■
" SURFACE RIGHTS ONLY	□
" MINING RIGHTS ONLY	◻
LICENCE OF OCCUPATION	▼
ORDER-IN-COUNCIL	OC
RESERVATION	⊙
CANCELLED	⊗
SAND & GRAVEL	⊕

Ⓡ THIS TWP. IS SUBJECT TO FOREST ACTIVITY IN 1992/93. FURTHER INFORMATION AVAILABLE ON FILE.

SCALE: 1 INCH = 40 CHAINS



TOWNSHIP
HUTT
M.N.R. ADMINISTRATIVE DISTRICT
TIMMINS
MINING DIVISION
PORCUPINE
LAND TITLES / REGISTRY DIVISION
SUDBURY

Ministry of Natural Resources
Ministry of Northern Development and Mines

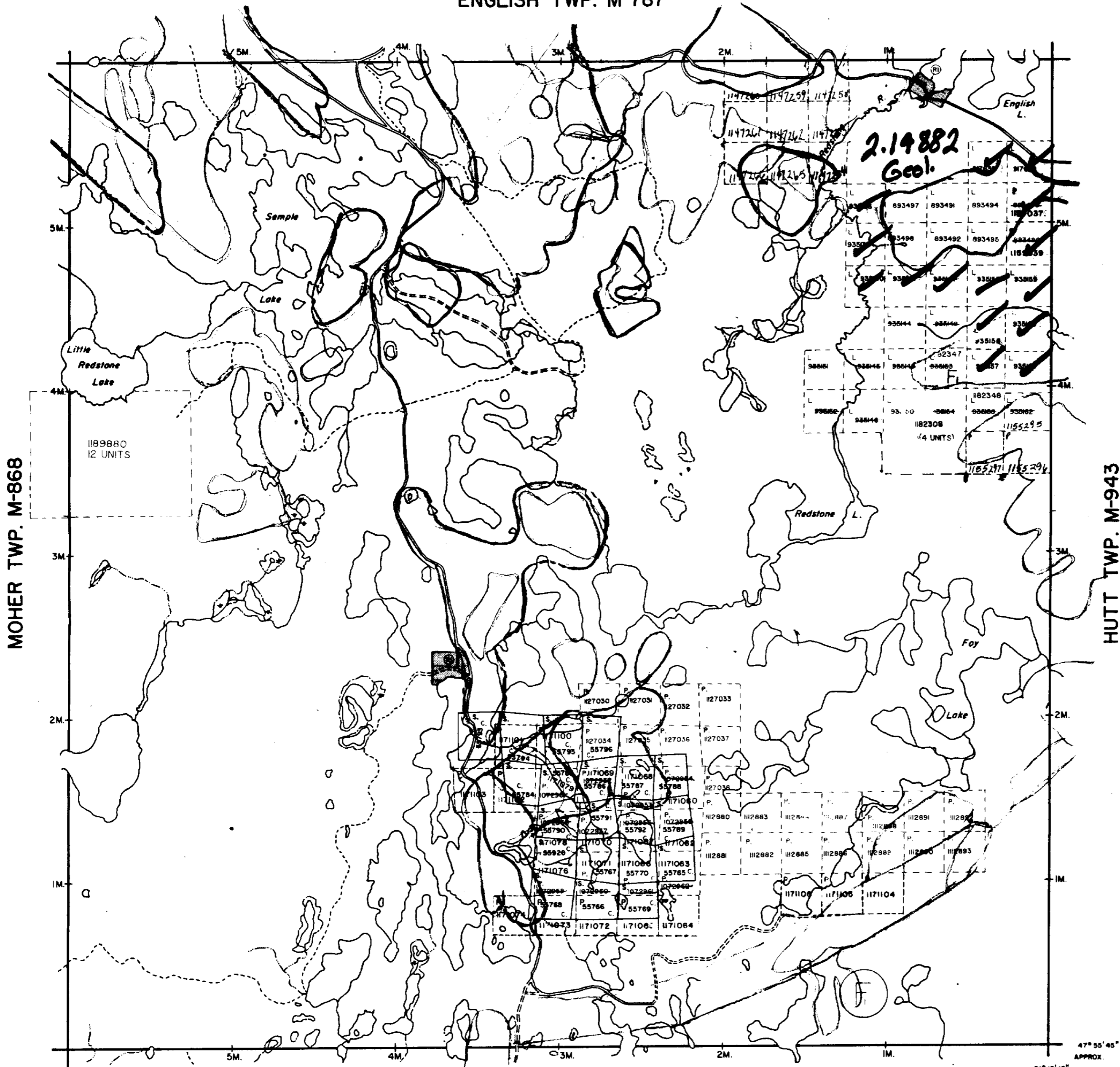
Date JUNE, 1992
Number G-3948
ACTIVATED JULY 16, 1992 BY D.C.
CHECKED BY G.W.

HALLIDAY TWP.



42A635E8378 2.14882 HUTT

ENGLISH TWP. M-787



MOHER TWP. M-868

HUTT TWP. M-943

SOTHMAN TWP. M-121

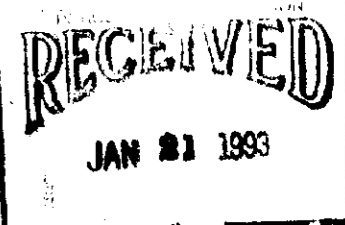
NOTES

400' surface rights reservation along the shores of all lakes and rivers.

- THIS TWP. SUBJECT TO FOREST ACTIVITY IN 1992/93 FURTHER INFORMATION ON FILE.
- (F) THIS TWP. IS SUBJECT TO FOREST ACTIVITIES IN 1991/92 FURTHER INFORMATION AVAILABLE ON FILE.

Areas withdrawn from staking under Section 43 of the Mining Act(R.S.O. 1970)

Order	File	Date	Disposition
(R)	W/19 / 78	168543	10 / 4 / 78 S.R.O.



ACTIVATED APRIL 24, 1990 D.C.

LEGEND

- PATENTED LAND (P) or (●)*
- PATENTED FOR SURFACE RIGHTS ONLY (●)*
- LEASE (L)
- LICENSE OF OCCUPATION (L.O.)
- CROWN LAND SALES (C.S.)
- LOCATED LAND (Loc.)
- CANCELLED (C.)
- MINING RIGHTS ONLY (M.R.O.)
- SURFACE RIGHTS ONLY (S.R.O.)
- HIGHWAY & ROUTE NO. (Hwy symbol)
- ROADS (Road symbol)
- TRAILS (Trail symbol)
- RAILWAYS (Railway symbol)
- POWER LINES (Power line symbol)
- MARSH OR MUSKEG (Marsh symbol)
- MINES (Mine symbol)

*used only with summer resort locations or when space is limited

TOWNSHIP OF

SEMPLÉ

DISTRICT OF SUDBURY

PORCUPINE MINING DIVISION

SCALE : 1 INCH = 40 CHAINS (1/2 MILE)

DR. R.W. NOBLE

DATE APR. 22, 71

PLAN NO. M-1100

ONTARIO DEPARTMENT OF MINES AND NORTHERN AFFAIRS



42A03SE8378 2.14882 HUTT

47° 55' 45" APPROX.
81° 12' 15"



SYMBOLS

ROADS
 All Weather Gravel Road
 Bush Road

CLAIMS
 Chain Post - Puckles Located
 Chain Post - Puckles Assumed
 Chain Line
 1176552 Chain Number

TOPOGRAPHY and VEGETATION
 Alders, Open, Grassy Swamp
 Pines, Birch, at
 Sandstone Till
 Spongy Boulder Till
 (MHT)
 Intermittent Creek
 River
 Pond
 Hydro Corridor
 High ground, low ground
 Low ground

GEOLOGY
 Outcrops with
 Rock Type
 Geological Contact
 Foliations, with dip
 Approximate Location

GEOLOGY LEGEND

QUARTZ DIOBASE
 12 Unsubdivided
 13 Quartz porphyry
 14 Quartz felsic porphyry (quartz-eye porphyritic)
 15 Quartz porphyry (quartz-eye porphyritic)
 16 Quartz porphyry (quartz-eye porphyritic)
 17 Quartz porphyry (quartz-eye porphyritic)
 18 Quartz porphyry (quartz-eye porphyritic)
 19 Quartz porphyry (quartz-eye porphyritic)
 20 Quartz porphyry (quartz-eye porphyritic)

ULTRAMAFIC INTRUSIVE ROCKS
 21 Unsubdivided
 22 Olivine-spinifex textured peridotite
 23 Olivine-spinifex textured peridotite
 24 Olivine-spinifex textured peridotite
 25 Olivine-spinifex textured peridotite
 26 Olivine-spinifex textured peridotite
 27 Olivine-spinifex textured peridotite
 28 Olivine-spinifex textured peridotite
 29 Olivine-spinifex textured peridotite
 30 Olivine-spinifex textured peridotite

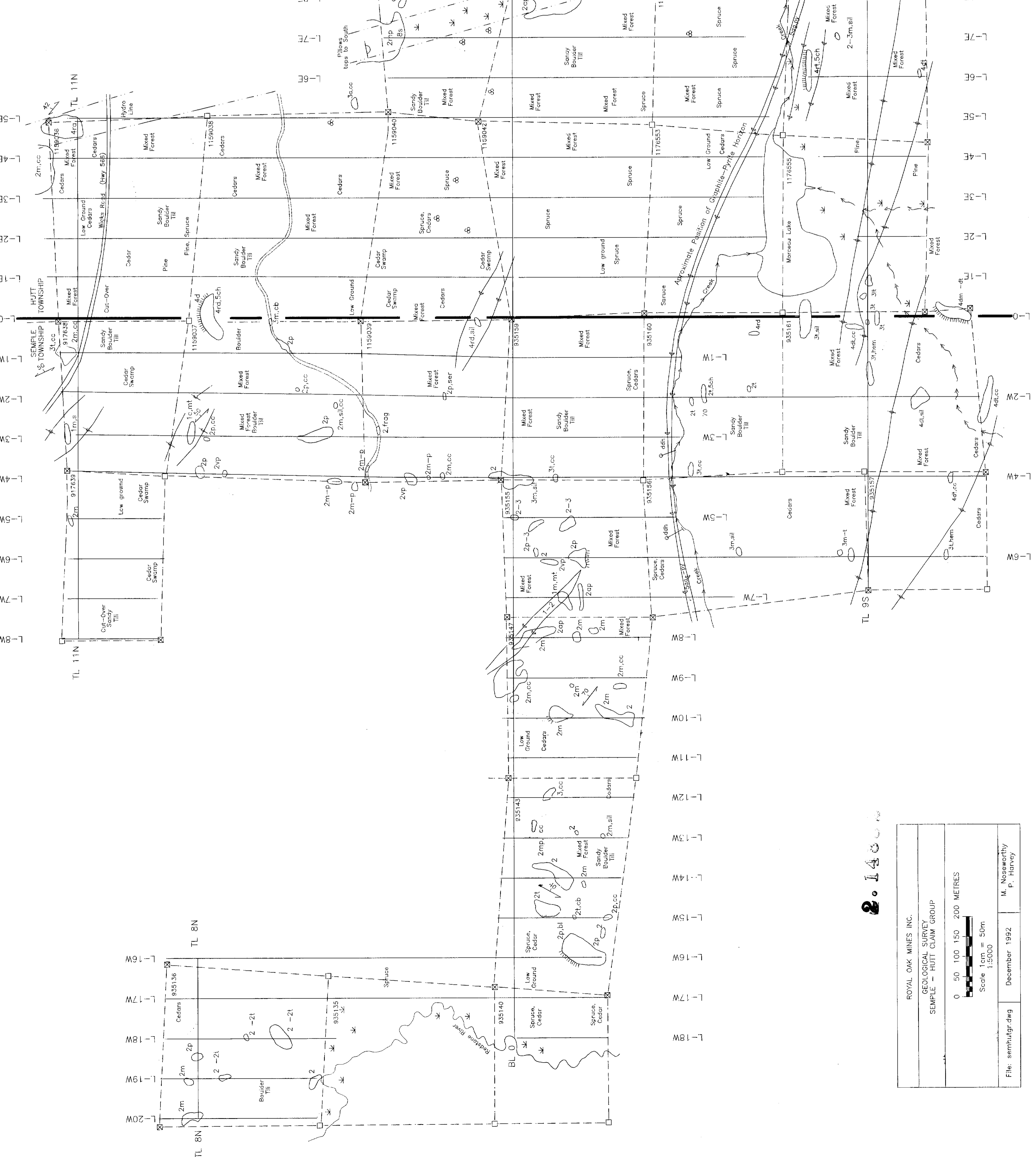
INTERMEDIATE-FELSIC VOLCANICS
 31 Unsubdivided
 32 Basaltic andesite
 33 Basaltic andesite
 34 Basaltic andesite
 35 Basaltic andesite
 36 Basaltic andesite
 37 Basaltic andesite
 38 Basaltic andesite
 39 Basaltic andesite
 40 Basaltic andesite

INTRUSIVE ROCKS
 41 Unsubdivided
 42 Granite
 43 Granite
 44 Granite
 45 Granite
 46 Granite
 47 Granite
 48 Granite
 49 Granite
 50 Granite

SEDIMENTS
 51 Unsubdivided
 52 Sandstone
 53 Sandstone
 54 Sandstone
 55 Sandstone
 56 Sandstone
 57 Sandstone
 58 Sandstone
 59 Sandstone
 60 Sandstone

TECTONIC VOLCANICS
 61 Unsubdivided
 62 Basaltic andesite
 63 Basaltic andesite
 64 Basaltic andesite
 65 Basaltic andesite
 66 Basaltic andesite
 67 Basaltic andesite
 68 Basaltic andesite
 69 Basaltic andesite
 70 Basaltic andesite

TEXTURE
 fa Fine grained
 mg Medium grained
 lg Large grained
 bx Breccia
 fr Fragmental
 pr Primary fragments
 qp Quartz porphyry
 py Pyroclastic
 br Brecciated
 brd Brecciated
 * where computer space permits, use br



ROYAL OAK MINES INC.
 GEOLOGICAL SURVEY
 SEMBLE - HUTT CLAIM GROUP

Scale 1:5000
 0 50 100 150 200 METRES

File: samh14gr.dwg
 December 1992
 M. Nasaworthy
 P. Harvey