010

ENGLISH-ZAVITZ PROJECT 1991

SUMMARY REPORT

ENGLISH AND ZAVITZ TOWNSHIPS, ONTARIO
TINTINA MINES LIMITED
November 15, 1991

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF DRAWINGS

APPENDICES

1.SUMMARY AND CONCLUSIONS

A multi-stage exploration program was carried out during the period February-October/1991 on an 86 claim property in English and Zavitz Townships, Ontario. The program, referred to as the English-Zavitz Project 1991, was jointly funded by Tintina Mines Limited and NSR Resources Inc., Tintina being the Operator. The 1991 work was partly assisted by an OMIP grant.

The purpose of the 1991 work was (i) to investigate gold showings discovered during 1990 and previously on the property near the extrapolated trace of the Tisdale/Deloro geologic contact, (ii) to define structural and stratigraphic controls, and (iii) to assess potential of the property for hosting economic gold mineralization.

Work included linecutting, land acquisition, ground geophysics (MAG), geological and lithogeochemical surveys, power stripping, channel sampling, and diamond drilling. More specifically; existing grids were extended to provide uniform access throughout the property, the existing geophysical database was augmented with additional surveying to provide coverage for most of the property, and all 86 claims were mapped on 100m line spacing. Subsequent to this work, certain gold showings and vicinity were stripped of overburden and sampled in detail, and finally drilled.

The above work evaluated the entire property, and directed detailed attention to the only two principal gold bearing zones of merit; (i) the North Shear Zone, a 200m wide carbonatized zone of intense shearing and alteration which includes the Road Showing (discovered 1990, values upward to 6700pbb Au), and (ii) the 43North Showing and vicinity, (discovered 1987, values upward to 1200ppb Au). Both zones represent gold bearing domains with high lithogeochemical background, with localized higher grade mineralized gold sections.

The 1991 work established the location of the Tisdale-Deloro contact at the property, and confirmed that the gold showings are within the Tisdale series near this contact, apparently also spatially associated with major cross-faulting.

The 1991 work was successful in detailing and delimiting the gold bearing domains at the property. The work failed, however, to establish continuity of gold mineralization and geology within the North Shear Zone and within the Road Showing due mainly to extensive faulting. The work also proved the 43N Showing to be a spottily mineralized dike, albeit in a favorable horizon, rather than a strataformed unit as initially suspected.

In summary, although the property continues to present all of the geologic, geochemical, and structural conditions favorable to hosting gold mineralization, the disappointing results from the surface work and from the drill program do not support additional detailed work on individual showings.

The proximity of the two principle gold showings to the junction of the regional fault and the Tisdale-Deloro contact, and their favorable stratigraphic position, argue in favour of a more general approach to understanding mineral controls at the property should any future work be contemplated. In that context, the North Shear Zone, by virtue of consistently elevated gold background, substantial and open strike length, continues to present a viable horizon for future work, and should receive particular attention.

2.TERMS OF REFERENCE

Interest in the area was the result of a discovery made by G.S.W.Bruce in 1990 of a gold showing (the Road Showing) within a 200m wide carbonatized and sheared band of very altered rocks in the vicinity of the favorable Tisdale-Deloro Contact.

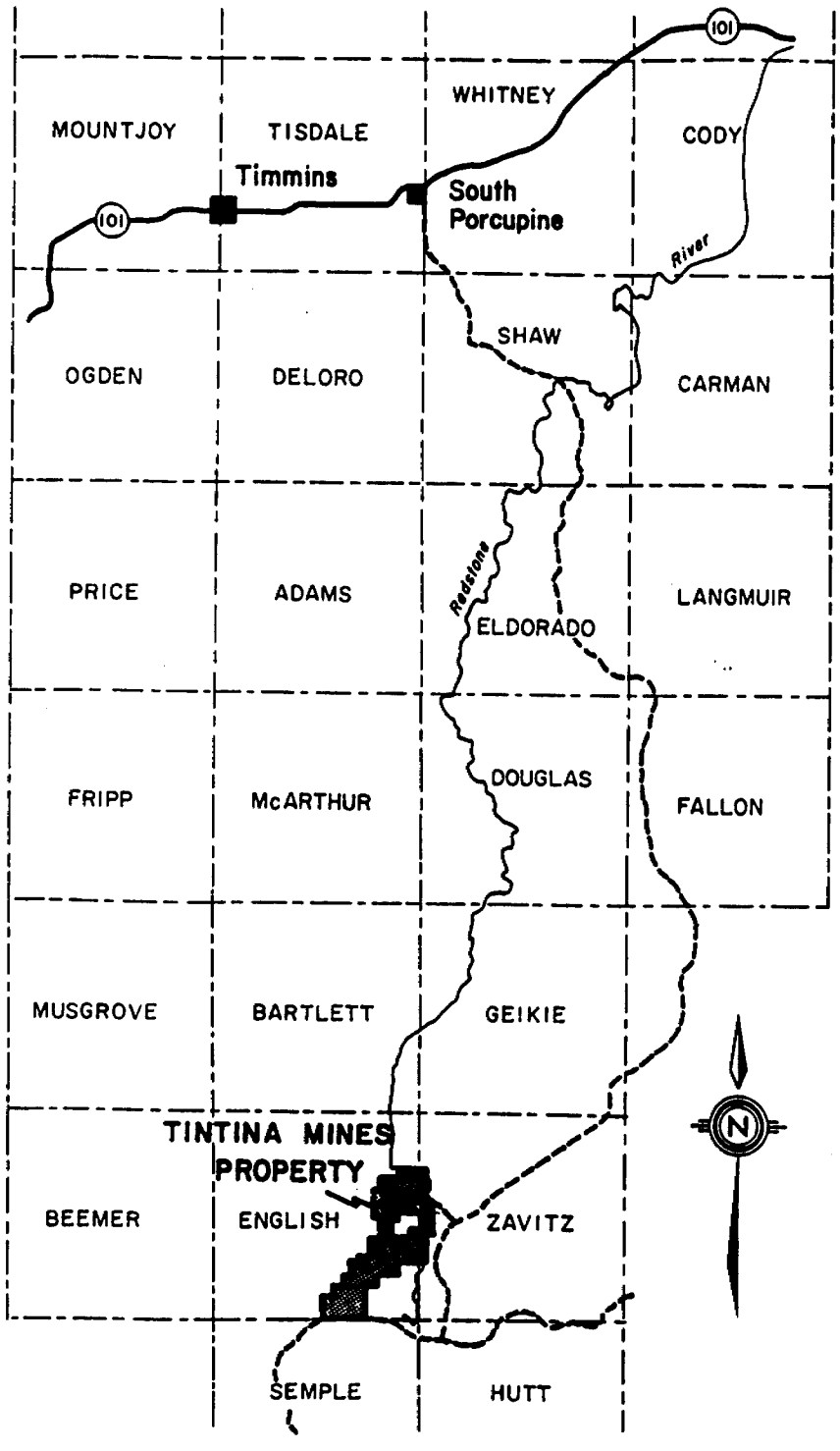
A total of 77 claims were staked by Bruce in stages, and by January 1991 Tintina Mines Limited optioned the property from the G.S.W.B Grubstake Syndicate. An additional 9 claims were staked by Tintina soon thereafter, and by April 1991 it established a joint venture with NSR Resources Inc., Tintina being Operator, to jointly fund exploration at the 86 claims comprising the property.

Exploration was essentially initiated to investigate the potential of the showing discovered by Bruce which held promise for expansion into an as yet undiscovered larger and higher grade gold concentration. To this end, exploration work at the start of the program was designed to determine the structural and stratigraphic controls of this mineralization, as well as evaluating the remaining portions of the property.

Midway through the program, stripping and channel sampling of the showing proved it to be a relatively small altered sill, and although geochemically anomalous in gold, the best mineralized sections were subeconomic (1000-3000ppb). Outlining sufficient volume of this material to yield a high tonnage low grade gold deposit was considered not to be a realistic expectation due the prevalence of faulting present in the immediate area, thus the balance of the program was directed outward from the showing proper to the enclosing 200m wide carbonatized zone of shearing, itself a very favorable domain with high background in geochemical gold.

3.LOCATION, ACCESS and TOPOGRAPHY

The property is located in east central English township and west Zavitz township, Ontario (Figure 1). The center of the property is approximately 48 km south of the City of Timmins. Excellent access is provided by a system of all weather roads, which extend south from both Timmins (Pine Street South) and South Porcupine (Stringers, or Langmuir Road). Locally, the north area of the property is best



LOCATION MAP

Figure 1

reached by the Ferrier Creek road, on which the "Road Showing" is situated. Access to the southern portion of the claims is provided by the Matachewan Road and also by the Ontario Hydroelectric power transmission line from Timmins to North Bay, which passes north-south across the property, also crossing the Ferrier Creek Road.

Essentially, all points on the property can be reached via one of the roads, with the maximum walking time being one hour.

Topography at the property is characterized by low to moderate relief, with shallow overburden (rarely greater than 2m) composed of a very thin layer of till.

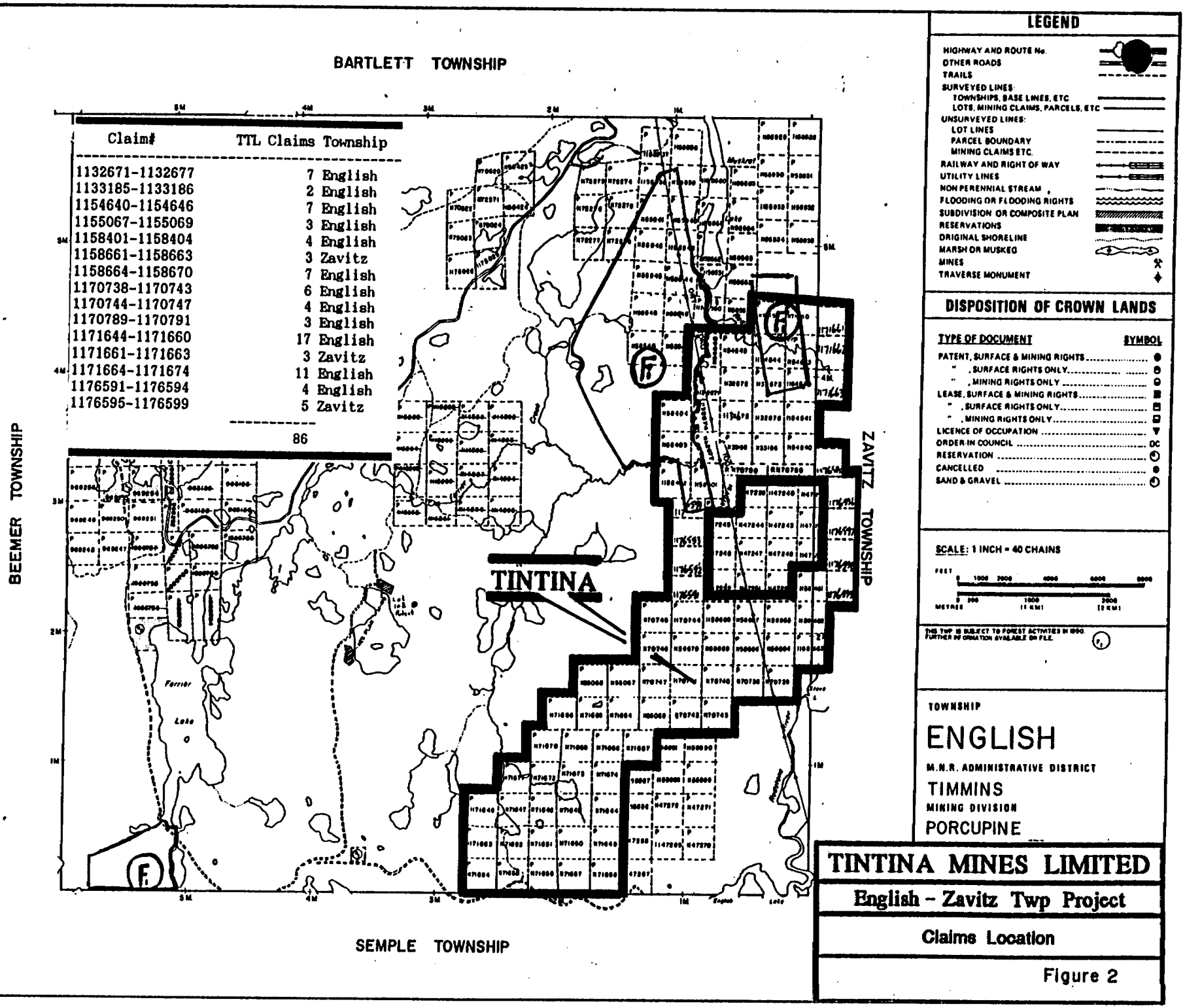
Surface over the northern portion is 50% cedar and alder swamp interspersed with linear ridges of more resistant rock. Two meandering streams, the Ferrier Creek and Redstone River, drain these swamps.

Much of the southern portion is covered by mixed cedar swamp and low relief uplands. These uplands have been denuded in the past ten years by pervasive spruce budworm infestation.

4.PROPERTY

The property consists of 86 contiguous claims (Figure 2), staked in stages during the period May/1990 to March/1991. All claim posts were located in the field and are shown on Drawings 1 through 4. Claim numbers and due dates are summarized below.

Claim#	TTL Clms	Twp	Due Date
1132671-1132677	7	English	Jun 25, 1995
1133185-1133186	2	English	Jun 25, 1995
1154640-1154646	7	English	Jul 23, 1995
1155067-1155069	3	English	Dec 10, 1992
1158401-1158404	4	English	Jul 23, 1994
1158661-1158663	3	Zavitz	Aug 15, 1992
1158664-1158670	7	English	Aug 15, 1992
1170738-1170743	6	English	Nov 8, 1992
1170744-1170747	4	English	Dec 10, 1992
1170789-1170791	3	English	Nov 9, 1994
1171644-1171658	15	English	Dec 10, 1992
1171659-1171660	2	English	Dec 10, 1994
1171661-1171663	3	Zavitz	Dec 10, 1994
1171664-1171674	11	English	Dec 10, 1992
1176591-1176594	4	English	Mar 12, 1993
1176595-1176599	5	Zavitz	Mar 12, 1993
Total	86 Claims		



Claim#	TTL Claims	Township
1132671-1132677	7	English
1133185-1133186	2	English
1154640-1154646	7	English
1155067-1155069	3	English
1158401-1158404	4	English
1158661-1158663	3	Zavitz
1158664-1158670	7	English
1170738-1170743	6	English
1170744-1170747	4	English
1170789-1170791	3	English
1171644-1171660	17	English
1171661-1171663	3	Zavitz
1171664-1171674	11	English
1176591-1176594	4	English
1176595-1176599	5	Zavitz
	86	

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	R
CANCELLED	●
SAND & GRAVEL	G

SCALE: 1 INCH = 40 CHAINS

FEET 0 1000 2000 4000 6000 8000

METRES 0 500 1000 (1 KM) 2000 (2 KM)

THIS TWP IS SUBJECT TO FOREST ACTIVITIES IN 1990. FURTHER INFORMATION AVAILABLE ON FILE. (F)

TOWNSHIP

ENGLISH

M.N.R. ADMINISTRATIVE DISTRICT

TIMMINS

MINING DIVISION

PORCUPINE

TINTINA MINES LIMITED

English - Zavitz Twp Project

Claims Location

Figure 2

The above table reflect assessment credits from linecutting and ground geophysics filed in April/91, but excludes credits for any other work from the 1991 work program (mapping, assaying, stripping, drilling).

The claims are registered to Tintina Mines Limited.

5.PREVIOUS WORK

While the area to the south of the property, in Semple Township, has seen several exploration campaigns dating back to 1962, the only previous work of material interest to the property is that carried out during the mid-late-1980's (Chevron 1984, Esso 1987) over the southern portion of the claims. There are no records of any previous work at the northern portion of the property prior to prospecting in 1990 by G.S.W.Bruce.

A summary of previous work to the south of the property, at times overlapping onto a few of the claims is as follows:

1962: Hollinger Consolidated Gold Mines Limited examined a pyritiferous lean iron formation exposed near the Matachewan road, southeast of the Property at the English-Semple township boundary. They produced a geological map which included the extreme southwest claims of the Property. Hollinger also carried out ground magnetometer and EM surveys, and drilled several very short packsack holes, of which two appear to be on the present claim group, although there is uncertainty as to exact location. In 1963 Hollinger mounted a major drill program, of which three holes totalling 1510 feet are on land at the extreme southwest of the Property. No assays were submitted with the drill logs, and there appears to be nothing of geologic significance.

1972: Dowa Mining Company Limited held a large block of claims on Semple Township which overlapped onto one claim of the Property at the extreme soutwest. Records indicate that Dowa obtained nothing of interest.

1974: Granges Exploration Canada AB carried out a regional airborne electromagnetic survey in the general English Township area, but obtained no anomalies and did no further work on the subject claims.

1982: Amax Minerals Exploration, geologically mapped the extreme southwest part of the property concentrating on a sulphide iron formation north of the Redstone River. No significant results were returned.

1984: Chevron Canada Resources Limited held a 43 claim block in English and Semple Townships part of which overlap onto the southeastern quarter of the Property, as far north as the 43North Showing. Chevron established a 100m line spaced

grid and carried out ground magnetometer survey. While there is no indication of what Chevron's targets were, the grid and the geophysical data were utilized by Esso in 1987, and by Tintina during the current years field work at the Property.

1987: Dome Exploration (Canada) Limited examined a 42 claim block at the English-Semple Township boundary, overlapping several of the extreme southeast claims of the Property. As follow-up of gold lithogeochemical anomalies from reconnaissance sampling, Dome carried out geologic mapping, ground magnetometer, horizontal loop EM, and IP surveys, followed by a power stripping program.

1987: After obtaining anomalous lithogeochemical values from a reconnaissance program, Esso Minerals Canada staked ground to the north of, and adjoining, Dome's claims. Esso partially rehabilitated the 1984 Chevron grid, and carried out limited geologic mapping, power stripping, IP surveying, and a pilot soil sampling survey. The 43North Showing was discovered by this work, represented by a coincident IP/Soil Geochemical/Lithogeochemical gold anomaly apparently hosted in volcanics. Esso appears to have stripped the showing but abandoned their property due to corporate reasons.

1990: In the early summer of 1990, as part of an OPAP funded program prospecting and tracing the Tisdale-Deloro contact, G.S.W.Bruce discovered extensive carbonatization and pyritization near the Ferrier Creek Road. Further prospecting led to the discovery of a heavily altered and weathered gold bearing showing on the Ferrier Creek Road ("Road Showing"), and the identification of a NE trending 200m wide zone of intense shearing and alteration enveloping this showing.

Sixteen claims were staked by the GSWB Grubstake Syndicate soon thereafter over the showing and the shear zone, a grid was established and the claims were mapped in detail by W.Kerr in the autumn of 1990.

After discovering additional gold anomalies from several areas to the south of the 16 claims, on ground previously explored by Esso in 1987, an additional 15 claims were staked by the Grubstake Syndicate to secure these anomalies including the 43North Showing, and by late 1990, the Syndicate held 77 claims in two groups.

In addition to the above, more general information for the township is available from regional geological mapping and airborne surveys of Ontario Geological Survey.

6.CURRENT PROGRAM: 1991

Pre-engineering work for the 1991 Program commenced during late January. Field work proceeded in stages commencing in early March with linecutting, followed soon thereafter by ground geophysics (MAG). Available airborne geophysical information was studied and GEOTEM data was reinterpreted to aid field work.

Field crew mobilized to the property during late May, and operated from a camp established on Ferrier Creek Road. Systematic mapping, prospecting and sampling of the claims were completed by late June, in advance of overburden stripping during which a number of designated areas were stripped, washed and sampled in detail.

Crew demobilized in late July, and the balance of the field work, comprising primarily diamond drilling, was serviced from Timmins as required. Detailed follow-up mapping/sampling occupied most of August, and after a preliminary compilation of data collected, diamond drilling of two principal target areas was completed during late September.

Data compilation, interpretation and drafting were completed during October. A generalized schedule is schematically presented in Figure 3. Details of work quantities are outlined below and particulars of contractors whose services were retained are summarized in Appendix F.

Linecutting: Following grid layout during February, 18.7Km of lines were cut by Georgex Contractors during the period March3-7. The purpose of the linecutting was to expand a previously (1990) established 100m line-spaced grid over the northern portion of the property and to extend same to the property boundaries. The above grid is picketed at 25m spacing along 100m spaced lines oriented 140 degrees, and has a 50 degree baseline.

During June, a 2.5km long 25 degree oriented tie-line was also cut to provide control during mapping of the southwestern portion of the property. This tie-line parallels the baseline of the grid previously established by Chevron in 1984 (refurbished by Esso 1987), and originates at 21+50N/10+00W. Control line 21+50N connects this line to the Chevron Baseline which was tied to the north grid by compass-chain. The south grid is picketed at 25m spacing along lines oriented 115 degrees, and has a base-line at 25 degrees.

The above grids provided good access throughout most of the property, with the exception of its south-western portion throughout which work relied on compass/hip-chained lines using the tie-line for control.

Geophysics: Geosearch Consultants Limited was contracted to complete a 26.8 line Km ground Magnetometer survey over the northern portion of the property. This work, covering 28 claims, was completed during the period March14-April11. This work, in conjunction with other ground geophysics available from work by

English-Zavitz Project 1991

Summary Project Schedule

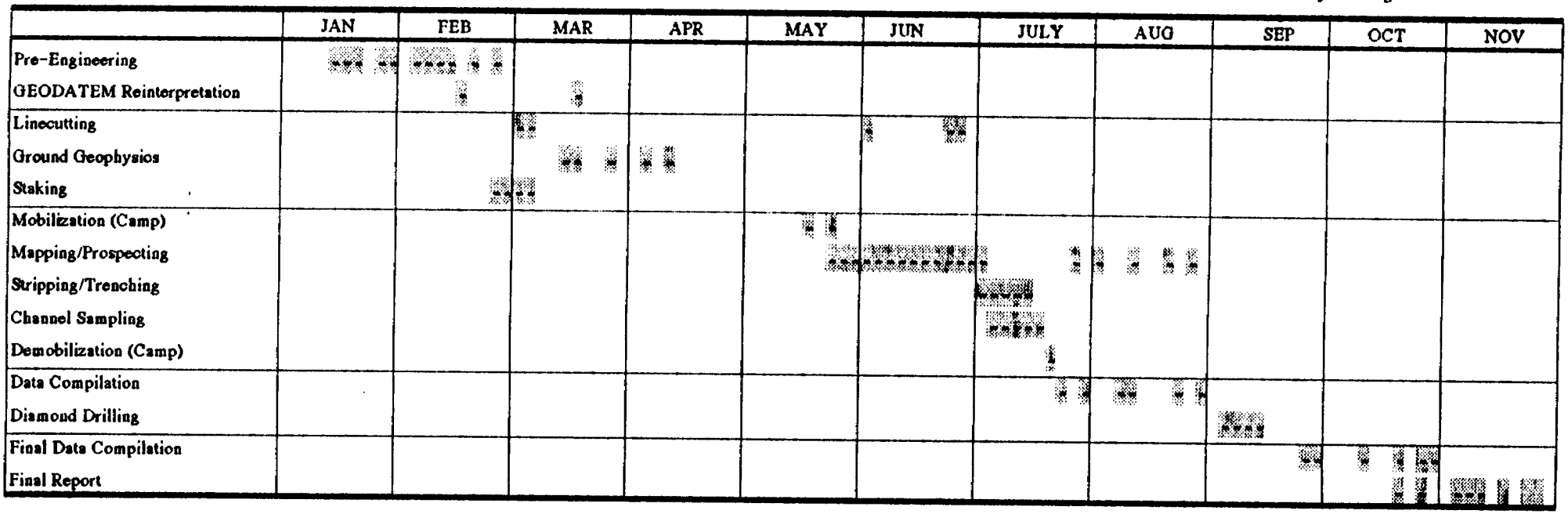


Figure 3

Chevron and Esso for the southeastern part of the property, provided a relatively good database for most of the property.

An analog reinterpretation of GEOTEM airborne data was also prepared by Geodatem Airborne Consultants prior to field work. Results of this work are in Appendix E.

Geological Mapping: The entire property was mapped at a scale of 1:2500, along 100m line spacing. A total of 101.5 line kilometers were mapped, of which 18.7 were on winter cut and picketed lines, approximately 28 line kilometers were on the Chevron grid, and the balance along compass-hipchained lines. In addition, 3.3 line km in two selected areas, the Road Showing and the 43North Showing and vicinities, were mapped in greater detail at a scale of 1:500, and some 35 samples were taken for analysis.

Information from previous mapping (W.Kerr 1990) of a 16-claim block at the northern portion of the property was incorporated into the current work after additional ground follow-up.

Prospecting and lithogeochemical sampling were also completed concurrent with the mapping. A total of 284 samples were collected during the mapping, and an additional 57 samples collected during the detailed follow-up of anomalies. All samples were analyzed for gold at Swastika Laboratories by fire assay technique with an atomic absorption finish, and reported in ppb.

Geology of the property at 1:2500 is presented in Drawings 1 through 4, detailed work for two areas at 1:500 is presented in drawings 5 and 6. Sample descriptions are tabulated in Appendix A, and assay certificates are in Appendix B.

Stripping and Channel Sampling: Following the mapping phase of the program, power stripping, washing, and channel sampling work was carried out over, and on strike of, the Road Showing and vicinity to aid in explaining the geologic and structural controls of the mineralization.

The stripping work was carried out during the period July2-12, by Larchex Inc., utilizing a John Deere 450 bulldozer with a detachable 9300 backhoe. Washing was done using a Honda unit with a Wajax Mark 3 used to top up a nearby sump pond supplied from Ferrier Creek.

Approximately 400 meters in 6 linear cross trenches, with an average width of 1.5-2.0 meters, and an average depth of 0.5m were cleaned of overburden and washed. In addition, a 10x20m area was stripped exposing the Road Showing proper.

All trenches were geologically mapped at a scale of 1:125, channels were then cut with a diamond saw and a total of 170 channel samples and 25 grab samples were taken and assayed for gold. Trench data are presented in drawings 7a,7b,8a,and 8b.

Sample descriptions are presented in Appendix A.

The above stripping program was by far the most cost effective phase of the 1991 program. Overburden was negligible, and much useful exposure was easily obtained.

Diamond Drilling: The diamond drilling phase of the program comprised 456m in 5 holes (T1-91 through T5-91) drilled by Norex Drilling Limited, during the period Sept6-14. The drilling probed two areas of interest; the Road Showing proper (NW-SE cross-section, 3 holes) and the 43North Showing (2 holes across strike).

Core recovery was excellent, and 173 samples of split core were taken for assaying. The core was stored at the Core Library facilities of the Ministry of Northern Development and Mines in Timmins, whose logging facilities were utilized. All pulps/rejects from samples are also stored at the same facility.

Compilation, interpretation, drafting and report writing were carried out intermittently during September-October.

7.REGIONAL GEOLOGY

The property is within the Porcupine Camp of the Superior Province of the Canadian Shield, underlain by rocks of the Abitibi volcanic belt - a prolific regional gold bearing belt hosting the Porcupine, Kirkland Lake, Larder Lake, Cadillac, and Val D'or mining camps.

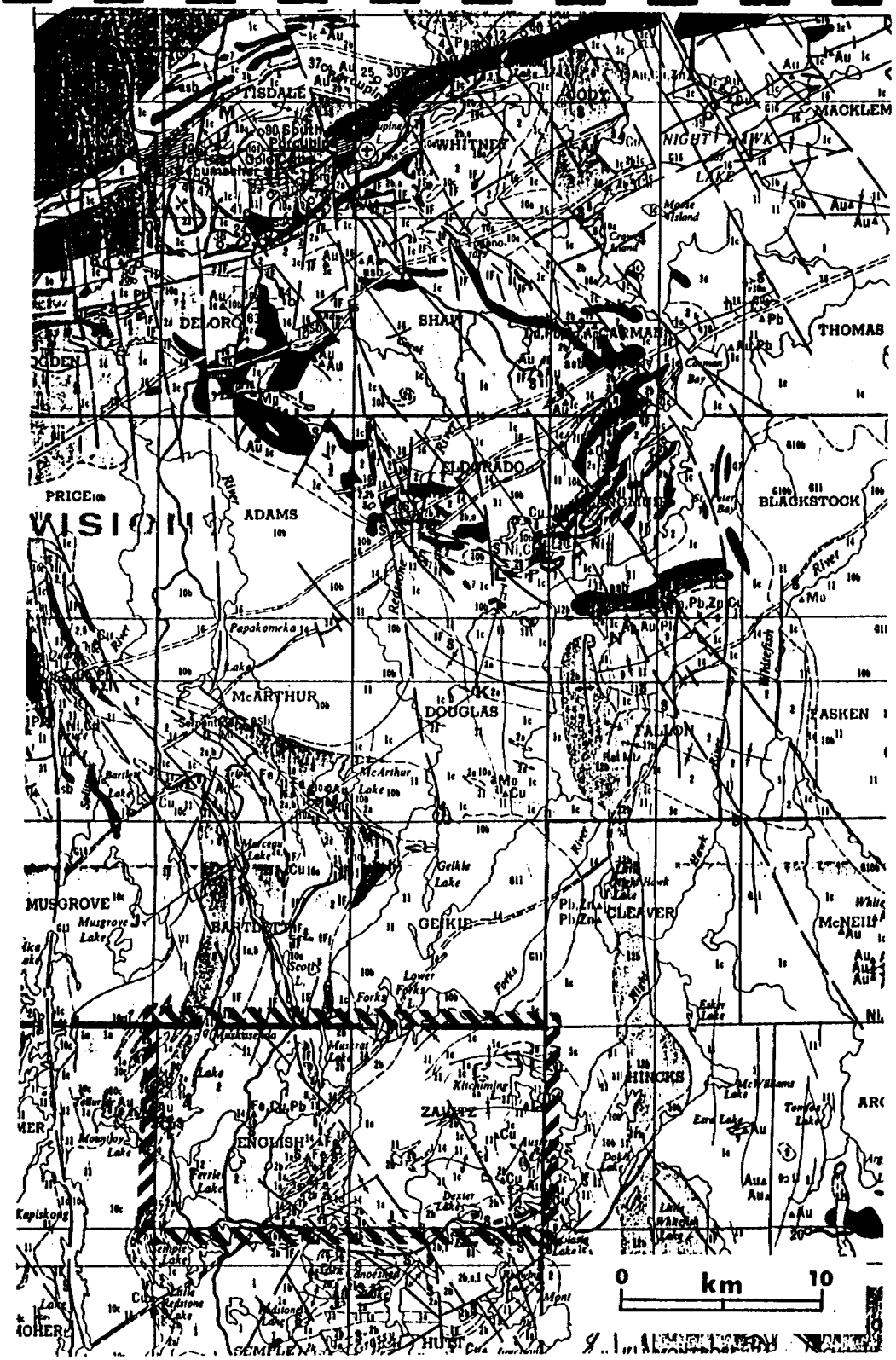
Within the Porcupine Camp, gold mineralization is associated with komatiitic and Mg-rich tholeiitic basalts, the Tisdale Group, near the contact with the underlying, more felsic, Deloro age rocks. Most exploration for gold has historically concentrated along major structural and lithologic "breaks" near this Tisdale-Deloro geologic contact, with which most of the Timmins gold deposits are associated.

The feature that originally attracted interest to English and Zavitz Townships (e.g.Chevron 1984, Esso 1987, G.S.W.Bruce 1990), is the proposition by Pyke, 1978, that the Tisdale-Deloro contact passes in a general southerly trend through the area. Regional Geology is schematically presented in Figure 4.

8.PROPERTY GEOLOGY and 1991 RESULTS

Property geology is shown in detail in Drawings 1 through 4 , and schematically presented in Figure 5. The geology is discussed below and the reader is referred to the drawings for exact relationships.

The 1991 work established the Tisdale-Deloro geologic contact at the property with relative confidence. This contact passes southerly across the northwest corner of the property, is offset by a sinistral



MESOZOIC

19 *Kimberlite: dikes.*

INTRUSIVE CONTACT

PALEOZOIC

LOWER AND MIDDLE SILURIAN

18 *Thornloe Formation: limestone, dolomite, sandstone. Wabi Formation: limestone, shale.*

MIDDLE AND UPPER ORDOVICIAN

17 *Dawson Point Formation: shale. Farr Formation: limestone. Bucke Formation: limestone, shale. Guigues Formation: sandstone.*

UNCONFORMITY

PRECAMBRIAN

LATE PRECAMBRIAN

MAFIC INTRUSIVE ROCKS

16 *Diabase: dikes.*

INTRUSIVE CONTACT

MIDDLE PRECAMBRIAN

ALKALIC INTRUSIVE ROCKS

15 *Syenite, nepheline syenite.*

MAFIC INTRUSIVE ROCKS[a]

14 *Diabase, granophyre: sheets and dikes.*

INTRUSIVE CONTACT

HURONIAN SUPERGROUP

COBALT GROUP

Lorrain Formation

13 *Quartzite, arkose.*

Gowganda Formation

12 *Unsubdivided.*
12a *Firstbrook Member: argillite, greywacke, siltstone, arkose.*
12b *Coleman Member: conglomerate, arkose, greywacke, quartzite, argillite.*

UNCONFORMITY

EARLY PRECAMBRIAN

MAFIC INTRUSIVE ROCKS[b]

11 *Diabase: dikes.*

INTRUSIVE CONTACT

FELSIC INTRUSIVE ROCKS[c]

10a *Quartz porphyry, quartz-feldspar porphyry, feldspar porphyry, granophyre, felsite*
10b *Trondhjemite, granodiorite, quartz monzonite: simple batholiths and stocks*
10c *Trondhjemite, granodiorite, quartz monzonite, quartz diorite, aplite, pegmatite, migmatite: complex batholiths.*

9 *Syenite, monzonite, feldspar porphyry*

METAMORPHOSED MAFIC AND ULTRAMAFIC ROCKS[e]

8 *Gabbro, diorite, lamprophyre.*

7 *Peridotite, dunite, pyroxenite, serpentinite*

INTRUSIVE CONTACT

METASEDIMENTS[g]

6 *Conglomerate, greywacke, siltstone, slate, argillite*

5 *Greywacke, siltstone, slate, argillite and minor pebble conglomerate*

METAVOLCANICS[g]

ALKALIC METAVOLCANICS[h]

4 *Trachyte, leucitic trachyte; flows, tuff, breccia.*

ULTRAMAFIC METAVOLCANICS[k]

3 *Serpentinized dunitic and peridotitic flows.*

FELSIC METAVOLCANICS[j]

2 *Unsubdivided.*
2a *Pyroclastic rocks.*
2b *Flows.*

INTERMEDIATE AND MAFIC METAVOLCANICS[j]

1 *Unsubdivided.*
1a *Intermediate flows.*
1b *Intermediate pyroclastic rocks.*
1c *Mafic flows and pyroclastic rocks.*

IF *Iron formation and ferruginous chert (occurs as a member of stratigraphic units 1, 2, 4, and 5).*

S *Sulphide mineralization.*

FIGURE 4.

Regional geology summary sketch (from ODM, Map2205 Geological Compilation Series, Timmins-Kirkland Lake Sheet).

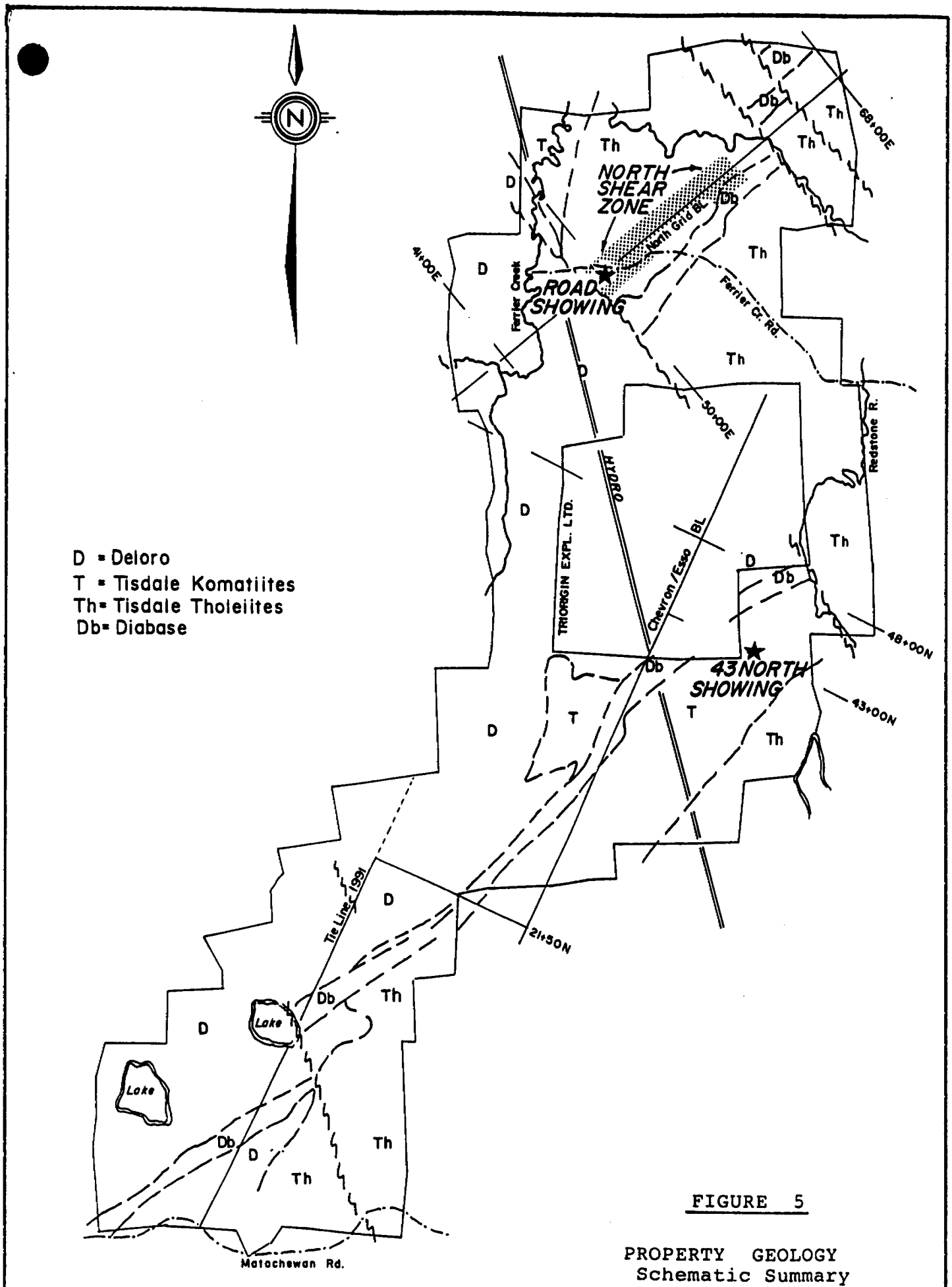


FIGURE 5

PROPERTY GEOLOGY
Schematic Summary

regional southeasterly fault, and is discernible thence passing southwesterly along the eastern portion of the claims.

Deloro Group felsic volcanics dominate the western portion of the property, and were the oldest rock types encountered during the mapping. They are most commonly represented by quartz sericite schists, with a very well developed foliation (generally 100-110 degrees), and are locally with lapilli clasts (less commonly with larger size clasts). At the southern portion of the property, interbedded basalts were also noted with increasing frequency.

Bedding, though rarely observed, appears to be subparallel to the subvertical foliation trending 110 degrees. Where observed, units are generally very fresh and relatively unaltered, with only 1% pyrite disseminated locally. At the northern portion of the property, however, quite near the contact with the Tisdale volcanics, several outcrops (Drawing 1, powerline), exhibit extensive epidote alteration related to a strong shear developed foliation.

Directly overlying the Deloro, apparently unconformably, is the Lower Unit of the Tisdale volcanics, represented by ultramafic volcanics with abundant polysuturing, local spinifex, and with a strong degree of ankerite alteration. Mariposite alteration is also present, occasionally in the volcanics proper but more often related to thin quartz veins and veinlets. This ultramafic unit has an apparent width of 400 meters at the center of the property (Drawing 3), and an interpreted width of 400 meters at the north (Drawing 1).

While Tisdale ultramafics can potentially host base metal mineralization, there are no indications of same at the property.

Overlying the ultramafics, still in Tisdale, is an unknown thickness of tholeiitic basalt, which is rarely pillowed but often vesicular and almost invariably containing pervasive calcite. At the northern part of the property, this unit is locally interbedded with more felsic dacitic material often displaying a strong foliation, and still with pervasive calcite. This basalt is generally very fresh and unaltered, except in the vicinity of the Road Showing (Drawing 1, 0+00N/49+00E) where it is extensively sheared.

Bedding, though rarely observed, appears to be subparallel to the subvertical foliation trending 20-50 degrees. Pillows, with easterly tops, were observed in trenches near the Road Showing.

Iron formation is exposed in several places on the property. Several thin interflow type units are present within the Deloro Group at the south end of the claims (Drawing 4), and confirm the general easterly strike of the Deloro volcanics.

A strongly magnetic Iron Formation unit marks the contact between the Deloro and the Tisdale at the center of the property (Drawing 3), roughly paralleling a major diabase dyke. While in the Timmins area proper, iron formations typically mark the cessation of Deloro volcanic activity prior to deposition of the Tisdale, this particular Iron

Formation unit is conformable with the Tisdale Group rocks rather than with the Deloro (i.e., the Deloro rocks strike into the contact and the iron formation). This spatial relationship is enigmatic since Tisdale age iron formation is extremely rare in this part of the Abitibi.

In addition, another unit of iron formation, paralleling the diabase due east of the Road Showing, may be correlated with the above unit and hence is well within the Tisdale group. The relationship of these units with the ultramafics and the Tisdale-Deloro contact is material to an understanding of the stratigraphic controls of the gold showings at the property; the Road Showing in particular. The 1991 mapping, however, has not helped clarify this matter.

Mafic intrusives, specifically diorites and quartz diorites, are widely distributed throughout the property but do not seem to be economically significant.

A variety of felsic intrusives are widely distributed throughout the property without any apparent association with any particular unit. These intrusives are represented by feldspar porphyry, quartz porphyry, quartz feldspar porphyry, felsite and syenite. They are almost always crosscutting, and are generally enriched in gold; typically with 10-50ppb, but rarely higher than 100ppb except in the vicinity of, and near, the Road Showing.

The syenitic member of the intrusives represents the only unit with any demonstrable economic merit. This unit is deep brick red to pale pink to medium grey in color based on degree of ankeritization, hematitization, and local silicification. It typically contains up to 10% erratic clasts of more mafic chloritized material and, less commonly, mariposite bearing clasts. This rock is often quite pyritic, and is almost uniformly geochemically anomalous in gold (typically at least 50-100ppb background, with anomalies as high as 7000ppb). The Road Showing, discovered by G.S.W.Bruce in 1990 is entirely in very altered syenite (Esso called phases of this rock generally an aplite or chloritic granite; however, the term syenite or syenite-like was used during the 1991 program).

A zone of intense carbonatization, alteration and shearing has been defined crossing the northern portion of the claims in a general northeasterly direction. This zone defines a 200m wide elongate domain within which gold bearing sills, dikes and irregular intrusive masses of syenite, porphyry and felsite are common. The intrusives within this domain generally exhibit higher gold concentrations than similar rocks elsewhere at the property.

The above domain (the North Shear Zone) hosts the Road Showing, and has been observed in trenches over 200m of its strike (e.g.Road Showing), in mineralized outcrop over an additional 300M to the east, and is projected to extend to another 1000m eastward. The zone is open easterly into portions of the property devoid of outcrop, but terminates to the west against the Tisdale-Deloro contact.

While the North Shear Zone exhibits all of the classic elements capable

of concentrating gold mineralization, its significance within the context of local stratigraphy and structure remains unresolved despite the particular attentions directed to it during the 1991 work program.

The only major fault at the property is a souteasterly sinistral regional fault nearly bisecting the claims, which offsets the Tisdale-Deloro contact. Other, minor, faults have also been noted, but by far the most intense structural feature is the North Shear Zone characterized by numerous predominantly steep dipping offsets and shears which exacerbated all attempts at correlating geology.

A major throughgoing diabase dyke transects the property, but is not economically significant.

Lithogeochemical sampling during mapping proved to be a very useful prospecting tool. A number of point source anomalies (i.e.>10ppb) were identified during the initial pass of routine sampling, and all anomalies were resampled during follow-up work. This sampling concludes the following:

> Syenitic rocks throughout the property, regardless of whether exposed as small single outcrops or as sill or dyke like features, are almost invariably anomalous. Increasing pyrite content can be broadly correlated with higher gold values, such that backgrounds of generally around 50ppb for units devoid of pyrite, increasing to 200-300ppb for pyritiferous bodies, and ranging upward to 2000-6000ppb at parts of the Road Showing bearing some 10% pyrite.
>
> The ultramafic volcanics that host the 43North Showing (Esso area showings) are occasionally anomalous to 200-300ppb. Detailed prospecting and resampling, however, failed to disclose any other gold mineralization nearby, and it is suggested that these anomalies reflect elevated horizons within the lithologic package rather than proximity to mineralization. The significance of these values are unknown at this time.
>
> The Road Showing and vicinity represents the only significant, and by far the strongest, lithogeochemical halo at the property. Virtually all rocks exposed in the trenches stripped at, and near, the Showing are anomalous to some degree, and comments regarding its significance can to some degree be also extended to the major zone of shearing and associated carbonatization which hosts the Showing.

The 1991 ground magnetometer geophysical survey identified a number of features, many of which were previously known structures or units. Of incidental interest are some easterly trending linear magnetic highs, entirely within Deloro rocks, along the northwestern portion of the property (for greater detail the reader is referred to Racic 1991).

All geophysical features identified during 1991, as well as those previously reported by Chevron, were followed up in the field and

accounted for. In summary:

The Road Showing has no magnetic expression, and considering the amount of faulting and alteration would probably not respond to IP.

Some of the magnetic highs are caused by thin lenses of iron formation at the margins of the diabase dike.

Iron Formation, magnetite rich cherty rhyolite, and diabase represent the sources of most anomalies documented by Chevron from the southeastern portion of the property.

The analog reinterpretation of GEOTEM airborne data did not present any significant nor useful information.

In summary, gold mineralization at the property is concentrated in only two principal locations, the Road and 43North Showings. Both locations are entirely within the Tisdale group, and are near the junction of the southeasterly regional fault and the Tisdale-Deloro contact. The showings are described in greater detail below.

THE ROAD SHOWING and VICINITY: The Road Showing is located on the Ferrier Creek Road at 0+00N/49+00E. At the time of its discovery in 1990 it consisted of an extremely weathered rusty altered knobby outcrop of apparently volcanic affinity, grab samples from which yielded gold concentrations ranging upward to 6700ppb. Other, anomalies were also identified nearby in other units which collectively define an overall 200m wide northeasterly trending band (or zone) within which alteration and gold anomalies are common.

Overburden stripping was concentrated on, and in the vicinity of, the Road Showing revealing it to be an altered gold bearing "syenitic" sill within the enclosing basalts, rather than altered basalt as had first been surmised.

This sill is exposed in trenches with overall dimensions of 10mx20m. Gold concentrations at the Showing appears to be related to pyritization of the syenite at the margins of thin quartz veinlets. Although the main syenite body is consistently anomalous in the hundreds of ppb range, values in the 500-1000ppb range (locally 1000-2000ppb) correlate with heavy disseminations of pyrite in the 10%-15% range.

At the Showing proper, even though the syenite is altered throughout, intensity of alteration and distribution of pyrite are very uneven. Gold mineralization is poddy and preliminary overall outcrop averages from channel sampling yield subeconomic grades. In addition, due to extensive cross fault offsets, even if averages were of higher tenor, it would be difficult (impossible) to target future drilling.

Cross trenching at 25 meter spacing along strike of the volcanic envelope failed to reveal other mineralization, and all attempts at

correlation of geology were unsuccessful due to extensive cross-fault offsets.

Attempts at correlation of drill data from a section drilled across the Showing and flanks were similarly exacerbated. The three-hole cross-section (Drawing 9) shows the syenite to be faulted off 30 meters below the trench, and in its place a porphyry is present with associated flanking ankeritized ultramafic. Although numerous nondirectional vertical faults can be seen on surface, the absence of the syenite in Hole T2-91 suggests the presence also of at least one low angle fault.

It is noteworthy that the only interesting feature of the drilling, and certainly data that were not evident from surface, was the existence of mariposite bearing felsic tuffs in the footwall of the quartz porphyry-ultramafic package (T2-91). The lower contact of the felsic tuff unit is extensively altered, and marked by a 3.7m alteration zone containing abundant smokey blue quartz and green-yellow hydrothermal sericite, locally with semi-massive pyrite. This alteration zone, while barren in gold, presents the most favorable rock type observed on the property as a potential host for higher grade gold values than those observed from the syenite.

No other drill intersections of merit were noted.

Other anomalies near the Road Showing were also investigated in detail by means of stripping and sampling (Drawings 7a, 7b, 8a, 8b). These consist of a quartz porphyry on the north side of the Ferrier Creek road, several other 500ppb anomalous areas from sampling carried out in 1990, and a gold-bearing felsite dyke system. While this work corroborated their anomalous nature, it proved impossible to demonstrate any continuity nor uniformity of mineralization.

Prior to the 1991 work, ankeritization was considered a possible indicator to gold mineralization at the property. The detailed surface sampling established that degree of ankeritization is not associated with elevated gold values. Some of the most pervasively ankeritized rocks, e.g. rocks flanking the porphyry below the Road Showing (see drilling) returned very low or negligible values.

43NORTH SHOWING: The 43North Showing was discovered by Esso Minerals in 1987 as a coincident Lithogeochemical/IP and soil geochemical gold anomaly, with gold concentrations from grab samples up to 1200ppb. Esso's work reported the showing to be hosted in volcanics.

Holes T4-91 and T5-91 were drilled across strike to test the showing, and both holes intersected their target which turned out to be a shallow dipping mafic dyke cut by pyritic quartz veinlets. While fairly consistent assays in the 200-700ppb range were obtained from 1m interval samples across the full width of the target units, on the whole grades are subeconomic.

The 1991 data corroborates previous sampling, and the abundant pyrite

appears to be the principle cause of the IP anomalies. This showing has been adequately tested, and no further work is warranted.

9.CONCLUSIONS AND RECOMMENDATIONS

The 1991 work corroborated previously documented gold mineralization at the property. Despite identifying a number of lithogeochemical gold anomalies, this work concluded that there are only two localities at the property capable of concentrating gold; the Road and the 43North showings and vicinities.

Detailed work at the showings concluded that: (i) the 43North showing is a shallow dipping mafic dyke cut by pyritic quartz veinlets, and (ii) there is no discernible continuity of geology nor grade within the Road Showing and its vicinity.

The proximity of the two principle gold showings to the junction of the regional fault and the Tisdale-Deloro contact, and their favorable stratigraphic position, argue in favour of a more general approach to understanding mineral controls at the property should any future work be contemplated. In that context, the North Shear Zone, by virtue of consistently elevated gold background, substantial and open strike length, continues to present a viable horizon for future work, and should receive particular attention.

In summary, although the property continues to present all of the geologic, geochemical, and structural conditions favorable to hosting gold mineralization, the disappointing results from the surface work and from the drill program do not support additional detailed work on individual showings although more general and regionally oriented work is recommended.

All of the above is respectfully submitted,

S.F.Sabag
Project Manager

W.Kerr
Party-Chief & Sr.Prj Geologist

CERTIFICATE OF QUALIFICATIONS

THIS IS TO CERTIFY THAT:

I currently reside at 1010 Michener Boulevard, South Porcupine, Ontario, P0N 1K0.

I am a graduate of the University of New Brunswick, Fredericton, New Brunswick, with a Bachelor of Science degree, major -Geology, completed 1975.

I have been actively involved in the Canadian mining industry since 1972 and have been employed full time as a geologist since 1975.

I am a member of the Prospectors and Developers Association of Canada, and a Fellow of the Geological Association of Canada.

This report, entitled ENGLISH-ZAVITZ PROJECT 1991, SUMMARY REPORT, dated November 15, 1991, is based upon my own observations while working on the property, and on a study of all publicly available information at the Ministry of Northern Development and Mines Assessment records and in published geological maps and reports on the area.

I have no interest, direct or indirect, in the property described, nor do I anticipate any such interest.

South Porcupine, Ontario
November 15, 1991

William C. Kerr, B. Sc

CERTIFICATE OF QUALIFICATIONS

I, Shahe F. Sabag, HEREBY CERTIFY THAT:

I currently reside at 134 Albertus Avenue, Toronto, Ontario, M4R 1J7.

I am a graduate of the University of Toronto, Toronto, Ontario, with a Masters of Science (Geology Specialist) degree, completed 1979.

I have been actively involved in the Canadian mining industry since 1971 and have been employed full time as a Geologist since 1979.

I am a member of the Prospectors and Developers Association of Canada.

This report, entitled ENGLISH-ZAVITZ PROJECT 1991, SUMMARY REPORT, dated November 15, 1991, is based upon my own observations while working on the property, and on a study of all publicly available information at the Ministry of Northern Development and Mines Assessment records and in published geological maps and reports on the area.

I have no interest, direct or indirect, in the property described, nor do I anticipate receiving any such interest.

Toronto, Ontario
November 15, 1991

SABAG.
Shahe F.Sabag, MSc

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APPENDIX

A

TINTINA MINES LIMITED

English-Zavitz Project 1991

Lithogeochemical and Channel Sample Records

Sample#	Location	Location	Area/Grid/Claim	Description	Results
AA1	L43E	0485N	P1158403	Feldspar porphyry 30% coarse feldspars in dioritic matrix 0.5% med grained diss py	nil
AA2	L36+30E	1+50S	P1158402	Diorite, weathers white, possibly felsite	nil
AA3	L38+00E	1+85S	P1158402	Quartz/feldspar porphyry, sample with 0.5" qv along quartz selvage	nil
AA4	L38+00E	1+75S	P1158402	Similar to AA3 but pervasively ankeritized, weathering pink	7/7
AA5	L46+85E	3+50N	P1132674	Carbonatized, rusty mass 12a at contact with 3e near a 2 metre mafic dyke	nil
AA6	L46+50E	3+00N	P1132674	12e weathers pink, very pink on fresh surface due to feldspars, contorted, sheared, kink banded, epidotized with epidoted veins along the foliation	nil
AA7	L42+00E	7+25S	P1170791	0.5 - 1 inch erratic quartz veins with diss Po in diabase, extr'y magnetic	nil
AA8	L44+00E	5+71S	P1170791	12a min diss py in massive feldspar porphry	nil
AA9	L52+05E	11+05S	P1170789	Rhyolite 5a. Minor Quartz veining, tr diss py, in contact with 11b-AA10	nil
AA10	L52+05E	11+20S	P1170789	4% feldspar in mafic volcanic or diorite	nil
AA11	L59+30E	5+12S	1154641	Felsite tr py	nil
AA12	L59+40E	4+75S	1154642	Diorite, mildly carbonatized, tr py	nil
AA13	L60E	4+50S	1171663	Diorite, minor py cubes, minor qv'e	nil
AA14	L61+75E	2+00S	1171662	Rhyolite 1% fd py, sheared	7
AA15	L63+80E	5+00S	P1171663	Intermediate volcanic, foliated with erratic minor Q veins, Sample includes 1 inch Q vein	nil
AA16	L63+50E	2+00N	P1171660	Diabase. 1% disseminated magnetite	nil
AA17	L66+80E	2+00S	P1171662	Pillowed intermediate volcanic, erratic 1-inch barren- looking Q veins, foliated 194,80 W	nil
AA18	L63+00E	5+00N	P1171659	Felsic tuff, boudinaged qtz ste crosscutting mildly contorted foliation, 084, vert	nil
AA19	L62+00E	5+60N	P1171659	Felsic pyrociastic, half of o/c is totally altered, carbon'd, massive looking. Other half is well foliated, chloritized 096, vert	nil
AA20	L61+00E	6+00N	P1171659	2-inch Q vein crosscutting the foliation in 4b,c	nil
AA21	L39+00E	2+75S	P1176594	Sheared feldspar porphyry	nil
AA22	L38+63E	2+56S	P1176594	Quartz feldspar porphyry, locally foliated	10
AA23	L47N	9+75W	P1176594	Well foliated, mildly carbon'd QFP	7
AA24	L45N	9+12W	1176593	Rusty locally, foliated diorite	nil
AA25	L44N+50N	8+50W	1176592	Diorite with 0.5% diss py	nil
AA26	L46+50W	9+00W	1176593	Diorite	nil
AA27	L46N	9+17W	1176593	Altered tan-coloured rock with Q veins in a small grubhoe trench	45
AA28	44+175N	8+85W	1176593	2-inch barren looking Q vein in carb'd altered rock	nil
AA29	44+175N	8+85W	1176593	Float, 1' x 2' boulder, 60-80% Po in altered rock	168/175
AA30	44+50N	8+55W	1176593	Diorite. Magnetic, 1% diss py	nil
AA31	42N	10+15W	1176592	Float, mafic tuff	nil
AA32	37+75N	5+60W	1176591	Well foliated, sheared. Locally rusty sample with 1-inch Q vein along foliation	17
AA33	37+25N	5+60N	1176591	Similar to AA32 except completely carb'd and chlor'd	nil
AA34	40+07N	0+50W	1158667	3-inch Q vein crosscutting 4e. Host rock contains 5% diss py	51
AA35	40+07N	0+50W	1158667	85% agglomerate sized bombs stretched along foliation in chlor'd matrix 5% diss Po	55

AA36	39+75N	0+75W	1158667	Similar to AA35	nil
AA37	39+75N -525 ppb	0+00 "ESSO SHOWING"	1158667	1-meter wide Fe Fm engulfed by diabase chilled at contacts. 80% of massively clustered coarse Po	1323/1299
AA38	41+00N	5+25E	1158665	Chilled diabase. Sample with 0.25" Q vein	nil
AA39	L39N	1+25E	1158665	Altered tuff? Weakly magnetic	17
AA40	L39N	3+50E	1158665	Altered syenite? 5% FD PY	79/86
AA41	L39N	3+62E	1158665	With 1" Q vein and 1" band of py. Pale green on fresh surface (Fuchsitic?) 1% diss py	137
AA42	L39N	3+65E	1158665	Very coarse grained (Feldspars) with 50% fuchsitic alteration of matrix. Tr of py	14
AA43	L39+05N	3+62E	1158665	Sample with 0.25" Quartz vein, 20% FD py	62
AA44	L39+18N	3+62E	1158665	Quartz from 2-inch Quartz vein	14
AA45	L39+22N	3+67E	1158665	Very rusty locally with pink (feldspathic) and green alteration (fuchsitic?)	4
AA46	L38N	9+13E	1158665	Pale green (fuchsitic?) on fresh surface,1% fd py	nil
AA47	L38N	3+20N	1158664	Pinkish green, dioritic 20% Po,conc'd along q/c veinlets,1a	161/230
AA48	L38N	3+25E	1158664	Mass, fg, pale green, minor py	nil
AA49	L38N	3+23E	1158664	20% py conc'd along q/c veinlets	86
AA50	L38N	3+31E	1158664	2" wide q vein in fg 11b	7
AA51	37+95N	2+60E	1158667	Min fg py in biotitte-rich syenite?	nil
AA52	37+75N	2+45E	1158667	4-% py in qv'd altered 12e	45
AA53	37+75N	2+45E	1158667	2-inch qv crosscut by 0.25 inch qv, min py	nil
AA54	37+90N	2+48E	1158667	Qv with wallrock, 5% fd py	7
AA55	L38N	2+00E	1158667	0.5 inch qv's om cg, mass, epidotized 12e, 4% py	24
AA56	L38N	1+70E	1158667	Carbonatized rusty 1a	nil
AA57	L39N	0+50E	1158667	1% diss Po 1a?	nil
AA58	28+40N	0+00	1170740	Altered 11b? carbonatized, chloritized, rusty weathering	nil
AA59	28+00N	2+25E	1170743	Qv'd, weakly magnetic 1a	nil
AA60	L27N	1+12W	1170740	Qv'd, weathere rusty green 1a	17
AA60-1	27+00N	1+15W	1170740	Similar to WK212-1, 25% fd py	24
AA60-2	27+15N	1+45W	1170741	1% fd py in aphanitic dark grey 1a	21
AA61	L27N	1+50W	1170741	Very dark to black, 5% py specks, 1a	141/168
AA61-2	27+00N	1+50W	1170741	5% diss Po in aphanitic dark grey 1a	7
AA62	L27N	0+75W	1170743	Mildly ankeritized 1a	nil
AA63	26+85N	1+50W	1170742	Massive intermediate volcanic	nil
AA64	L25N	12+33W	1155068	Carbonatized, chloritized 1a	nil
AA65	L24N	1+50W	1170742	Carbonatized 1a	65
AA65-1	24+00N	1+25W	1170742	Min diss py in serpentinized, med grained 1a	nil
AA66	L24N	1+00W	1170742	Carbonatized felsite, 4% fd py, 0.2" qv's	130/120
AA66-1	24+00N	1+00W	1170742	0.2 inch qv's crosscutting, 3% fd py, carb'd 12d	34/55
AA67	21+50N	5+00W	1171667	Felsite	nil
AA68	21+50N	9+25W	1171667	Sericite schist	nil
AA69	21+00N	9+25W	1171667	Syenite with py/qv stringer	nil
AA70	22+00N	10+27W	1171664	1% fd py in diorite	14
AA71	26+00N	1+05W	1170742	Altered diorite	nil
AA71-1	26+00N	1+12w	1170742	Ankeritized, chloritized, medium grained 1a	7
AA72	26+00N	2+00W	1170742	Altered diorite	7
AA72-1	26+00N	2+00W	1170742	5-10% fd py in fg, chloritized 1a	nil
AA72-2	25+00N	1+00W	1170741	3-5% fd py in fg, chloritizes 1a	nil
AA73	21+00N	8+50E	1171664	Chlorite schist	21
AA74	20+00N	4+54E	1171667	Felsic tuff with 5% diss py	24
AA74-1	20+00N	5+18W	1171667	Felsic tuff	nil

AA74-2	20+00N	5+34W	1171667	Similar to AA74-1, min py	nil
AA74-3	19+98N	5+45W	1171667	1" qv loaded with Po in felsic tuff	21
AA74-4	20+25N	5+45W	1171667	5% Po in felsic tuff	17
AA74-5	19+46N	5+50W	1171667	Altered felsite or syenite	nil
AA74-6	19+30N	5+50W	1171667	Similar to AA74-5	10
AA75	19+40N	3+50W	1171667	10% py in rusty magnetite Fe Fm	45/41
AA75-1	19+30N	3+50W	1171667	5-10% diss py in Fe Fm	21/21
AA76	19+00N	6+30W	1171667	Chlorite/sericite schist	21
AA77	19+00N	9+08W	1171668	Sericite schist, locally rusty, well foliated	21
AA78	18+00N	6+50E	1171667	Mylonitized 12e, well foliated	17
AA79	18+00N	3+91E	1171667	50% Qv, Qc veining in silicified, slightly chloritic rock 5-10% py, poorly exposed	34
AA80	11+00N	3+32E	1171645	Foliated diorite	17/21
AA81	17+00N	4+00W	1171667	1% fd aspy, 0.2 inch qv's in fg sheared diorite	nil
AA82	17+00N	6+95W	1171668	Felsic tuff, well foliated	nil
AA83	19+00N	12+00W	1171665	Iron formation, rusty, difficult to sample, limited exposure, got some chips	nil
AA84	19+00N	11+75W	1171665	Chlorite schist, rusty	nil
AA85	18+00N	10+36W	1171669	Chlorite schist	nil
AA86	18+00N	12+64W	1171669	1-2% py cubes diss'd in altered ultramafic	nil
AA87	18+00N	13+00W	1171669	2-inch qv in banded (qtz & mag) Fe Fm	17
AA87-1	18+25N	12+75W	1171666	Pyritiferous magnetite Fe Fm	17
AA88	8+25N	10+05W	1171645	Min py cubes diss'e in intermediate tuff	nil
AA89	8+00N	9+50W	1171645	Carbonatized epidotized massive intermediate volcanic, sample contains calcite veinlet	nil
AA90	7+88N	8+00W	1171645	Foliated (sheared) ultramafic flow	nil
AA91	7+00N	8+82W	1171645	Qv'd diorite with minor py	nil
AA92	5+00N	3+00W	1171650	Min cpy, cpy in sericitized felsic tuff	nil
AA93	5+00N	4+00W	1171650	10% coarse euhedral py in hematized carbonatized syenite	nil
AA94	4+50N	8+85W	1171650	Carbonatized, epidotized, minor qv's locally, min py in intermediate volcanic	nil
AA95	L3+00N	1+32W	1171657	Chlorite sericite schist, some rusty patches	24/21
AA96	L3+00N	2+15W	1171657	Minor fd py in very pink aphan syenite	nil
AA97	L3+00N	9+30W	1171657	Minor diss py in dark grey to black intermediate volcanic	nil
AA98	TL10W	7+00N	1171645	Erratic local 1-2 inch qv, 10% py, 1-2% Po. Wallrock is extensive in area locally ankeritized, epidotized, hematized. Unit appears to be intermediate tuff but difficult to identify due to alteration	69
AA99	6+81N	17+50W	1171671	Feldspar porphyry	nil
AA100	6+50N	17+50W	1171671	0.5% diss py in chloritzed diorite	nil
AA101	6+00N	0+38W	1171646	1% diss Po in feldspar porphyry (intermediate tuff?)	14
AA102	5+00N	10+00W	1171651	Hematized, carbonatized, chloritized intermediate tuff	nil
AA103	4+00N	11+75W	1171651	Sericitized, locally rusty, intermediate tuff	nil
AA104	3+00N	11+50W	1171651	Hematized, epidotized, intermediate volcanic	nil
AA105	48+00E	0+08N	1132675	0.5% diss py in rusty chloritized tuff	65
AA106	48+65E	0+60N	1132675	10% fd py, 1-2mm qtz stringers in ankeritized 12e	51
AA107	48+72E	0+25N	1132675	Min diss py, very pink ankeritized 12e	600/456

WK101	48+20E	3+25N	Ankerite Zone	Seric, shrd felsic rk with 1% py, 5% Q vns	nil
WK102	49+02E	3+80N	Ankerite Zone	25 cm chip, stgly cbzd syenite, 5% py	470/346
WK103	49+15E	3+95N	Ankerite Zone	Grabs, brick red fine grained syenite, 5 - 10% py	82
WK104	49+20E	3+95N	Ankerite Zone	Grabs, sim to WK103 with 60% qvns	161

WK105	50+25E	4+60N	Ankerite Zone	1.0 m chip, Ankerite basalt, fuchsite with qvns	7
WK106	49+75E	4+50N	Ankerite Zone	20 cm chip, Ankerite fuchsite, 3% py in basalt	nil
WK107	49+80E	4+55N	Ankerite Zone	1.0m chip, 70% fuchsite, 5% Q vns, 1% py	nil
WK108	50+70E	4+00N	Ankerite Zone	1.0 m chip, similar to WK-57, 1% py	58
WK109	52+25E	6+75N	Ankerite Zone	Grab, 50% quartz veinlets, 1% py in stgly ank basalt	nil
WK110	52+15E	6+65N	Ankerite Zone	Grab, 40% Q vns, chl ank alt near ultramafic ct	nil
WK111	53+25E	7+15N	Ankerite Zone	Grabs from bldr - Ank fuch qtz biol alt	31
WK112	54+50E	8+30N	Ankerite Zone	chips - q vn 0-80 E, 2 to 10" wide, syenite host	nil
WK113	54+95E	8+00N	Ankerite Zone	grabs-qtz-ank-fuch in basalts (on cl line)	nil
WK114	Post 3 - 1147245		West Bridge cls	1.0M chip, trenched felsic RK with 50% q vns	41
WK115	Post 4 - 1176595		East Bridge cls	grabs from boulder - semi massive py	82/82
WK116	51+00E	0+15S	Road Showing	Ultramafic at contact with QFP, 1% py Grab	17
WK117	51+00E	0+30S	Road Showing	Ankeritized diorite, minor alt	nil
WK118	50+75E	0+20S	Road Showing	Grab - 1/2" Q veinlets, 2% py, stg ankzd 11b	nil
WK119	50+62E	0+65S	Road Showing	5-10% Py, 1% Cp, 5% Q vns stgly anktd RK (ank) (Grab)	291
WK120	50+62E	0+65S	Road Showing	sito WK119, 15% Q vns	69
WK121	50+50E	0+70S	Road Showing	Grabs-cbdz, ankzd, vfg sillificat'n(pink), 2% lge py cubes	281/315
WK122	50+50E	1+00S	Road Showing	cdzd ser schist, 1 min Q vns, min py (Grab)	nil
WK123	48+90E	1+00S	Road Showing	1.0m chip-stgly foliated 4c w 5% py, loc ankeritization	89
WK124	49+75E	0+20S	Road Showing	Grabs-QFP char sample, 1% py	nil
WK125	48+25E	0+55S	Road Showing	0.5cm chip - 5-8% py in ser shst	nil
WK126	48+20E	0+55S	Road Showing	chps- 30cm- 15% py, cherty ser shst, 20% Q vns	134/144
WK127	48+18E	0+53S	Road Showing	grab - py (1%) in felsic int	103
WK128	50+75E	0+60N	Road Showing	30cm chip - ankzd 11b dike, 5% Q vns, no sil	nil
WK129	50+25E	1+10N	Road Showing	cbzd 4c, 10% ankzd feldspars, locally sericitic - grab	nil
WK130	50+25E	0+60N	Road Showing	grab- felsite, v fg granular, 1% diss py massive	93
WK131	50+10E	55N	Road Showing	grab- felsite, sil, flooded, 3-4% py	3240/2949/3018
WK132	49+85E	1+00N	Road Showing	grab-felsite, sil flooded 2-3% py minor ankzn	38
WK133	49+75E	0+85N	Road Showing	0.5%m chip -5% py locally brick red ank/syen intrusive	285
WK134	49+75E	0+75N	Road Showing	grabs- rubbly qtz & sulph in ankzd syen	65
WK135	48+75E	0+75N	Road Showing	grab- py zones in serd intermediate intrusive	10
WK136	200 m N of 1176595		East Bridge	grab-variolitic dacite ?? 2% diss Po, pos sil 3a	nil
WK137	58+00N	2+50E	East Bridge	grab - 20% Q vns, irreg, Fe stained int volcanic	nil
WK138	57+00N	4+25E	East Bridge	grab - 10cm rusty shear in fresh qtz diorite	nil
WK139	57+00N	2+80E	East Bridge	grab - irr qtz Fspr veining in fresh basalt	nil
WK140	56+00N	6+85E	East Bridge	grab- character sample- diabase	nil/nil
WK141	55+50N	6+00S	East Bridge	grab - interm volcanic, no carb altn - char sample	nil
WK142	55+00N	57+00E	East Bridge	Grab- massive Basalt - looks baked	nil
WK143	55+00N	4+60E	East Bridge	grab- massive basalt, cal altn	nil
WK144	52+45N	5+00E	East Bridge	grab- char sample -massive fresh 3a cal	nil
WK145	50N	8+00E	East Bridge	grab- minor qtz veins in 3a cal	7
WK146	53+00N	6+63E	East Bridge	grab- cbzd, red sil, diorite	nil
WK147	53+80N	6+75E	East Bridge	grab- 10cm green silv/epid alt in 3a, 4a 2% py	nil
WK148	51+00N	9+40E	East Bridge	grab- sito WK147, 1% py	nil
WK149	49+00N	4+64E	43N Area	stgly foltd 3c, loc stg Fe stain (grab)	nil
WK150	49+00N	6+00E	43N Area	diabase - character sample (grab)	nil
WK151	49+00N	10+50E	43N Area	grabs- irreg qtz veining, felsite dyke	nil
WK152	48+00N	3+40E	43N Area	grabs - massive basalt	7
WK153	48+00N	6+50E	43N Area	grabs- good talcose spinafix komatiite	31
WK154	48+00N	7+00E	43N Area	30cm chip - ankerite shear, (ankzd 11b?) 1-2%py	nil
WK155	48+00N	7+10E	43N Area	grab- good brick red fresh syenite	17
WK156	48+00N	8+15E	43N Area	grab- 5% py in QC, shear, 20% qtz (NICE!!)	nil

WK157	48+00N	8+15E	43N Area	grab- 50% qtz, 10% pyrite, ankeritic shear	55/82
WK158	47+00N	5+80E	43N Area	grab- ankzd komatiite near syenite	nil
WK159	47+00N	6+50E	43N Area	grab- cbzd mafic intrusive	14
WK160	47+00N	7+00E	43N Area	6cm q vn in ankzd basalt, 4% py locally	nil
WK161	47+00N	7+40E	43N Area	grab frostheave - fuchsite qtz 5% py, alt zone	81
WK162	46+00N	7+25E	43N Area	ankzd basalt tuff min q vlts, 2% py	nil
WK163	46+00N	5+25E	43N Area	Grab- syenite fresh	nil
WK164	45+00N	4+95E	43N Area	grab- ankzd 12e, 20% Q vlts, 4% py	274/326
WK165	45+00N	6+60E	43N Area	grab- fuchsite, q vns, altd basalt, 5% py	27
WK166	44+00N	9+40E	43N Area	grab- fuchsite qtz 3% py - altd 12e ??	nil
WK167	44+00N	5+25E	43N Area	grab- frost heave - 10% py in alt zone	312/298
WK168	43+00N	8+11E	43N Area	grab- serd ankzd, 2-4% py	nil
WK169	42+00N	8+00E	43N Area	grab- ankzd basalt, 20% diss py, 15% Q vns	24
WK170	41+00N	7+25E	43N Area	grab- altd 1a ?? - stg carb altn	62
WK171	40+00N	9+75E	43N Area	grab- char sample, pillow basalt	nil
WK172	40+00N	3+20E	43N Area	grab- intermed - intrusive- ankzd	nil
WK173	36+00N	0+50E	ESSO Grid	grab- stg cc alt, representative sample	14
WK174	36+00N	1+30E	ESSO Grid	Grab- 5% py, 10% irr Q vlts, serd cc 11b	250/267
WK174-	36+00N	1+20E	1158666	Q veined (0.25-0.5 inch) in 12d, sample loaded w/coarse py	871/939
WK174-	36+00N	0+80E	1158666	Q vein (barren?) in chloritized, sheared 1a	10
WK175	35+00N	1+75E	ESSO Grid	grab- 1a cc - char sample	nil
WK176	34+00N	0+65E	ESSO Grid	grab- cbzd serd, fine grained 12e	31
WK176-	34+00N	0+70E	1158666	Similar to 174-1, sample of Quartz, 12d	62
WK176-	34+00N	0+70E	1158666	5-10% FD py in 12d, similar to 174-1	58
WK177	34+00N	1+00E	ESSO Grid	30cm chip - fuchsite, silN - 5% py cc 12e?	nil
WK178	34+00N	3+10E	ESSO Grid	Grab, ultramafic, cg ankeritized veinlets, char sample	nil
WK179	35+00N	3+00E	ESSO Grid	Qtz boulder, 4% diss py, poss cp	147
WK179-	35+00N	3+35E	1158666	Similar to 174-2, minor FD py in 1a, Float?	10
WK180	32+00N	0+00E	ESSO Grid	Grab, 12e, red, siliceous, fg, massive	nil
WK181	32+00N	0+70E	ESSO Grid	Grab, carbonatized 12e, 3% py sericitized, 5% Q veins	27
WK181-	32+12N	0+75E	1170740	Chloritized, epidotized, very rusty sheared 1a	nil
WK181-	32+00N	0+75E	1170740	0.25" Quartz vein, minor py in carbonatized 12d	48
WK182	32+00N	3+00E	ESSO Grid	Grab, Q veins, 5% py banded, MP alteration	106/117
WK183	33+00N	2+40E	ESSO Grid	Grab, 1a, MP, crosscutting alteration, 2% py, 4% Q veins	nil
WK184	33+00N	1+65E	ESSO Grid	Grab, strongly foliated 1a, locally 12b, 12e, MP Q alteration	nil
WK185	33+00N	1+50E	ESSO Grid	Grab, shear Q vein (2m) 5% py, MP, crosscutting alteration	17
WK185-	33+00N	0+65E	1170738	5% diss py in chloritized, epidotized, ankeritized 1a	7
WK185-	33+00N	1+50E	1170738	10% diss py in 12d, similar to 174-1	34
WK185-	33+00N	1+55E	1170738	Q vein (less than 3' wide) with 10% py erratically distr'd	21
WK186	33+00N	1+50E	ESSO Grid	Grab, carbonatized shear zone, 7% py, min MP	7
WK187	33+00N	9+50W	ESSO Grid	Grab, 4d, rep sample	nil
WK188	33+00N	9+60W	ESSO Grid	Grab, boulder, cherty 1F, 4% py, Q veinlets	nil
WK189	32+00N	4+25W	ESSO Grid	Grab, 1a, crosscutting, strong foliation	nil
WK190	32+00N	1+60W	ESSO Grid	Grab, Po-Py (semi-massive) in Mag IF	202/199
WK191	32+00N	1+60W	ESSO Grid	Grab, silifications 0 of IF, chert with Py, Po	48
WK191-	32+00N	1+50W	1170740	Fe Fm, sample with minor diss py & Quartz	62
WK192	34+00N	5+10W	ESSO Grid	Grab, Fe stained, intermediate volcanic? poor exp	nil
WK193	34+00N	5+20W	ESSO Grid	Grab, 12e, cc, minor py	nil
WK194	34+00N	8+75W	ESSO Grid	Grab, Feldspar porphyry, Rep sample	nil
WK195	34+00N	9+50W	ESSO Grid	Grab, cherty iron Fm, similar to previous sample IF	nil
WK196	36+00N	5+00W	ESSO Grid	Grab, carbonatized, well foliated, ultramafic	nil
WK197	38+00N	2+20W	ESSO Grid	Grab, quartz sericite schist	nil

WK198	38+00N	3+75W	ESSO Grid	Grab, quartz sericite schist	nil
WK199	37+00N	4+40W	*ESSO Grid*	*Grab, Feldspar porphyry, type sample*	nil/nil
WK200	37+00N	3+40W	ESSO Grid	Grab, ultramafic	nil
WK201	30+00N	0+60W	ESSO Grid	Grab, 1a, massive, locally schistose carbonatized	31
WK201-1	30+00N	0+60W	*1170740*	*5% very coarse py cubes in chloritized 1a*	24
WK202	30+00N	2+75W	ESSO Grid	Grab, basalt bx, cut by 12d with py (4%)	nil
WK203	30+00N	4+30W	ESSO Grid	Grab, quartz, sericitic schist, massive	nil
WK204	30+00N	9+70W	ESSO Grid	Grab, 12c, (4d), massive	nil
WK205	29+00N	1+25W	ESSO Grid	Grab, 3a, representative sample	nil
WK206	29+00N	6+40W	ESSO Grid	Grab, 4d, sericitic, local Fe stained particles	120
WK206-1	29+00N	6+40W	1170747	1% vfd py in foliated 4d	nil
WK207	29+00N	6+40W	ESSO Grid	grab, boulder, ang qtz, 3% py in basalt	319/243
WK207-1	29+00N	6+40W	1170747	3% diss euhedral pyrite in vuggy veinlet	413/370
WK208	29+00N	7+55W	ESSO Grid	Grab, 12e, no carbonatization	14
WK208-1	29+00N	17+54W	1170746	2% of 0.1 inch Q veins in altered felsite (syenite?)	nil
WK209	29+00N	7+90W	*ESSO Grid*	*Grab, good carbonatized 12e*	nil
WK210	28+00N	4+20W	ESSO Grid	Grab, biot, altered qtz vein, min py in 3a, 4a	7
WK211	28+00N	3+00W	ESSO Grid	Grab, chert iron Fm, black, 4% diss sulphides	nil
WK212	28+00N	1+10W	*ESSO Grid*	*Grab, carbonatized 11b, 4% py, strong cc,10% Q vns*	51
WK212-1	28+00N	1+00W	1170740	Irregular 0.25 inch Q vein, 15-20% Fd py in altered 1a	147
WK213	0+00BL	28+50N	ESSO Grid	Grab, ang, Qtz boulder, Fe carb, 2% py	79/62
WK214	1+00N	0+75E	*ESSO Grid*	*Grab, carbonatized 3a, coarse ankeritized cubes*	nil/nil
WK215	0+00	1+00W	ESSO Grid	Grab, Quartz sericite, schist-shear zone	nil
WK216	0+00	1+15W	ESSO Grid	Grab, QC veinlets in ultramafic, strong crosscutting, 2% py frost heave	nil
WK217	12+00N	4+90W	SW Block	Grab, mafic Qtz porphyry, carbonatized	nil
WK218	12N	6+80W	SW Block	Grab, Qtz porphyry, mafic rock	nil
WK219	12N	13+20W	SW Block	Grab, 3a-4a, sericitized, local chlorite	nil
WK220	13N	15+05W	SW Block	Grab, sericite schist - type sample	nil
WK221	14+00N	0+90W	SW Block	Grab, irr Q alt min, massive 4d	nil
WK222	13+00N	12+50W	SW Block	Grab, 3a c cal - character sample	nil
WK223	14+00N	7+05W	SW Block	Grab, black cherty iron FM	nil
WK224	15+00N	14+55W	*SW Block*	*Grab, irr qc alteration in 12b, 3a, min py*	7
WK225	17+00N	14+65W	SW Block	Grab, QFP, bx zone with Quartz	nil
WK226	17+00N	12+35W	SW Block	Grab, 8" Q vein in 3a, Fe stained ct's	nil
WK226-1	17+35N	12+15W	*1171666*	*6" quartz vein in chloritized feldspar porphyry*	21
WK226-2	17+35N	12+15W	1171666	Wallrock to WK226-1	nil
WK227	17+00N	12+25W	SW Block	0.5m chip, 0.5m Q vein in 3a col min py	171/96
WK227-1	17+35N	12+00W	1171666	*2' wide Quartz vein (rusty with minor diss py)*	nil
WK227-2	17+35N	12+00W	1171666	Chloritize feldspar porphyry wallrock	41
WK227-3	16+80N	12+00W	1171666	Well foliated, chloritized feldspar porphyry	nil
WK228	16+00N	7+75W	SW Block	Grab, cherty 5a, poss biot alt	nil
WK229	43+00N	5+10E	43N Area	1.0m chip, rusty carbonatized, 10% Q veins, minor MP, sul	nil
WK230	43+00N	5+20E	43N Area	0.5m chip, 1-3% py, quartz veins in 1a	nil
WK231	43+00N	5+25E	43N Area	Grab, 15% quartz veinlets, 1% py, silicified zone	17
WK232	42+70N	5+25E	43N Area	Grab, silicified, carbonatized zone in 1a	nil
WK233	43+90N	5+10E	43N Area	Grab, irregular Q veining, 10-15% py in 1a, ca	490
WK234	43+95N	5+10E	43N Area	0.3m chip, ---, Quartz vein, 10% py, selected chip	1587/1485
WK235	44+00N	5+30E	43N Area	Grab, good QFP, similar to Ferrier Rd show	45
WK236	44+25N	5+15E	43N Area	*Grab, strongly silicified, MP cc Q veins, minor sulph*	31
WK237	45+00N	4+75E	43N Area	2% diss py, 2% quartz veinlets in syenite	38
WK238	2+00N	0+60E	SW Block	Grab, sericitic felsic schist, shear related	nil

WK239	2+00N	8+50W	SW Block	Grab, 1a, rare quartz veinlets, crosscutting	nil
WK240	2+00N	8+50W	SW Block	Grab, QFP, rare py, but 5% py in Quartz veinlets	33
WK241	1+00N	9+65W	SW Block	Grab, 4a, light cal, character sample	nil
WK242	1+00N	7+80W	SW Block	Grab, Fe stained mafic rock, 3a	nil
WK243	1+00N	6+50W	SW Block	Grab, ankeritized, 15% quartz veinlets, 1-2% py, poss FH	38
WK244	50+10E	0+55N	Road Showing	Grab, resampled WK31, selected grab	350
WK245	50+10E	0+55N	Road Showing	Grab, resampled WK31, routine grab	189
WK246	50+10E	0+55N	Road Showing	0.5m chip, felsite, quartz silicified dyke, local py	nil
WK247	50+10E	0+55N	Road Showing	0.3m chip, 10cm silicified zone, 5% py in felsite	2616/2657/2883
WK248	50+10E	0+55N	Road Showing	1.0m chip, 60% felsite, 40% mafic - flank sample	134
WK249	50+10E	0+55N	Road Showing	1.5m chip, felsite & 3a, sheared	1827/1803
WK250	0+00N	3+27W	SW Group	Grab, sericitic schist, local Fe stain	1151
WK251	0+00N	5+00W	SW Group	Grab, similar to WK250, local Fe stain	nil
WK252	47+00E	2+50N	Road Showing	Grab, epidotized alteration, sericitized felsic tuff	nil
WL253	4+00S	10+00W	SW Group	Grab, carbonatized altered zone in 3a, massive	nil
WK254	1+00S	13+25W	SW Group	Grab, felsic tuff, character sample	nil
WK255	0+00N	10+75W	SW Group	Grab, massive fine grained basalt	nil
WK256	0+00N	15+60W	SW Group	Grab, py bx zone in felsic breccia	nil
WK257	1+00N	14+30W	SW Group	Grab, carbonatized py contact zone - 12b	24
WK258	0+00	53+25E	Road Showing	Grab, 3a, cal, near 12b outcrop	21
WK259	47+88E	2+88N	Ankerite Zone	30cm chip, quartz porphyry, 1% py	51
WK260	47+88E	2+88N	Ankerite Zone	Grab, contact zone with above, sericitic silicified 5a?	nil
WK261	47+90E	2+85N	Ankerite Zone	1.0m chip, strong shear at 040-090-, strong cc, 1% py	nil
WK262	2+90N	47+88E	Ankerite Zone	Grab 1-5a (12b) crosscutting, 1-2% py, 5% quartz veinlets	nil
WK263	3+00N	47+75E	Ankerite Zone	Grab, silicifed, sericitic, strongly altered ultramafic	62
WK264	47+68E	2+75N	Ankerite Zone	Grab, 12a,b,c, - all phases present, py locally	89
WK265	47+55E	2+62N	Ankerite Zone	Grab, 12b, massive, 40% Q veinlets, 2% py	38
WK266	47+00E	7+45E	ESSO 43N	Grab, FH, MP with Qtz, 3-4% py	137/151
WK267	47+00E	7+60E	43N Area	Grab, polysut weath 1a, 5-7% MP	nil
WK268	47+25E	7+50E	43N Area	Grab, minor crosscutting Q veins in 1a	10
WK269	48+00N	7+75E	43N Area	Grab, altered 1a, minor MP, 5% py	24
WK270	48+00N	7+70E	43N Area	Grab, 60% q veins, selected grabs	192
WK271	53+00E	0+10S	Road Showing	1.0m chip, 10-25% irregular Q veins, splash cpy, 3% py	271
WK272	53+00E	0+10S	Road Showing	Grab, rusty Q veins, 4% py	418/350
WK273	0+00N	3+27W	SW Group	Resample of WK250, sericite schist	nil
WK274	0+00N	3+27W	SW Group	Similar to WK273	130
WK275	0+00N	3+27W	SW Group	Similar to WK273	17
WK276	43+00N	4+40E	43N Area	Feldspar Porphyry, 2% py	110/151

CHANNEL SAMPLES FROM STRIPPED AREAS

1	Main Showing	1132675	0.80m channel, 5-10% FD py, locallyt 15% in massive syenite	672
2	Main Showing	1132675	1.50m channel, 5-10% diss py, minor Q stringers, heavy hematite alteration	2242/2057
3	Main Showing	1132675	0.70m channel, 1-2% coarse diss py in Feldspar porphyry	1166,1159
4	Main Showing	1132675	1.27 channel rusty hematized shear zone 1cm Qvn, 2% py	254
5	Main Showing	1132675	1.40m channel, fresh pinkish green fine-med grain syenite, minor py	696
6	Main Showing	1132675	1.50m channel, 5% very finely diss py in pinkish green fresh syenite, carbonatized	1041
7	Main Showing	1132675	1.50m channel ankeritized rusty 5 to 15% FD pyrite	826
8	Main Showing	1132675	1.50m channel, 3-5% very finely diss py in pinkish ankeritized fine	1090/1029

			grained syenite	
9	Main Showing	1132675	1.50m channel, fresh pink syenite 3-5% FD py	782
10	Main Showing	1132675	1.50m channel, 3-5% py in carbonatized 12e - 2cm rusty shear	1097/1234
11	Main Showing	1132675	1.50m channel, (0.8m silicified, hard 2% py)(0.6m rusty soft)	1248/1029
12	Main Showing	1132675	1.00m channel, rusty shear across strike, 1-2cm erratic quartz stringers	1848/1851
13	Main Showing	1132675	1.0m channel, rusty, relatively unaltered, 2cm q vn	1053/960
14	Main Showing	1132675	1.0m channel, 2-5cm, anastomosing chloritized rusty sheare, 1-2% py	583
15	Main Showing	1132675	1.50m channel, rusty ankeritized minor Q vns, py content unknown	802
16	Main Showing	1132675	1.50m channel - hard relatively unaltered, 2-3% dis py, locally rusty	1193/823
17	Main Showing	1132675	1.50m channel, 0.35m along 1 cm veinlet, rest of sample fresh, minor malachite staining, minor py	610
18	Main Showing	1132675	1.50m channel, minor py in fresh pinkish green syenite	585
19	Main Showing	1132675	0.70m channel, relatively fresh pinkish green syenite, minor py	418
20	Main Showing	1132675	0.90m channel, pale greenish grey fine grained, minor py, 1 cm Q vein in sample	470
21	Main Showing	1132675	1.50m channel, rusty brown ankeritized, carbonatized, minor diss py	967/1203
22	Main Showing	1132675	1.50m channel, rusty brown carbonatized, minor py sample sample cuts, few Q stringers	1275/960
23	Main Showing	1132675	1.50m channel, rusty brown, fine grained, carbonatized, ankeritized	662
24	Main Showing	1132675	1.50m channel, rusty brown, carbonatized, ankeritized minor quartz stringers	281
25	Main Showing	1132675	1.50m channel, pinkish green, fine grained, minor py, minor quartz stringers	96
26	Main Showing	1132675	0.44m channel, chloritized mafic volcanic	38
27	Main Showing	1132675	1.20m channel, pink, minor chloritization, no py	298
28	Main Showing	1132675	1.47m channel, chloritized basalt	10
29	Main Showing	1132675	1.43m channel pink fine grained massive syenite, no py	353
30	Main Showing	1132675	1.57m channel, rusty pink fine grained 5% py locally	816
31	Main Showing	1132675	1.02m channel 5% finely diss py in pink fresh syenite minor cross-cutting Q veinlets	799
32	Main Showing	1132675	1.50 channel, similar to 31, 10-15% py over 30cm, 2cm mass veinlet py	754
33	Main Showing	1132675	1.53m channel, 3-5% very finely diss py throughout, pink except for 0.3m, light grey at south end	1323/1440
34	Main Showing	1132675	1.50m channel, rusty over 0.6m at north end with 2% finely diss py, fresh otherwise	898
35	Main Showing	1132675	1.55m channel, 0.65m ankeritized, 0.35 fresh, 0.35m 5-10% py with parallel Q stringers	470
36	Main Showing	1132675	1.50m channel, very rusty, weathered throughout, minor Q stringers, ankeritized	621
37	Main Showing	1132675	0.60m channel, similar to 36, 3% Q stringers, rusty, weathered	593
38	Main Showing	1132675	1.0m channel, pink rusty ankeritized silicified 12e, py unknown	254
39	Main Showing	1132675	1.35m channel, hard silicified fresh pink syenite, 0.5m is rusty hematized ankeritized minor py	178
40	Main Showing	1132675	1.27m channel, silicified, foliated 3a, minor diss py	75
41	Main Showing	1132675	1.41m channel, med-light grey, mass 3a, 30cm in rusty vuggy joint	235
42	Main Showing	1132675	1.70m channel, 2 anastomosing rusty sheare with 15-20% py locally	1128/1303
43	Main Showing	1132675	0.93m channel, similar to 42, rusty locally, 10-15% finely diss py, gen 5%	854
44	Main Showing	1132675	2.0m channel, very rusty, 15-20% py locally, minor Q stringers sample cuts shear zone	699
45	Main Showing	1132675	1.70m channel, rusty brown ankeritized, hematized, 5-10% py	658

46	Main Showing	1132675	1.0m channel fresh pink ankeritized, minor Q stringers py from 5-15%	2362/2263
47	Main Showing	1132675	0.85m channel, 30cm rusty shear, otherwise fresh pink grey syenite with 1% py	579
48	Main Showing	1132675	1.25m channel, 5-7% py, 10% crosscutting Q veins, rubbly syenite	802
49	Main Showing	1132675	1.10m channel, 1-7% diss py in fresh syenite, 5% of sample rubbly	782
50	Main Showing	1132675	1.35m channel, 10% diss py in medium grained locally chloritized syenite, rare crosscutting Q veinlets	946/1008
51	Main Showing	1132675	1.50m channel, 10-15% py locally (half of sample in rubbly oxidized syenite)	1258/1371
52	Main Showing	1132675	1.30m channel, fine to medium grained pink massive syenite, 1% py locally, 5-10% along fractures	864
53	Main Showing	1132675	0.70m channel sheared intermediate volcanic, Tr pyrite	27
54	Main Showing	1132675	1.25m channel, rusty sericite paper schist, completely weathered	48
55	Main Showing	1132675	1.10m channel, similar to 54	21
56	Main Showing	1132675	0.85m channel, aphanitic, medium grey intermediate volcanic, silicified?	34
57	Main Showing	1132675	0.65m channel, aphanitic, silicified medium grey intermediate volcanic	nil
58	Main Showing	1132675	1.20m channel, coarse grained feldspar porphyry, minor Q veins	14
59	Main Showing	1132675	1.00m channel, coarse grained (feldspar porphyry)	353
60	Main Showing	1132675	1.20m channel, rusty pink ankeritized 12e with 3% py locally	1505/1584
61	Main Showing	1132675	1.10m channel, relatively fresh hard syenite, minor py along imm Q veinlets	394
62	Main Showing	1132675	0.60m channel, silicified hard relatively fresh syenite	89
63	Main Showing	1132675	1.02m channel, hard relatively unaltered fresh syenite	178
64	Main Showing	1132675	0.85m channel, fresh hard pink syenite	175
65	Main Showing	1132675	1.45m channel, massive rusty pink hard relatively unaltered less than 3% py	144
66	Main Showing	1132675	1.73m channel, relatively fresh pinkish green locally ankeritized, minor py	497/535
67	Main Showing	1132675	1.05m channel, relatively fresh pink syenite, locally rusty, minor py	127
68	Main Showing	1132675	1.25m channel, moderately ankeritized, minor py, in syenite	223
69	Main Showing	1132675	1.30m channel, syenite mod ankerite, minor py	195
70	Main Showing	1132675	1.30m channel, fresh syenite, minor crosscutting Q veins, massive	274
71	Main Showing	1132675	0.70m channel, syenite massive local py to 1%, chlortic slips	435
72	Main Showing	1132675	1.20m channel, "dirty" syenite, 5% Q veinlets, minor py locally chloritized	45
73	Main Showing	1132675	0.55m channel, syenite, green chloritic slps, no sulphides	nil
74	Main Showing	1132675	1.00m channel, sheared silicfied ankeritic rock	14
75	Main Showing	1132675	0.65m channel syenite, massive, no sulphides	nil
76	Main Showing	1132675	0.33m channel, syenite dyke, massive, green grey	51
77	Main Showing	1132675	0.95m channel, massive brick red syenite, silicified 10% crosscutting qtz veinlets, min py	41
78	Main Showing	1132675	1.30m channel, silicified syenite, 5% py locally, 5% crosscutting quartz veinlets	82
79	Main Showing	1132675	1.30m channel, good red fine grained syenite, 5% py locally, silicified	62
80	Main Showing	1132675	1.30m channel, good medium grained syenite, local arkosic texture	247
81	Main Showing	1132675	0.85m channel, syenite silicified, 5% py, massive	315
82	Main Showing	1132675	1.25m channel, rubbly syenite, strongly oxidized, 5% py locally	991/1104
83	Main Showing	1132675	0.75m channel, quartz porphyry, minor py, numerous crosscutting Q veins	72
84	Main Showing	1132675	0.65m channel, sericitized, carbonatized sheared 3a-4a, strong ankeritization	10
85	Main Showing	1132675	1.20m channel, strongly carbonatized altered rock, basalt, syenite, silification present	10

86	Main Showing	1132675	0.70m channel, altered basalt? 5% Q veins, strong ankerite alteration	41
87	Main Showing	1132675	0.65m channel, Quartz Feldspar porphyry, silicified	353
88	Main Showing	1132675	2.20m channel, basalt, carbonatized locally, flank sample	10
89	Main Showing	1132675	0.65m channel, felsite, 5% ankerite, minor py 10% Q vns	96
90	Main Showing	1132675	1.20m channel, carbonatized felsite, minor py in Q veinlets	339/367
91	Main Showing	1132675	1.80m channel, rusty, py to 10% locally in altered rock	329
92	Main Showing	1132675	1.30m channel, 7-10% pyrite in syenite strongly carbonatized	312
93	Main Showing	1132675	1.00m channel, syenite with patches 5% diss py massive	31
94	Main Showing	1132675	0.80m channel, massive felsite, minor carbonatization, local py	nil
95	Main Showing	1132675	1.20m channel, massive friable carbonatized basalt	89
96	Main Showing	1132675	1.35m channel, massive, felsic carbonatized rock	10
97	Main Showing	1132675	1.35m channel, felsic carbonatized rock, minor py, probably intrusive	14
98	Main Showing	1132675	0.90m channel, massive intermediate felsic intrusive, locally syenitic	31
99	Main Showing	1132675	0.95m chip, basaltic? friable schistose, no sulphides	17
100	Main Showing	1132675	1.30m channel, strongly carbonatized felsic rock, minor py possibly intrusive	nil
101	Main Showing	1132675	1.55m channel, felsic rock, carbonatized, locally seriticized, schistose	10
102	Main Showing	1132675	1.50m channel, friable carbonated felsic volcanic	nil
103	Main Showing	1132675	1.35m channel, strongly carbonated felsic volcanic	34
104	Main Showing	1132675	1.00m channel, carbonatized basalt, felsics, shearing	nil
105	Main Showing	1132675	0.65m channel, fine-medium grained felsic, mafic intrusive? minor py	21
106	Main Showing	1132675	1.65m channel, fine grained brick red syenite, minor py	1035/1145
107	Main Showing	1132675	1.10m channel, brittle Feldspar porphyry, 10% crosscutting qtz veinlets, minor py	48
108	Main Showing	1132675	1.10m channel, 5% py, foliated carbonated basalt	374
109	Main Showing	1132675	1.40m channel, syenite and syenitic basalt, massive	182
110	Main Showing	1132675	1.30m channel, mixed syenite & basalt, minor sulphides	69
111	Main Showing	1132675	1.25m channel, mixed 3a, 4a & 12e dykelets, 10% q veins	31
112	Main Showing	1132675	1.00m channel, sericitic felsic tuff carbonated, minor py	185
113	Main Showing	1132675	0.65m channel, strongly sheared, carbonated 3a&4a, minor py	17
114	Main Showing	1132675	0.35m channel, intermediate-felsic intrusive, 5% py	17
115	Main Showing	1132675	0.90m channel, sheared carbonatized mafic rock	10
116	Main Showing	1132675	1.30m channel, carbonatized basalt, massive	134
117	Main Showing	1132675	1.00m channel, rubbly syenitic intrusive, strong carbonatization, 5% py locally	48
118	Main Showing	1132675	0.55m channel, syenite, carbonatized, minor py, probably silicified	113
119	Main Showing	1132675	0.55m channel, green red strong carbonatized syenite, massive	387
120	Main Showing	1132675	1.70m channel, rubbly, poor channel, carbonated syenite, 4% py locally	271/302
121	Main Showing	1132675	1.00m channel, brick red syenite, 2-3% pyrite	576
122	Main Showing	1132675	0.90m channel, carbonated syenite, rubbly, also felsic dykelet	1803/1975
123	Main Showing	1132675	1.20m channel, local heavy py to 10% in ankeritic syenite	1306/1166
124	Main Showing	1132675	1.15m channel, good fresh syenite with green chlorite pods	278
125	Main Showing	1132675	0.45m channel, good felsite, 15% crosscutting Q veins, minor sulphides	158
126	Main Showing	1132675	0.90m channel, fine grained green felsite, minor py	1190/950
127	Main Showing	1132675	0.90m channel, mixed basalt felsite, 1-2% pyrite	45
128	Main Showing	1132675	0.50m channel, lense of sheared basalt calcite alteration	34
129	Main Showing	1132675	0.70m channel, felsite, silicified, 5-7% diss py along planes	994
130	Main Showing	1132675	0.80m channel, felsite, 27cm lense of 3a, 1-2% py	nil
131	Main Showing	1132675	1.15m channel, medium-coarse grained basalt, locally more silicified	nil
132	Main Showing	1132675	0.42m channel, felsite, minor pyrite, thin parallel quartz veinlets, no sulphides	497
133	Main Showing	1132675	0.63m channel, sheared basalt, minor ankerite	55

134	Main	Showing	1132675	1.38m channel, felsite fine grained, green, minor sulphides	1193/1296
135	Main	Showing	1132675	0.39m channel, felsite, minor py on fracture fillings	154
136	Main	Showing	1132675	0.82m channel, flank sample, basalt	24
137	Main	Showing	1132675	0.72m channel, flank sample, massive basalt	nil
138	Main	Showing	1132675	1.40m channel, good aphanitic felsite, minor q veins, py	1776/1635
139	Main	Showing	1132675	0.98m channel, massive felsite, 1% diss py	76
140	Main	Showing	1132675	0.73m channel, felsite dyke, 10% crosscutting q veinlets	106
141	Main	Showing	1132675	1.04m channel, felsite wiht 10cm chloritic breccia zone	nil
142	Main	Showing	1132675	1.07m channel, strongly carbonated, 1% coarse py, felsic intrusive	497
143	Main	Showing	1132675	0.70m channel, medium grained granular textured syenite?	89
144	Main	Showing	1132675	1.24m channel, 30cm lense feldspar porphyry, 94cm syenite ankeritized	14
145	Main	Showing	1132675	2.20m channel, flank sample carbonatized basalt	nil
146	Main	Showing	1132675	1.34m channel, massive basalt, locally sheared	14
147	Main	Showing	1132675	1.30m channel, calcite basalt, dykelets of ankeritic material	21
148	Main	Showing	1132675	1.70m channel, felsic intermediate dyke	24
149	Main	Showing	1132675	1.35m channel, strong ankeritic zone, 1% py, looks intrusive	nil
150	Main	Showing	1132675	1.38m channel, similar to 149	nil
151	Main	Showing	1132675	1.70m channel, quartz feldspar porphyry	34
152	Main	Showing	1132675	1.60m channel, similar to 151	144/106
153	Main	Showing	1132675	0.60m moiled channel, carbonated intrusive, strongly ankeritized	nil
154	Main	Showing	1132675	0.85m channel, ankeritic intrusive intermediate	24
155	Main	Showing	1132675	0.95m channel, red ankeritic looking intrusive	103
156	Main	Showing	1132675	1.15m channel, feldspar porphyry, minor sulphides	89
157	Main	Showing	1132675	1.40m channel, feldspar porphyry, 10% crosscutting quartz veinlets	298
158	Main	Showing	1132675	0.80m channel, strongly carbonated basalt	nil
159	Main	Showing	1132675	1.25m channel, massive quartz feldspar porhpyry	24
160	Main	Showing	1132675	0.80m channel, felsite dyke	nil
161	Main	Showing	1132675	0.52m channel, felsite dyke, 1% pyrite	309/285
162	Main	Showing	1132675	0.65m channel, felsite dyke	21
163	Main	Showing	1132675	0.80m channel, massive felsite	141
164	Main	Showing	1132675	1.95m channel, ankeritic altered rock	nil
165	Main	Showing	1132675	1.37m channel, ankeritic altered rock	7
166	Main	Showing	1132675	1.55m channel, felsite also feldspar porphyry phase	79
167	Main	Showing	1132675	1.07m channel, strongly foliated, carbonated intermediate volcanic	nil
168	53+00E	0+00N	1132676	1.30m channel, carbonated quartz porphyry, 1-3% py	nil
169	53+00E	0+00N	1132676	1.30m channel, syenite quartz porphyry, locally carbonated	nil
170	53+00E	0+00N	1132676	Grab, carbonatized mafic rock	nil
171	53+00E	0+00N	1132676	Grab, carbonatized mafic intrusive	7
172	50+50E	0+75S	1132675	Grab, strongly ankeritized rubbly rock, originally syenite	264
173	50+50E	0+75S	1132675	Grab, similar to 172, 10% Quartz veins, 4% py, splash cpy	147
174	50+50E	0+75S	1132675	Grab, strongly ankeritized, rubbly rock, original syenite?	21
175	50+50E	0+75S	1132675	Grab, rubbly ankeritized syenite?	363/346
176	50+50E	0+75S	1132675	Grab, mixed syenite and syenitized basalt	72
177	Main	Showing	1132675	1.50m channel, carbonatized altered rock	nil
178	Main	Showing	1132675	Grab, altered rock, sheared sericitic	nil
179	Main	Showing	1132675	Grab, similar to 178	nil
180	Main	Showing	1132675	Grab, similar to 178	nil
181	Main	Showing	1132675	0.90m channel, syenite, different phases	151
182	Main	Showing	1132675	1.15m channel, syenite, massive, 2% pyrite locally	1073/1299
183	Main	Showing	1132675	Grab, clotty, podlike py in syenite, 2-4% py average, 10-12% locally	696
184	Main	Showing	1132675	Grab, 10-12% FD py in silicified syenite, pink-grey locally	96

185	Main Showing	1132675	Grab,13-15% lensey, streaky & poddy py in massive syenite	525
186	Main Showing	1132675	Grab, 9-11% coarse & mg, FD & clotty py in massive syenite	1018/1162
187	Main Showing	1132675	Grab, 2cm Qtz veinlet, bull, ladder type at 128-80 SW	93
188	Main Showing	1132675	Grab, 10-14% VFD py in pink-red syenite, also 25% py along fracture plane	2057/1786
189	Main Showing	1132675	Grab, tourmaline bearing bull Q vein from shear, 2% py locally	195
190	Main Showing	1132675	Grab, pink grey syenite, VFD py to 10% locally, silicified	852
191	Main Showing	1132675	Grab, similar to 190, more siliceous phase, now 14% py	518
192	Main Showing	1132675	Grab, 10% py locally, 15% crosscutting q veins, with siliceous bleaching	1371/1241
193	Main Showing	1132675	Grab, 10-12% VFD py in grey pink, siliceous phase	3703/3771
194	Main Showing	1132675	Grab, fg, silicified zone, 10-12% coarser mg py	1371/1296
195	Main Showing	1132675	Grab, black chert dyke	14

Note Re:Sample Number Scheme

(1) To avoid confusion in sample numbers with work carried out by W.Kerr during 1990, sample numbers series WK- for 1991 work commence with WK-101. Sample numbers WK-1 to WK-100 were utilized during 1990.

(2) All analyses were by fire assay with an AA polish.

(3) All WK- and AA- series represent lithogeochemical samples, 1-195 Channel samples from trenches.

APPENDIX

B

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Established 1928

Geochemical Analysis Certificate

1W-3018-RG1

Company: TINTINA MINES LIMITED
Project: TINTINA
Attn: SHANE SABAG

Date: JUN-05-91

Copy 1. SUITE 804-920 YONGE ST. TORONTO, ONT.
2. M4W 3C7
3. VIA FAX TO 705-235-3007 Ph# 235-2405

We hereby certify the following Geochemical Analysis of 46 ROCK samples submitted JUN-03-91 by .

Sample Number	Au ppb
AA-1	Nil
AA-2	Nil
AA-3	Nil
AA-4	7/7
AA-5	Nil
AA-6	Nil
AA-7	Nil
AA-8	Nil
AA-9	Nil
AA-10	Nil
AA-11	Nil
AA-12	Nil
AA-13	Nil/Nil
AA-14	7
AA-15	Nil
AA-16	Nil
AA-17	Nil
AA-18	Nil
AA-19	Nil
WK-101	Nil
WK-102	470/346
WK-103	82
WK-104	161
WK-105	7
WK-106	Nil
WK-107	Nil
WK-108	58
WK-109	Nil
WK-110	Nil
WK-111	31

Certified by Donna Gardner

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

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Geochemical Analysis Certificate

1W-3060-RG1

Company: **TINTINA MINES LTD.**
Project: TINTINA
Attn:

Date: JUN-11-91
Copy 1. 804-920 YONGE ST.TORONTO, ONT. M4W C37
2. FAX TO 235-3007

We hereby certify the following Geochemical Analysis of 19 ROCK samples submitted JUN-06-91 by A. ALI.

Sample Number	Au ppb	Au check ppb
AA-20	Nil	
AA-21	Nil	
AA-22	10	
AA-23	7	
AA-24	Nil	
AA-25	Nil	
AA-26	Nil	
AA-27	45	
AA-28	Nil	
AA-29	168	175
AA-30	Nil	
AA-31	Nil	
AA-32	17	
AA-33	Nil	
AA-34	51	
AA-35	55	
AA-36	Nil	
AA-37	1323	1299
AA-38	Nil	

Certified by Donna Gavin

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

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Geochemical Analysis Certificate

1W-3151-RG1

Company: TINTINA MINES LTD.
Project: ENGLISH-ZAVITZ
Attn: SHAHE' SABAG/ BILL KERR

Date: JUN-25-91

Copy 1. SUITE 804-920 YONGE ST.,TORONTO. ONT
2. M4W 3C7
3. FAX TO 235-3007

We hereby certify the following Geochemical Analysis of 31 ROCK samples submitted JUN-14-91 by .

Sample Number	Au ppb	Au check ppb
AA-39	17	
AA-40	79	86
AA-41	137	
AA-42	14	
AA-43	62	
AA-44	14	
AA-45	41	
AA-46	Nil	
AA-47	161	230
AA-48	Nil	
AA-49	86	
AA-50	7	
AA-51	Nil	
AA-52	45	
AA-53	Nil	
AA-54	7	
AA-55	24	
AA-56	Nil	
AA-57	Nil	
AA-58	Nil	
AA-59	Nil	
AA-60	17	
AA-61	141	168
AA-62	Nil	
AA-63	Nil	
AA-64	Nil	
AA-65	65	
AA-66	130	120
AA-67	Nil	
AA-68	Nil	
AA-69	Nil	

Certified by P Candini

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JUL 02 19

Geochemical Analysis Certificate

1W-3200-RG1

Company: TINTINA MINES LTD.
Project: TINTINA
Attn: SHANE SABAG

Date: JUN-27-91
Copy 1. 804-920 YONGE ST. TORONTO M4W 3C7
2. FAX TO 235-3007

We hereby certify the following Geochemical Analysis of 11 ROCK samples submitted JUN-20-91 by B. KERR.

Sample Number	Au ppb
AA-70	14
AA-71	Nil
AA-72	7
AA-73	21
AA-74	24
AA-75	45/41
AA-76	21
AA-77	21
AA-78	17
AA-79	34
AA-80	17/21

Certified by Donna Gardner

P.O. Box 10, Swastika, Ontario P0K 1T0
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Geochemical Analysis Certificate

1W-3242-RG1

Company: TINTINA MINES LTD.
Project: TINTINA
Attn:

Date: JUL-02-91
Copy 1. 604-920 YONGE ST, TORONTO M4W 3C7

We hereby certify the following Geochemical Analysis of 14 ROCK samples submitted JUN-25-91 by .

Sample Number	Au ppb
AA-81	Nil
AA-82	Nil
AA-83	Nil
AA-84	Nil
AA-85	Nil
AA-86	Nil
AA-87	17
AA-88	Nil
AA-89	Nil
AA-90	Nil
AA-91	Nil
AA-92	Nil
AA-93	Nil
AA-94	Nil

Certified by Gina Hartman

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

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Geochemical Analysis Certificate

1W-3262-RG1

Company: TINTINA MINES LTD.
Project: TINTINA
Attn:

Date: JUL-04-91
Copy 1. 604-920 YONGE ST. TORONTO M4W 3C7
2. FAX TO 235-3007 (W. KERR)

We hereby certify the following Geochemical Analysis of 12 ROCK samples submitted JUN-27-91 by W. KERR.

Sample Number	Au ppb
AA-94 NOT REC'D	
AA-95	24/21
AA-96	Nil
AA-97	Nil
AA-98	69
AA-99	Nil
AA-100	Nil
AA-101	14
WK-253	Nil
WK-254	Nil
WK-255	Nil
WK-256	Nil
WK-257	24

Certified by Donna Gardner

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Geochemical Analysis Certificate

1W-3293-RG1

Company: TINTINA MINES LTD.
Project: TINTINA
Attn:

Date: JUL-08-91
Copy 1. 604-920 YONGE ST.,TORONTO,ONT. M4W 3C7
2. FAX TO 235-3007

We hereby certify the following Geochemical Analysis of 27 ROCK samples submitted JUL-02-91 by W. KERR.

Sample Number	Au ppb
WK-174-1	871/939
WK-174-2	10
WK-176-1	62
WK-176-2	58
WK-179-1	10
WK-181-1	Nil
WK-181-2	48
WK-185-1	7
WK-185-2	34
WK-185-3	21
WK-191-1	62
WK-201-1	24
WK-206-1	Nil
WK-207-1	413/370
WK-208-1	Nil
WK-212-1	147
AA-60-1	24
AA-60-2	21
AA-61-2	7
AA-65-1	Nil
AA-66-1	34/55
AA-71-1	7
AA-72-1	Nil
AA-72-2	Nil
AA-102	Nil
AA-103	Nil
AA-104	Nil

Certified by Donna Gardner

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Geochemical Analysis Certificate

1W-3408-RG1

Company: **TINTINA MINES LTD.**
Project: TINTINA
Attn: SHANE SABAG

Date: JUL-18-91
Copy 1. 604-920 YONGE ST,TORONTO,ONT. M4W 3C7
2. FAX TO 235-3007

We hereby certify the following Geochemical Analysis of 16 ROCK samples submitted JUL-10-91 by A. ALI.

Sample Number	Au ppb	Au check ppb
AA 75-1	21	21
AA 74-1	Nil	
AA 74-2	Nil	
AA 74-3	21	
AA 74-4	17	
AA 74-5	Nil	
AA 74-6	10	
AA 105	65	
AA 106	51	
AA 107	600	456
AA 87-1	17	
WK 226-1	21	
WK 226-2	Nil	
WK 227-1	Nil	
WK 227-2	41	
WK 227-3	Nil	

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Geochemical Analysis Certificate

1W-3018-RG1

Company: TINTINA MINES LIMITED
Project: TINTINA
Attn: SHANE SABAG

Date: JUN-05-91

Copy 1. SUITE 804-920 YONGE ST. TORONTO, ONT.
2. M4W 3C7
3. VIA FAX TO 705-235-3007 Ph# 235-2405

We hereby certify the following Geochemical Analysis of 46 ROCK samples submitted JUN-03-91 by .

Sample Number	Au ppb
WK-112	Nil
WK-113	Nil
WK-114	41
WK-115	82/82
WK-116	17
WK-117	Nil
WK-118	Nil
WK-119	291
WK-120	69
WK-121	281/315
WK-122	Nil
WK-123	89
WK-124	Nil
WK-125	Nil
WK-126	134/144
WK-127	103

Certified by Donna Gardner

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Geochemical Analysis Certificate

1W-3061-RG1

Company: TINTINA MINES LTD.
Project: TINTINA
Attn:

Date: JUN-12-91
Copy 1. 804-920 YONGE ST.,TORONTO,ONT. M4W 3C7
2. FAX TO 235-3007

We hereby certify the following Geochemical Analysis of 40 ROCK samples submitted JUN-06-91 by W. KERR.

Sample Number	Au ppb	Au check ppb	Au 2nd ppb
WK-128	Nil		
WK-129	Nil		
WK-130	93		
WK-131	3240	2949	3018
WK-132	38		
WK-133	285		
WK-134	65		
WK-135	10		
WK-136	Nil		
WK-137	Nil		
WK-138	Nil		
WK-139	Nil		
WK-140	Nil	Nil	
WK-141	Nil		
WK-142	Nil		
WK-143	Nil		
WK-144	Nil		
WK-145	7		
WK-146	Nil		
WK-147	Nil		
WK-148	Nil		
WK-149	Nil		
WK-150	Nil		
WK-151	Nil		
WK-152	7		
WK-153	31		
WK-154	Nil		
WK-155	17		
WK-156	Nil		
WK-157	55	82	

Certified by Donna Yarie

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1W-3061-RG1

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Project: TINTINA
Attn:

Date: JUN-12-91
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2. FAX TO 235-3007

We hereby certify the following Geochemical Analysis of 40 ROCK samples submitted JUN-06-91 by W. KERR.

Sample Number	Au ppb	Au check ppb	Au 2nd ppb
WK-158	Nil		
WK-159	14		
WK-160	Nil		
WK-161	81		
WK-162	Nil		
WK-163	Nil		
WK-164	274	326	
WK-165	27		
WK-166	Nil		
WK-167	312	298	

Certified by Donna Gardiner

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Geochemical Analysis Certificate

1W-3149-RG1

Company: TINTINA MINES LTD.
Project: ENGLISH-ZAVITZ
Attn: SHAHE'SABAG/BILL KERR

Date: JUN-26-91
Copy 1. SUITE 804-920 YONGE ST.,TORONTO,ONT
2. M4W 3C7
3. FAX TO 235-3007

We hereby certify the following Geochemical Analysis of 29 ROCK samples submitted JUN-14-91 by BILL KERR.

Sample Number	Au ppb
WK-168	Nil
WK-169	24
WK-170	62
WK-171	Nil
WK-172	Nil
WK-173	14
WK-174	250/267
WK-175	Nil
WK-176	31
WK-177	Nil
WK-178	Nil
WK-179	147
WK-180	Nil
WK-181	27
WK-182	106/117
WK-183	Nil
WK-184	Nil
WK-185	17
WK-186	7
WK-187	Nil
WK-188	Nil
WK-189	Nil
WK-190	202/199
WK-191	48
WK-192	Nil
WK-193	Nil
WK-194	Nil
WK-195	Nil
WK-196	Nil

Certified by Donna Yaciuk

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Geochemical Analysis Certificate

1W-3150-RG1

Company: TINTINA MINES LTD.
Project: ENGLISH-ZAVITZ
Attn: SHAHE' SABAG/BILL KERR

Date: JUN-26-91
Copy 1. 804-920 YONGE ST.,TORONTO,ONT. M4W 3C7
2. FAX TO 235-3007

We hereby certify the following Geochemical Analysis of 17 ROCK samples submitted JUN-14-91 by .

Sample Number	Au ppb
WK-197	Nil
WK-198	Nil
WK-199	Nil/Nil
WK-200	Nil
WK-201	31
WK-202	Nil
WK-203	Nil
WK-204	Nil
WK-205	Nil
WK-206	120
WK-207	319/243
WK-208	14
WK-209	Nil
WK-210	7
WK-211	Nil
WK-212	51
WK-213	79/62

Certified by Donna Gavinga

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JUL 02 1991

Geochemical Analysis Certificate

1W-3201-RG1

Company: TINTINA MINES LTD.
Project: ENGLISH/ZOUITZ
Attn: SHANE SABAG

Date: JUN-27-91
Copy 1. 804-920 YONGE ST. TORONTO M4W 3C7
2. FAX TO 235-3007

We hereby certify the following Geochemical Analysis of 15 ROCK samples submitted JUN-20-91 by B. KERR.

Sample Number	Au ppb
WK-214	Nil/Nil
WK-215	Nil
WK-216	Nil
WK-217	Nil
WK-218	Nil
WK-219	Nil
WK-220	Nil
WK-221	Nil
WK-222	Nil
WK-223	Nil
WK-224	7
WK-225	Nil
WK-226	Nil
WK-227	171/96
WK-228	Nil

Certified by Donna Gardner

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Geochemical Analysis Certificate

1W-3241-RG1

Company: TINTINA MINES LIMITED
Project: ENGLISH/ZAUITZ
Attn:

Date: JUL-02-91
Copy 1. 604-920 yonge st. Toronto, M4W 3C7
2. fax to 235-3007

We hereby certify the following Geochemical Analysis of 24 ROCK samples submitted JUN-25-91 by W. Kerr.

Sample Number	Au ppb	Au check ppb	Au 2nd ppb
WK-229	Nil		
WK-230	Nil		
WK-231	17		
WK-232	Nil		
WK-233	490		
WK-234	1587	1485	
WK-235	45		
WK-236	31		
WK-237	38		
WK-238	Nil		
WK-239	Nil		
WK-240	33		
WK-241	Nil		
WK-242	Nil		
WK-243	38		
WK-244	350		
WK-245	189		
WK-246	Nil		
WK-247	2616	2657	2883
WK-248	134		
WK-249	1827	1803	
WK-250	1151		
WK-251	Nil		
WK-252	Nil		

Certified by Donna Gardner

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Geochemical Analysis Certificate

1W-3292-RG1

Company: TINTINA MINES LTD.
Project: TINTINA
Attn:

Date: JUL-04-91
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2. FAX TO 235-3007

We hereby certify the following Geochemical Analysis of 15 ROCK samples submitted JUL-02-91 by W. KERR.

Sample Number	Au ppb
WK-258	21
WK-259	51
WK-260	Nil
WK-261	Nil
WK-262	Nil
WK-263	62
WK-264	89
WK-265	38
WK-266	137/151
WK-267	Nil
WK-268	10
WK-269	24
WK-270	192
WK-271	271
WK-272	418/350

Certified by Ilona Gardner

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1W-3372-RG1

Company: TINTINA MINES LTD.
Project: ENGLISH-ZAUITZ
Attn: SHANE SABAG

Date: AUG-09-91
Copy 1. 604-920 YONGE ST, TORONTO M4W 3C7
2. FAX TO 235-3007 W. KERR

We hereby certify the following Geochemical Analysis of 55 ROCK samples submitted JUL-10-91 by .

Sample Number	Au ppb	Au check ppb
1	672	
2	2242	2057
3	1159	1166
4	254	
5	696	
6	1041	
7	826	
8	1090	1029
9	782	
10	1097	1234
11	1248	1029
12	1848	1851
13	1053	960
14	583	
15	802	
16	1193	823
17	610	
18	535	
19	418	
20	470	
21	967	1203
22	1275	960
23	662	
24	281	
25	96	
26	38	
27	298	
28	10	
29	353	
30	816	

Certified by Ilona Gardner

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Project: ENGLISH-ZAUITZ
Attn: SHANE SABAG

Date: JUL-18-91
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2. FAX TO 235-3007 W. KERR

We hereby certify the following Geochemical Analysis of 55 ROCK samples submitted JUL-10-91 by .

Sample Number	Au ppb	Au check ppb
1	672	
2	2242	2057
3	1159	
4	254	
5	696	
6	1041	
7	826	
8	1090	
9	782	
10	1097	
11	1248	
12	1848	1851
13	1053	
14	583	
15	802	
16	1193	
17	610	
18	535	
19	418	
20	470	
21	967	1203
22	1275	
23	662	
24	281	
25	96	
26	38	
27	298	
28	10	
29	353	
30	816	

Certified by Donna Gardner

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Project: ENGLISH-ZAUITZ
Attn: SHANE SABAG

Date: AUG-09-91
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2. FAX TO 235-3007 W. KERR

We hereby certify the following Geochemical Analysis of 55 ROCK samples submitted JUL-10-91 by .

Sample Number	Au ppb	Au check ppb
31	799	
32	754	
33	1323	1440
34	898	
35	470	
36	621	
37	593	
38	254	
39	178	
40	75	
41	235	
42	1128	1303
43	854	
44	699	
45	658	
46	2362	2263
47	579	
48	802	
49	782	
50	946	1008
51	1258	1371
52	864	
WK-273	Nil	
WK-274	130	
WK-275	17	

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Attn: SHANE SABAG

Date: JUL-18-91
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2. FAX TO 235-3007 W. KERR

We hereby certify the following Geochemical Analysis of 55 ROCK samples submitted JUL-10-91 by .

Sample Number	Au ppb	Au check ppb
31	799	
32	754	
33	1323	1440
34	898	
35	470	
36	621	
37	593	
38	254	
39	178	
40	75	
41	235	
42	1128	
43	854	
44	699	
45	658	
46	2362	2263
47	579	
48	802	
49	782	
50	946	1008
51	1258	
52	864	
WK-273	Nil	
WK-274	130	
WK-275	17	

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Assay Certificate

1W-3453-RA1

Company: TINTINA MINES LTD.
Project: ENGLISH JAVITZ
Attn: SHAHE SABAG

Date: AUG-09-91

Copy 1. SUITE 604,920 YONGE ST.,TORONTO, ONT.
2. M4W 3C7
3. FAX TO 235-3007

We hereby certify the following Assay of 72 ROCK samples submitted JUL-17-91 by W. KERR.

Sample Number	Au ppb	Au check ppb
53	27	
54	48	
55	21	
56	34	
57	Nil	
58	14	
59	353	
60	1505	1584
61	394	
62	89	
63	178	
64	175	
65	144	
66	497	535
67	127	
68	223	
69	195	
70	274	
71	435	
72	45	
73	Nil	
74	14	
75	Nil	
76	51	
77	41	
78	82	
79	62	
80	247	
81	315	
82	991	1104

Certified by Donna Gardner

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Assay Certificate

1W-3453-RA1

Company: TINTINA MINES LTD.
Project: ENGLISH JAVITZ
Attn: SHAHE SABAG

Date: JUL-25-91

Copy 1. SUITE 604,920 YONGE ST.,TORONTO, ONT.
2. M4W 3C7
3. FAX TO 235-3007

We hereby certify the following Assay of 72 ROCK samples submitted JUL-17-91 by W. KERR.

Sample Number	Au ppb	Au check ppb
53	27	
54	48	
55	21	
56	34	
57	Nil	
58	14	
59	353	
60	1505	1584
61	394	
62	89	
63	178	
64	175	
65	144	
66	497	535
67	127	
68	223	
69	195	
70	274	
71	435	
72	45	
73	Nil	
74	14	
75	Nil	
76	51	
77	41	
78	82	
79	62	
80	247	
81	315	
82	991	1104

Certified by _____

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Company: TINTINA MINES LTD.
Project: ENGLISH JAVITZ
Attn: SHAHE SABAG

Date: AUG-09-91
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2. M4W 3C7
3. FAX TO 235-3007

We hereby certify the following Assay of 72 ROCK samples submitted JUL-17-91 by W. KERR.

Sample Number	Au ppb	Au check ppb
83	72	
84	10	
85	10	
86	41	
87	353	
88	10	
89	96	
90	339	367
91	329	
92	312	
93	31	
94	Nil	
95	89	
96	10	
97	14	
98	31	
99	17	
100	Nil	
101	10	
102	Nil	
103	34	
104	Nil	
105	21	
106	1035	1145
107	48	
108	374	
109	182	
110	69	
111	31	
112	185	

Certified by Donna Hardman

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Company: TINTINA MINES LTD.
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Attn: SHAHE SABAG

Date: JUL-25-91
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2. M4W 3C7
3. FAX TO 235-3007

We hereby certify the following Assay of 72 ROCK samples submitted JUL-17-91 by W. KERR.

Sample Number	Au ppb	Au check ppb
83	72	
84	10	
85	10	
86	41	
87	353	
88	10	
89	96	
90	339	367
91	329	
92	312	
93	31	
94	Nil	
95	89	
96	10	
97	14	
98	31	
99	17	
100	Nil	
101	10	
102	Nil	
103	34	
104	Nil	
105	21	
106	1035	1145
107	48	
108	374	
109	182	
110	69	
111	31	
112	185	

Certified by G. Fehr

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Attn: SHAHE SABAG

Date: AUG-09-91

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2. M4W 3C7
3. FAX TO 235-3007

We hereby certify the following Assay of 72 ROCK samples submitted JUL-17-91 by W. KERR.

Sample Number	Au ppb	Au check ppb
113	17	
114	17	
115	10	
116	134	
117	48	
118	113	
119	387	
120	271	302
121	576	
122	1803	1975
123	1306	1166
124	278	

Certified by Donna Gardner

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Project: ENGLISH JAVITZ
Attn: SHAHE SABAG

Date: JUL-25-91

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2. M4W 3C7
3. FAX TO 235-3007

We hereby certify the following Assay of 72 ROCK samples submitted JUL-17-91 by W. KERR.

Sample Number	Au ppb	Au check ppb
113	17	
114	17	
115	10	
116	134	
117	48	
118	113	
119	387	
120	271	302
121	576	
122	1803	1975
123	1306	
124	278	

Certified by _____

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Geochemical Analysis Certificate

1W-3464-RG1

Company: TINTINA MINES LIMITED
Project: ENGLISH ZAVITZ
Attn: SHAHE SABAG

Date: JUL-30-91
Copy 1. SUITE 604,920 YONGE ST.,TORONTO, ONT.
2. FAX TO 235-3007

We hereby certify the following Geochemical Analysis of 58 ROCK samples submitted JUL-19-91 by W. KERR.

Sample Number	Au ppb	Au check ppb
125	158	
126	1190	950
127	45	
128	34	
129	994	
130	Nil	
131	Nil	
132	497	
133	55	
134	1193	1296
135	154	
136	24	
137	Nil	
138	1776	1635
139	75	
140	106	
141	Nil	
142	497	
143	89	
144	14	
145	Nil	
146	14	
147	21	
148	24	
149	Nil	
150	Nil	
151	34	
152	144	106
153	Nil	
154	24	

Certified by Donna Gardner

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Geochemical Analysis Certificate

1W-3464-RG1

Company: TINTINA MINES LIMITED
Project: ENGLISH ZAVITZ
Attn: SHAHE SABAG

Date: JUL-30-91
Copy 1. SUITE 604,920 YONGE ST.,TORONTO, ONT.
2. FAX TO 235-3007

We hereby certify the following Geochemical Analysis of 58 ROCK samples submitted JUL-19-91 by W. KERR.

Sample Number	Au ppb	Au check ppb
155	103	
156	89	
157	298	
158	Nil	
159	24	
160	Nil	
161	309	285
162	21	
163	141	
164	Nil	
165	7	
166	79	
167	Nil	
168	Nil	
169	Nil	
170	Nil	
171	7	
172	264	
173	147	
174	21	
175	363	346
176	72	
177	Nil	
178	Nil	
179	Nil	
180	Nil	
181	151	
182	1073	1299

Certified by Donna Gardner

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

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Geochemical Analysis Certificate

1W-3516-RG1

Company: TINTINA MINES LTD.
Project: ENGLISH/ZAVITZ
Attn: SHAHE SABAG

Date: AUG-06-91

Copy 1. SUITE 804-920 YONGE ST.,TORONTO,ONT,
2. M4W 3C7
3. FAX TO 235-3007

We hereby certify the following Geochemical Analysis of 13 ROCK samples submitted JUL-25-91 by W. KERR.

Sample Number	Au ppb	Au check ppb
183	696	
184	96	
185	525	
186	1018	1162
187	93	
188	2057	1786
189	195	
190	852	
191	518	
192	1371	1241
193	3703	3771
194	1371	1296
195	14	

Certified by Donna Gardner

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SEP 20 1991

Geochemical Analysis Certificate

1W-3942-RG1

Company: TINTINA MINES LTD.
Project: ENGLISH JAVITZ
Attn: SHAHE SABAG

Date: SEP-18-91
Copy 1. 604-920 YONGE ST,TORONTO,ONT. M4W 3C7
2. FAX TO 235-3007

We hereby certify the following Geochemical Analysis of 78 DRILL CORE samples submitted SEP-11-91 by W. KERR.

Sample Number	Au ppb
1001	17
1002	89
1003	79
1004	96/72
1005	24
1006	75
1007	34
1008	10
1009	45
1010	34
1011	Nil
1012	Nil
1013	Nil
1014	Nil
1015	Nil
1016	Nil/Nil
1017	Nil
1018	Nil
1019	Nil
1020	Nil
1021	Nil
1022	Nil
1023	62/58
1024	Nil
1025	Nil
1026	Nil
1027	Nil
1028	Nil
1029	34
1030	Nil

Certified by Donna Gardner

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Geochemical Analysis Certificate

1W-3942-RG1

Company: TINTINA MINES LTD.
Project: ENGLISH JAVITZ
Attn: SHAHE SABAG

Date: SEP-18-91
Copy 1. 604-920 YONGE ST,TORONTO,ONT. M4W 3C7
2. FAX TO 235-3007

We hereby certify the following Geochemical Analysis of 78 DRILL CORE samples submitted SEP-11-91 by W. KERR.

Sample Number	Au ppb
1031	Nil
1032	Nil
1033	219
1034	237/295
1035	Nil
1036	Nil
1037	21
1038	Nil
1039	Nil
1040	Nil
1041	154
1042	Nil
1043	Nil
1044	Nil
1045	Nil
1046	Nil
1047	75
1048	257/271
1049	Nil
1050	Nil
1051	641/579
1052	Nil
1053	Nil
1054	Nil
1055	Nil
1056	Nil
1057	Nil
1058	Nil
1059	17
1060	48

Certified by Donna Yardley

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Geochemical Analysis Certificate

1W-3942-RG1

Company: TINTINA MINES LTD.
Project: ENGLISH JAVITZ
Attn: SHAHE SABAG

Date: SEP-18-91
Copy 1. 604-920 YONGE ST,TORONTO,ONT. M4W 3C7
2. FAX TO 235-3007

We hereby certify the following Geochemical Analysis of 78 DRILL CORE samples submitted SEP-11-91 by W. KERR.

Sample Number	Au ppb
1061	17
1062	62/51
1063	Nil
1064	24
1065	21
1066	38
1067	Nil
1068	Nil
1069	Nil
1070	Nil
1071	86
1072	106/117
1073	Nil
1074	Nil
1075	Nil
1076	Nil
1077	79
1078	Nil

Certified by Donna Gardner

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Geochemical Analysis Certificate

1W-3990-RG1

Company: TINTINA MINES LIMITED
Project: ENGLISH/ZAVITZ
Attn:

Date: SEP-25-91
Copy 1. 604--920 YONGE ST, TORONTO M4W 3C7
2. FAX TO W. KERR 235-3007

We hereby certify the following Geochemical Analysis of 91 DRILL CORE samples submitted SEP-17-91 by .

Sample Number	Au ppb	Au check ppb	Au 2nd ppb
1079	17		
1080	45		
1081	Nil		
1082	Nil		
1083	42		
1084	86	86	
1085	Nil		
1086	Nil		
1087	75		
1088	Nil		
1089	117		
1090	Nil		
1091	161		
1092	27		
1093	51		
1094	69		
1095	82		
1096	Nil		
1097	854		
1098	151		
1099	Nil		
1100	75		
1101	Nil	Nil	
1102	1738	1783	1886
1103	79		
1104	Nil		
1105	206		
1106	Nil		
1107	693		
1108	3134	3120	

Certified by Donna Gardner

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Geochemical Analysis Certificate

1W-3990-RG1

Company: TINTINA MINES LIMITED
Project: ENGLISH/ZAVITZ
Attn:

Date: SEP-25-91
Copy 1. 604--920 YONGE ST, TORONTO M4W 3C7
2. FAX TO W. KERR 235-3007

We hereby certify the following Geochemical Analysis of 91 DRILL CORE samples submitted SEP-17-91 by .

Sample Number	Au ppb	Au check ppb	Au 2nd ppb
1109	48		
1110	Nil		
1111	75		
1112	115		
1113	79		
1114	24		
1115	79		
1116	76		
1117	93		
1118	48		
1119	Nil		
1120	14		
1121	Nil		
1122	Nil		
1123	374		
1124	487	525	
1125	185		
1126	250		
1127	99		
1128	357	250	
1129	120		
1130	7		
1131	Nil		
1132	Nil		
1133	Nil		
1134	Nil		
1135	Nil		
1136	Nil		
1137	72	106	
1138	Nil		

Certified by Gina Stevens

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Geochemical Analysis Certificate

1W-3990-RG1

Company: TINTINA MINES LIMITED
Project: ENGLISH/ZAVITZ
Attn:

Date: SEP-25-91
Copy 1. 604--920 YONGE ST, TORONTO M4W 3C7
2. FAX TO W. KERR 235-3007

We hereby certify the following Geochemical Analysis of 91 DRILL CORE samples submitted SEP-17-91 by .

Sample Number	Au ppb	Au check ppb	Au 2nd ppb
1139	Nil		
1140	154		
1141	Nil		
1142	Nil		
1143	Nil		
1144	Nil		
1145	86		
1146	34		
1147	Nil		
1148	593	737	
1149	494		
1150	Nil		
1151	192		
1152	713	682	
1153	148		
1154	206		
1155	43		
1156	588		
1157	319		
1158	Nil		
1159	89		
1160	75		
1161	Nil		
1162	Nil		
1163	Nil		
1164	Nil		
1165	Nil		
1166	Nil		
1167	34	31	
1168	Nil		
1169	Nil		

Certified by Donna Gardner

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Geochemical Analysis Certificate

1W-4072-RG1

Company: TINTINA MINES LTD
Project:
Attn: SHAHE SABAG

Date: OCT-02-91
Copy 1. 920 YONGE ST.TORONTO ONT
2. FAX:705-235-3007

We hereby certify the following Geochemical Analysis of 5 ROCK CORE samples submitted SEP-26-91 by .

Sample Number	Au PPB
WK-276	110/151
1170	21
1171	10
1172	34
1173	Nil

Certified by Donna Gardner

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

APPENDIX

C

Tintina Mines Limited

DRILLING COMPANY: NOREX DRILLING LIMITED	COLLAR ELEVATION:	AZIMUTH: 117°	TOTAL FOOTAGE: 106.0M	DIP OF HOLE AT: collar -45°	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM: FROM COLLAR, 214 METRES EAST and 326 Metres NORTH to Post 1, claim P 1132675	HOLE NO.: T1-91	PAGE NO.: 1
DATE HOLE STARTED: Sept. 6/1991	DATE COMPLETED: Sept 7/1991	DATE LOGGED: Sept 7,8 1991	LOGGED BY: WILLIAM C KERR	106M -37°		CORE SIZE - BQ	CLAIM NO.: 1132675
PURPOSE: TO CROSS SECTION THE NORTH ZONE		SYSTEM: METRIC ✓ IMPERIAL	SUBMITTED BY (Signature):			LOCATION: 0+35 S 49+47 E (NORTH GRID)	
						PROPERTY NAME: ENGLISH/ZAVITZ PROJECT	

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION	PLANAR FEATURE ANGLE °	CORE SPECIMEN FOOTAGE °	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS PPB GOLD ORIG.	ASSAYS PPB GOLD RR	ASSAYS PPB GOLD REJ
0.0	3.0	CASING										
3.0	9.38	BASALT	Medium to dark green in colour strong pervasive calcite alteration and ~15-20% foliation parallel veinlets. Very strongly foliated at 85° to 90° to core axis; angles are at 60° near start of unit. 1 to 3% disseminated pyrite locally. Unit is soft, chloritic, may be termed a chlorite schist locally. 0.5 metre ground core at 8.0 metres FROM 3.52 to 4.04 Metres, equigranular dyke of dioritic composition, pervasive calcite alteration, sharp and chilled contacts at ~065°									
			8.88 — 9.38 - Flank sample sheared calcite rich basalt			1001	8.88	9.38	0.50m	17		
9.38	17.97	SYENITE	Pink red to brick red in color, both very fine grained plus medium grained phases are present. Upper contact is sharp at 1035°, lower contact is diffuse at 0160°. Pyrite content varies from nil to ~1-10% locally, and reaches 18% near areas of pinkish diffuse silicification, especially near upper contact. Pyrite is the only sulphide mineral observed. Local very minor chlorite patches. The unit is massive non foliated but with occasional diffuse mafic banding at 045° generally. Only rare quartz veins.									

DIAMOND DRILL RECORD

NAME OF PROPERTY: ENGLISH / ZAVITZ PROJECT
HOLE NO.: TI - 91
SHEET NO.: 2

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION	PLANAR FEATURE ANGLE	CORE SPECIMEN FOOTAGE	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS ORIG.	ASSAYS RR	ASSAYS REJ
			9.38 - 10.30 - Pinkish red syenite, pyrite to 10%, locally several thin cross-cutting ~~quartz~~ quartz veinlets			1002	9.38	10.30	0.92m	89	-	
			10.38 - 11.00 - similar to 1002 with very heavy patchy pyrite to 20% near lower section.			1003	10.38	11.00	0.70	79		
			11.00 - 12.00 - predominantly unaltered portion of syenite, pale color - may be diorite dyke			1004	11.00	12.00	1.00M	96	72	
			12.00 - 13.00 - First 50 cm similar to 1004, then predominantly sulphide poor syenite			1005	12.00	13.00	1.00m	24		
			13.00 - 14.00 - Massive syenite, coarser grain size, mostly sulphide poor			1006	13.00	14.00	1.00M	75		
			14.00 - 15.00 - very few sulphides present, locally chloritic, foliated at 060°			1007	14.00	15.00	1.00M	34		
			15.00 - 16.00 - similar to 1007			1008	15.00	16.00	1.00M	10		
			16.00 - 17.00 - Syenite with diffuse wispy silicification, pinkish red hematization, 5% sulphides locally			1009	16.00	17.00	1.00M	45		
			17.00 - 17.97 - similar to 1009, 5% quartz veinlets			1010	17.00	17.97	0.97m	34		
17.97	19.35	BASALT	Similar to 3.0 to 9.38, but more massive, much less foliated									
19.35	19.64	Sericite Schist	Very fine grain size, pale green grey in colour, very thinly laminated at 50 - 80° to core axis. Locally contorted foliation. NO significant mineralization									
19.64	22.20	DIORITE	Intermediate dyke, massive, with 5% angular fragments to 2 cm size locally of both basaltic and rhyolitic composition. Strong pervasive calcite alteration. Upper contact sharp at 025°.									

DIAMOND DRILL RECORD

NAME OF PROPERTY ENGLISH / ZAUITE PROJECT

HOLE NO. TI-91 SHEET NO. 3

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION	PLANAR FEATURE ANGLE °	CORE SPECIMEN FOOTAGE ±	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS ± ORIG.	ASSAYS ± RR	ASSAYS ± REJ
22.20	29.70	Quartz Porphyry	- May be rhyolitic phase. Pale creamy white to grey in colour, very fine grain size, very siliceous, very hard unit. Local patches of diffuse 2 mm silica knots may represent altered quartz eyes. Not significant mineralization, only minor quartz veinlets Gradational lower contact. Includes mafic dykes from 23.50 - 24.10M, 26.80 - 27.92M.									
			24M - 25.00 - Character sample of quartz porphyry, no sulphides, only minor very thin quartz veinlets			1011	24.14	25.00	0.86	nil		
			27.85 - 29.00 - 10% quartz veiglets with minor tourmaline, 5% pyrite locally			1012	27.85	29.00	1.15	nil		
			up to 5% pyrite near lower contact. Banding is contorted, but generally at 055°									
29.70	31.54	DACITE	Intermediate volcanics thinly laminated at 065°, pale to medium green, fine to medium grain size. Very strong pervasive calcite alteration. Only minor pyrite as blebby lenses massed. Upper contact is gradational, lower is sharp at 075°									
31.54	31.83	INTERMEDIATE DYKE	Pale translucent purple, medium to coarse grain size, fairly soft and of probable dioritic composition.									
31.83	35.45	Sericite Schist	Similar to 1935 to 31.64. Banding variable 075° near upper contact to 040° near lower contact. Some pyrite rich sections to 7% locally. Includes 20 cm coarse grained feldspar porphyry dike at 040° near lower contact			1013	32.00	33.54	1.54	nil		
35.45	36.40	Felsic DYKE	Medium grain size, medium grey in colour very massive and homogeneous, with 1%									

DIAMOND DRILL RECORD

NAME OF PROPERTY ENGLISH / ZAN ITE PROJECT

HOLE NO. JI-91 SHEET NO. 4

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION	PLANAR FEATURE ANGLE °	CORE SPECIMEN FOOTAGE ↓	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS ↓ ORIG.	ASSAYS ↓ RR	ASSAYS ↓ REJ
			included chloritic clasts to 2 MM size. Strong pervasive calcite alteration and several crosscutting calcite stringers.									
36.40	56.75	BASALT	Similar to 17.97 to 19.35. Massive medium to dark green, strong pervasive calcite, locally. Medium grained mafic dykes, with pervasive calcite, at 45.0 to 45.70, 53.25 to 54.20, and 55.76 to 56.75 metres. All contacts sharp, sometimes chilled, at 075°.									
			39.26 - 39.87 - 1% to 10% pyrite in thin veinlets, minor blebby quartz			1014	39.26	39.87	0.61	nil		
			39.87 - 40.72 - 10% crosscutting calcite alteration, two 1 cm quartz veinlets near lower contact			1015	39.87	40.72	0.85m	nil		
			41.46 - 42.02 - several 1cm areas of semi-massive pyrite 5% irregular quartz			1016	41.46	42.02	0.56	nil	nil	
			44.00 - 44.80 - 5% pyrite 10% irregular quartz,			1017	44.00	44.80	0.80	nil		
			45.75 - 46.42 - similar to 1017, 10% pyrite Locally			1018	45.75	46.42	0.67	nil		
			47.00 - 47.47 - Local semi-massive pyrite and very strong calcite alteration, well banded at 075°			1019	47.00	47.47	0.47	nil		
			48.00 - 49.00 - 10 - 15% irregular calcite veinlets, several thin irregular quartz veinlets with tourmaline			1020	48.00	49.00	1.00	nil		
			49.50 - 50.49 - 15% pyrite blebs as irregular patches within irregular quartz veins			1021	49.50	50.49	0.99	nil		
56.75	62.00	INTERMEDIATE VOLCANICS	Pale translucent green in colour, more massive near upper contact becoming strongly foliated @ 070° down the unit. 15 - 20% crosscutting calcite veinlets Locally. Occasional blebby pyrite stringers. Mafic dyke at 60.46 to 62.00 marks change to more felsic volcanics. Only moderate calcite alteration									

DIAMOND DRILL RECORD

NAME OF PROPERTY ENGLISH / ZAVITZ PROJECT

HOLE NO. TI-91 SHEET NO. 5

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION	PLANAR FEATURE ANGLE °	CORE SPECIMEN FOOTAGE ↓	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS ↓ ORIG.	ASSAYS ↓ RR	ASSAYS ↓ REJ
			57.67-58.32 - 10-15% crosscutting calcite-quartz veinlets, rare pyrite.			1022	57.67	58.32	0.65	nil		
			59.00-60.21 - similar to 1022, few splashes chalcopyrite locally			1023	59.00	60.21	1.21	62	58	
			60.21-61.00 5% irregular quartz-calcite veinlets, minor pyrite			1024	60.21	61.00	0.79	nil		
62.00	65.78	Sericite Schist	Similar to 19.35 to 19.64M. Very shallow cone angles of 15° near lower contact. Contains intermediate dyke, similar to 31.54 to 31.83 M from 64.00 to 64.35, sharp contacts at 075°. Lower contacts sharp at 060°, diffuse upper contacts.									
			62.24-62.92 - 1-2 cm patchy quartz, tourmaline near walls, minor specks pyrite.			1025	62.24	62.92	0.68	nil		
65.78	71.30	INTERMEDIATE VOLCANIC	Similar to 56.75 to 62.00, minor basaltic interbeds.									
71.30	73.85	Sericite Schist	Similar to 19.35 to 19.64. Very contorted banding, mafic dyke from 72.00 to 73.10. Sharp contacts at 045°.									
			73.08-74.00 - strongly sericitized material, several minor quartz veinlets, one 4 cm bull vein at 045°			1026	73.08	74.00	0.92	nil		
73.85	81.13	INTERMEDIATE VOLCANIC	Similar to 56.75 to 62.00. Patchy, very intense calcite alteration. Locally strongly foliated at 075°. 10% pyrite rich sections near lower contact.									
			74.00-74.63 - 30% patchy calcite alteration, no sulphides. Character sample.			1027	74.00	74.63	0.63	nil		
			Felsic dyke, from 76.26 to 77.00, similar to 33.45 to 36.40									
			79.09-79.85 Pink syenite dyke, massive, medium grain size, minor pyrite			1028	79.09	79.85	0.76	nil		

DIAMOND DRILL RECORD

NAME OF PROPERTY ENGLISH / ZANTZ PROJECT

HOLE NO. TY-91 SHEET NO. 6

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION	PLANAR FEATURE ANGLE °	CORE SPECIMEN FOOTAGE ↓	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS ↓ ORIG.	ASSAYS ↓ RR	ASSAYS ↓ REJ
			79.85-80.76 - Very heavy pyr. to 30% Locally, only minor quartz veinlets			1029	79.85	80.76	0.91	34		
81.13	104.00	BASALT	Massive, very strongly altered by pervasive calcite, rarely foliated. Medium to dark green in colour. Several mafic dykes at 81.13 - 81.55, 82.67 - 82.90 and 84.71 to 85.53 Metres. Sharp and chilled contacts generally at 065°									
			98.14 - 99.00 SYENITE, medium to coarse grain size. Gradational lower contact			1030	98.14	99.00	0.86	nil		
			99.00 - 99.70 - 10 - 15% quartz veinlets at 075°, barren			1031	99.00	99.70	0.70	nil		
104.00	106.00	INTERMEDIATE VOLCANIC	Similar to 56.75 to 62.00, well banded at 075°									
			105.02 - 105.72 - 15% irregular quartz veinlets, 5% pyrite locally.			1032	105.02	105.72	0.70	nil		
106.00			END OF HOLE									
			- CORE STORED AT TIMMINS DRILL CORE LIBRARY, TIMMINS, ONTARIO									
			- The core was lamped - nothing of interest									
			- A 0.6 Metre length of BW casing was left in the hole.									

Tintina Mines Limited

DRILLING COMPANY: NOREX DRILLING Limited	COLLAR ELEVATION: —	AZIMUTH: 117°	TOTAL FOOTAGE: 140.0M	DIP OF HOLE AT: collar | -45°	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM: FROM Collar, 279 METRES EAST and 297 METRES NORTH to Postn'l claim P 1132675	HOLE NO.: T2-91	PAGE NO.: 1
DATE HOLE STARTED: Sept 8/1991	DATE COMPLETED: Sept 9, 1991	DATE LOGGED: Sept 9, 10, 1991	LOGGED BY: WILLIAM C. KERR	140M | -37°		CORE SIZE - BQ	CLAIM NO.: 1132675
PURPOSE: TO CROSS SECTION THE NORTH ZONE		SYSTEM: METRIC ✓ IMPERIAL _	SUBMITTED BY (Signature): [redacted]	ft | ° ft | ° ft | °		LOCATION: 0+28 N, 49+20 E NORTH GRID	PROPERTY NAME: ENGLISH / ZAUITE PROTECT

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION	PLANAR FEATURE ANGLE °	CORE SPECIMEN FOOTAGE ↓	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS PPB GOLD ORIG.	ASSAYS PPB GOLD RR	ASSAYS PPB GOLD REJ
0.0	3.0	CASING										
3.0	4.80	SYENITE	Brick red to pink red due to ankerite plus hematization. Fine grain size. Disseminated pyrite to 1 10% rare cross cutting quartz veinlets. Occasional rare chloritic clast, resorbed. Gradational Lower Contact									
			3.0-4.0 - very rubbly, oxidized sample, pyrite disseminated to 10%, strong ankeritization and hematization.			1033	3.00	4.00	1.0	219		
			4.00-4.80 - similar to 1033, several chloritic patches			1034	4.00	4.80	0.80	237	295	
4.80	12.22	INTERMEDIATE VOLCANIC	Medium green grey, pink near upper contact with syenite, fine grain size, moderately siliceous, irregularly carbonated, primarily calcite but locally ankerite. Chloritic zone near 6.0 metre mark. Fairly massive unit, no banding observed									
			4.80-5.48 - very fine grained, locally sericitized, cream pink colour			1035	4.80	5.48	0.68	nil		
			5.48-6.40 - fine grain size, moderately siliceous, contains 2% cm irregular quartz carbonate alteration			1036	5.48	6.40	0.92	nil		
			8.65-10.08 - 10% irregular quartz veins in intermediate volcanic, 4 cm quartz vein at 80° at lower contact			1037	8.65	10.08	1.43	21		
12.22	13.00	SYENITE	Very fine grained, pink cut by numerous very fine quartz veinlets. Local pyrite to 1%. Irregular upper contact			1038	12.22	13.00	0.78	nil		

DIAMOND DRILL RECORD

NAME OF PROPERTY ENGLISH/ZADITZ PROJECT

HOLE NO. T2-91 SHEET NO. 2

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION	PLANAR FEATURE ANGLE °	CORE SPECIMEN FOOTAGE ↓	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS ↓ ORIG.	ASSAYS ↓ RR	ASSAYS ↓ REJ
13.00	14.27	INTERMEDIATE VOLCANIC	Similar to 4.80 - 12.22									
14.27	15.05	SYENITE	Very fine grained massive equigranular, irregular upper contact sharp at 060° lower sharp at 045° (und sheared). Dull reddish brown. Both ankerite and calcite are present. No Sulphides observed			1039	14.27	15.05	0.77	nil		
15.05	25.43	BASALT	Massive, medium green grey colour, Fine to very fine grain size, soft. Several areas containing coarse grain phases, or mafic dykes near upper Contact. Strong pervasive calcite alteration, several areas intense quartz carbonate veining over 10 cm. 19.34 - 20.00. 20 cm bull laminated quartz vein at 050° no sulphides. 22.41 - 23.60. 1% py in 30% irregular quartz veins			1040	19.34	20.00	0.66	nil		
						1041	22.41	23.60	1.19	15-4		
25.43	27.29	FELSIC DYKE	Massive, leucocratic with 10% mafic chloritized clasts, very hard and siliceous. Medium grain size, "dirty" diabitic texture. Character sample taken			1042	25.43	26.00	0.57	nil		
27.29	32.00	BASALT	Similar to 15.05 - 25.43. Pervasive Calcite									
32.00	36.89	ULTRAMAFIC	Very strong ankeritic rock. Medium grained, massive, and homogenous JC This is exposed on surface. Sharp contact with the quartz porphyry. Hangingwall is bleached by the porphyry. Gradational upper contact.									
			35.00 - 36.00 - Character Sample			1043	35.00	36.00	1.00	nil		
			36.00 - 36.89 - Character Sample, bleached by porphyry at contact.			1044	36.00	36.89	0.89	nil		

DIAMOND DRILL RECORD

NAME OF PROPERTY ENGLISH/ZAUTZ PROJECT

HOLE NO. T2-91 SHEET NO. 3

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION	PLANAR FEATURE ANGLE °	CORE SPECIMEN FOOTAGE ↓	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS ↓ ORIG.	ASSAYS ↓ RR	ASSAYS ↓ REJ
36.89	41.22	FELDSPAR PORPHYRY	MASSIVE Pink, creamy white, Large 1mm feldspar phenocrysts in a siliceous groundmass. Only rare cross cutting quartz veinlets, minor pyrite. Minor calcite as very thin veinlets. Contains 20 cm fine grained felsic dyke with 10% pyrite, near lower contact. Upper contact sharp at 060°, Lower is irregular									
			36.89 - 38.50 - Massive 5% quartz veinlets 1% disseminated pyrite			1045	36.89	38.50	1.61	nil		
			38.50 - 39.50 - similar to 1045			1046	38.50	39.50	1.0	nil		
			39.50 - 40.40 - Similar to 1045, 10-15% Larger quartz veins now, several pyrite stringers			1047	39.50	40.40	0.90	75		
			40.40 - 41.22 - contains 20 cm green sericite (3% pyrite) dyke at ?? at 035°			1048	40.40	41.22	0.82	257	271	
41.22	52.82	ULTRAMAFIC	ANKERITIC rock, similar to 32.00-36.89. Becoming moderately foliated at 050° down unit									
			41.22 - 42.40 - character sample			1049	41.22	42.40	1.18	nil		
			42.40 - 43.35 - character sample			1050	42.40	43.35	0.95	nil		
52.82	58.06	BASALT TUFFS	Fine grain size, strong pervasive Calcite alteration, prominent banding at 060°									
			53.85 - 54.36 - Pink feldspar porphyry dyke with irregular boundary at 065° 2% pyrite			1051	53.85	54.36	0.51	641	579	
			55.83 - 56.80 - Several 1-2 cm quartz stringers with chlorite patches, minor sulphides.			1052	55.83	56.80	0.97	nil		
			56.80 - 58.06 - Similar to 55.83 - 56.80. strongly carbonatized, only minor quartz stringers			1053	56.80	58.06	1.26	nil		
58.06	63.69	MARIPOSITE BEARING FELSIC TUFF	Very fine to fine grain size well laminated at 060°, clasts to Lapilli Size									

DIAMOND DRILL RECORD

NAME OF PROPERTY ENGLISH / FAUNTE PROJECT

HOLE NO. T2-91 SHEET NO. 4

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION	PLANAR FEATURE ANGLE °	CORE SPECIMEN FOOTAGE +	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + ORIG.	ASSAYS + RR	ASSAYS + REJ
			Patchy mariposite concentrated to 6-8% locally. Pyrite, very minor pyrrhotite in blebs and thin lenses. Several sections strongly sericitic and mariposite-poor.									
			58.06-59.00 - strongly fractured (045°) mariposite tuffs with 10% quartz veinlets			1054	58.06	59.00	0.94	nil		
			59.00-59.95 - Felsic tuffs, pyrite to 5% locally, strong calcite alteration			1055	59.00	59.95	0.95	nil		
			59.95-61.00 4 cm quartz vein at upper contact, diffuse wispy quartz veining, green sericite locally			1056	59.95	61.00	1.05	nil		
			61.00-62.00 Similar to 59.95-61.00. Heavy mariposite near lower contact.			1057	61.00	62.00	1.00	nil		
			62.00-63.00 5% mariposite near upper contact of samsite intermediate dyke at looks half?			1058	62.00	63.00	1.00	nil		
			63.00-63.69 Possibly sandy intermediate dyke, minor pyrite at lower contact with syenite.			1059	63.00	63.69	0.69	17		
63.69	65.00	SYENITE	Brick red, very fine grain size, weak pervasive sericite. Filled contacts at 070°. Contains several 2 cm size clasts of subround recrystallized mafic material. Very massive									
			63.69-65.00 - massive syenite with 3 cm quartz vein at lower contact, possibly tourmaline bearing			1060	63.69	65.00	1.31	48		
65.00	69.83	Mariposite bearing Felsic Tuffs	similar to 58.06-63.69									
			65.00-65.46 - FLANK sample - felsic tuffs, calcite moderate			1061	65.00	65.46	0.46	17		
			65.46-66.86 - Mariposite tuffs, 3 to 5% lensy blebby pyrite, rare quartz veinlets			1062	65.46	66.86	1.40	62	51	

DIAMOND DRILL RECORD

NAME OF PROPERTY: ENGLISH / ZAUITZ PROJECT

HOLE NO. 72-91 SHEET NO. 5

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION	PLANAR FEATURE ANGLE	CORE SPECIMEN FOOTAGE	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS ORIG.	ASSAYS RR	ASSAYS REJ
			66.86-68.17 - Similar to 65.46-66.86			1063	66.86	68.17	1.31	nil		
			68.17-69.83 - Green sericite and blobby irregular quartz, 2% pyrite.			1064	68.17	69.83	1.66	24		
69.83	70.80	SYENITE	SYENITE, similar to 63.69-65.00. Irregular contacts			1065	69.83	70.80	0.97	21		
70.80	79.13	INTERMEDIATE TUFFS	Generally similar to previous unit but with much less mariposite and sericite, locally more chlorite. Lapilli size clasts still present very strong calcite alteration. Foliation of clasts at 065-070°									
79.13	83.00	SERICITIC QUARTZ ALTERATION ZONE	IRREGULAR QUARTZ FLOODED and SERICITIC ALTERATION ZONE. Locally 40% blue smoky quartz within anastomosing green yellow sericitic ribbons. local pyrite to 10% in blebby lenses. A Hydrothermal channel way.									
			79.13-80.00 - Very strongly altered - green sericite, irregular blue quartz to 10%, foliation parallel pyrite with calcite alteration			1066	79.13	80.00	0.77	38		
			80.00-81.00 - Similar to 79.13 to 80.00. completely altered, host rock is not distinguishable			1067	80.00	81.00	1.00	nil		
			81.00-82.00 - Similar to 80.00-81.00, 50% irregular blue quartz			1068	81.00	82.00	1.00	nil		
			82.00-83.00 - BLANK SAMPLE - 30 cm alteration near lower contact			1069	82.00	83.00	1.00	nil		
83.00	140.00	MAFIC - INTERMEDIATE TUFFS	Local chlorite, local sericite, well foliated predominantly at 045°. Several interbeds of more felsic material may represent solution channel ways rather than more felsic interbeds. Strong calcite alteration throughout unit.									

DIAMOND DRILL RECORD

NAME OF PROPERTY ENGLISH / ZAVITZ Project

HOLE NO. T2-91 SHEET NO. 6.

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION	PLANAR FEATURE ANGLE °	CORE SPECIMEN FOOTAGE +	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + ORIG.	ASSAYS + RR	ASSAYS + REJ
			87.0-88.0 - Several 2 cm quartz veins, 2-3% pyrite, minor green sericite fuzz.			1070	87.0	88.0	1.0	nil		
			8800-8900 - similar to 820-880			1071	8800	89.00	1.0	86		
			96.38-97.38 - Intermediate dyke, medium grain size, equigranular, digritic composition. Contacts sharp at @40°									
			101.30-101.58 Thin felsic dyklet at @65° / porphyry									
			101.86-102.60 - 20% quartz veining several large splashes chalcopyrite strong calcite alteration, 2-1% pyrite			1072	101.86	102.60	0.76	106	117	
			115.25-117.04 - Intermediate to felsic dyke, massive, pinkish and coarser grained / differentiated core.									
			105.58-106.40 - More sericite portions, several mms 1cm quartz veinlets at @85°			1073	105.58	106.40	0.82	nil		
			119.0-120.0 - wispy, irregular pink silicification, 1% pyrite			1074	119.0	120.0	1.0	nil		
			120.0-121.0 - similar to 119.0-120.0			1075	120.0	121.0	1.0	nil		
			122.28-122.90 - SYENITE Dyke, massive, fresh			1076	122.28	122.90	1.0	nil		
			124.40-125.28 - SYENITE, coarser grain size than previous occurance, still massive, fresh, ankeritic and hematized.			1077	124.4	125.28	0.88	79-		
			132.66-135.96 - Felsic Dyke similar to 25.43-27.29									
			136.20-137.46 - Several large splashes chalcopyrite, also 1% pyrite in 3 cm veinlet near lower contact			1078	136.20	137.46	1.26	nil		
140.00			END OF HOLE									
			CORE STORED AT TIMMINS DRILL CORE LIBRARY - TIMMINS, ONTARIO									
			-the core was lamped - nothing of interest									
			-0.6 Metre of BW Casing left in hole									

Tintina Mines Limited

DRILLING COMPANY: NOREX DRILLING LIMITED	COLLAR ELEVATION: —	AZIMUTH: 117°	TOTAL FOOTAGE: 110.0M	DIP OF HOLE AT: collar -45°	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM: FROM COLLAR 339 M EAST and 267 M North to Post 1, claim P 1132675	CORE SIZE - BQ	HOLE NO.: T3-91 / PAGE NO.: 1
DATE HOLE STARTED: Sept 9, 1991 / DATE COMPLETED: Sept. 10, 1991	DATE LOGGED: Sept 11, 1991	LOGGED BY: WILLIAM C. KERR.	110.0M -45°			CLAIM NO.: 1132675	
PURPOSE: TO CROSS SECTION THE NORTH ZONE	SYSTEM: METRIC ✓ / IMPERIAL	SUBMITTED BY (Signature): [signature]				LOCATION: 0+92 N 48+90 E (NORTH GRID)	
						PROPERTY NAME: ENGLISH/ZAPATA PROJECT	

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION	PLANAR FEATURE ANGLE °	CORE SPECIMEN FOOTAGE †	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS PPB GOLD ORIG.	ASSAYS PPB GOLD RR	ASSAYS PPB GOLD REJ
0.0	1.0	CASING										
1.0	3.20	BASALT	Dark green blue in colour, moderately foliated at 050°, strong pervasive calcite alteration. Rusty oxidized near collar. Sharp lower contact at 035°									
3.20	3.50	SYENITE	Minor dyke, pink red, medium grain size, anhedritic.			1079	3.20	3.50	0.30	17		
3.50	8.54	INTERMEDIATE - FELSIC VOLCANIC	Pale cream, grey in colour, abundant fine grained sericite and quartz. Massive, not well foliated. Pervasive calcite and also as very thin crosscutting stringers. Locally no significant sulphides. Lower contact marked by 10 cm more siliceous alteration. Lower contact is irregular.									
			4.50-5.28 - very fine grained sericitized, contains 2 cm 45° bull quartz vein, and also crosscutting veinlets. Pyrite concentrated along margin			1080	4.50	5.28	0.78	45		
			7.75-8.54 - strongly oxidized locally, abundant kankarite (hematite?) 10 cm siliceous zone at lower contact.			1081	7.75	8.54	0.78	nil		
8.54	11.15	INTERMEDIATE - FELSIC INTRUSIVE	Medium grain size, very pale creamy pink in colour. Several prominent mafic clasts (included fragments?) Pervasive calcite, probably dolomite also. Very massive unit, rare sulphides.									

DIAMOND DRILL RECORD

NAME OF PROPERTY ENGLISH/ZAVITZ PROJECT

HOLE NO. T3-91 SHEET NO. 2

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION	PLANAR FEATURE ANGLE °	CORE SPECIMEN FOOTAGE ±	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS ± ORIG.	ASSAYS ± RR	ASSAYS ± REJ
			MAY be a phase of syen. fe]									
			8.54 9.84 - CHARACTER SAMPLE			1082	8.54	9.84	1.30	n.i		
11.15	12.76	INTERMEDIATE - FELSIC VOLCANIC	Similar to 3.50 to 8.54. Still relatively massive. Moderate calcite, probably ankerite. Irregular Lower Contact									
			11.67-12.24 - Several 1 cm Low angle quartz veinlets, minor pyrite			1083	11.67	12.24	0.57	42		
12.76	16.61	INTERMEDIATE FELSIC INTRUSIVE	Similar to 8.54-11.15. Very massive. Colour changes due to varying degrees of ankeritization and hematite staining. Sharp and irregular Lower contact, generally at 040°									
			12.76-13.81 - Several thin irregular quartz veinlets, 1% disseminated pyrite			1084	12.76	13.81	1.05	86	86	
			13.81-15.00 - several thin quartz-tourmaline (chlorite?) veinlets, otherwise barren.			1085	13.81	15.00	1.19	n.i		
			15.00-16.61 - Similar to 13.81 to 15.00			1086	15.00	16.61	1.61	n.i		
16.61	25.70	FELSIC VOLCANIC	Similar to 3.50 to 8.54, but becoming more foliated (increasing sericite) at 050-055°. Only weak calcite alteration. Becoming very strongly sericitic - takes on more of a green tinge.									
			16.61-17.44 - 10% thin cross cutting irregular quartz veinlets, no significant sulphides			1087	16.61	17.44	0.83	75		
			17.44-V19.01 - Several 3 to 10 cm. quartz veins, strongly chloritic and sericitized, no significant sulphides			1088	17.44	19.01	1.67	nil		
25.70	29.70	SYENITE	Variable color - pink to brick red, local strongly hematized sections. Very massive, rare cross cutting quartz stringers, maximum 1% disseminated pyrite									

DIAMOND DRILL RECORD

NAME OF PROPERTY ENGLISH / QUARTZ PROJECT

HOLE NO. T3-91 SHEET NO. 3

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION	PLANAR FEATURE ANGLE °	CORE SPECIMEN FOOTAGE °	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS ° ORIG.	ASSAYS ° RR	ASSAYS ° REJ
			25.70-27.00 - 1% pyrite rare quartz stringers in syenite			1089	25.70	27.00	1.30	117	-	-
			27.00-28.00 - similar to 25.70 to 27.00			1090	27.00	28.00	1.00	Nil		
			28.00-29.00 - more brick red in colour, several chloritic breccia zones			1091	28.00	29.00	1.00	161		
			29.00-29.70 - two 0.5 cm quartz veinlets at shallow angle, no significant sulphides			1092	29.00	29.70	0.70	27		
29.70	35.41	FELSIC TUFF	Variable banding but primarily at 045-060°. Locally a breccia with 3 cm size clasts. Moderate to strong and variable calcite alteration. No significant sulphides 34.18-35.41 - Wispy translucent silicification several minor quartz veinlets, 2% pyrite locally.			1093	34.18	35.41	1.23	51		
35.41	37.60	SYENITE	Massive, 10-15% irregular thin quartz veinlets + 2% pyrite. Good chilled contacts at 050° 35.41-36.61 - 5% thin quartz veinlets, maximum 1-2% pyrite			1094	35.41	36.61	1.22	69		
			36.61-37.60 - similar to 35.41 to 36.61			1095	36.61	37.60	0.99	82		
37.60	40.59	FELSIC TUFF	similar to 29.70 to 35.41									
40.59	43.14	MAFIC INTRUSIVE	Massive, dark blue, medium grain size, Local strong calcite alteration									
43.14	51.40	FELSIC TUFF	Similar to 29.70 to 35.41 Upper contact marked by 32 cm syenite dyke and accompanying brecciation. Still strong but sericitized. Contains more intermediate interbeds, possibly dykes, From 45.85 (diffuse contact) to 46.44 (contact sharp at 050) and From 46.80 to 48.00 (contacts sharp at 040°).									

DIAMOND DRILL RECORD

NAME OF PROPERTY ENGLISH/ZAUTH PROJECT

HOLE NO. T3-91 SHEET NO. 4

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION	PLANAR FEATURE ANGLE °	CORE SPECIMEN FOOTAGE ↑	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS ↑ ORIG.	ASSAYS ↑ RR	ASSAYS ↑ REJ
			43.14-44.00 - Syenite breccia zone with 25 cm grey translucent silicification, very minor green yellow sericite			1096	43.14	44.00	0.86	nil	-	
			45.85-46.44 - 0/15% random irregular thin 0.3 cm quartz veinlets with purple alteration rims and associated pyrite to 5%			1097	45.85	46.44	0.59	854		
			47.00-48.00 - Quartz-tourmaline veins, 1 cm at 040°, several thin crosscutting quartz stringers			1098	47.00	48.00	1.00	151		
			50.80-51.40 - green-yellow sericitization, strong foliation at 045°, no significant sulphides.			1099	50.80	51.40	0.60	nil		
51.40	71.34	BASALT	Locally tuffaceous, moderate calcite alteration. Fairly massive unit. Foliation at 040-045° where observed. Medium to grey green in color. Contains a small syenite dykelet and associated quartz veining at lower contact from 53.57 to 54.87. Also thin sense of more felsic sericitic material from 71.33 to 72.25									
			53.57-54.87 - Syenite and associated 30 cm quartz calcite flooding at lower contact			1100	53.57	54.87	1.30	75		
			64.20-65.09 - 30% quartz calcite veins & veinlets at 045°, rare sulphides			1101	64.20	65.09	0.89	nil	nil	
			71.32-72.27 - Local sericitization, 5% quartz veinlets, no significant sulphides			1170	70.32	71.32	1.00	21		
						1102	71.32	72.27	0.95	1738	1783	1886
						1171	72.27	73.00	0.73	10		
			75.00-75.50 - 40% quartz veinlets and veins at 050° minor brecciation minor pyrite. Local blue quartz.			1103	75.00	75.50	050	79		

DIAMOND DRILL RECORD

NAME OF PROPERTY ENGLISH / ZAVITZ PROJECT

HOLE NO. T3-91 SHEET NO. 5

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION	PLANAR FEATURE ANGLE °	CORE SPECIMEN FOOTAGE °	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS ° ORIG.	ASSAYS ° RR	ASSAYS ° REJ
			76.45 - 77.00 - Similar to 75.00 to 75.50			1104	76.45	77.00	0.55	nil		
			77.00 - 78.00 - Similar to 75.00 to 75.50, 30% quartz veinlets			1105	77.00	78.00	1.00	206		
			78.00 - 79.34 - 50% quartz veining predominently at 045°, very trace pyrite			1106	78.00	79.34	1.34	nil		
79.34	80.48	FELSITE	Pale pink in color, very fine grain size, siliceous, 10% irregular quartz veins and veinlets, only minor pyrite			1107	79.34	80.48	1.14	693		
80.48	84.40	BASALT	Similar to 51.40 to 79.34 - strongly hematized lower contact, sharp at 045°									
			80.48 - 81.00 - 15% brecciated quartz veinlets, rare pyrite			1108	80.48	81.00	0.52	3134	3120	
			81.58 - 82.00 - 15 cm quartz veining at 040°, rare pyrite			1172	81.00	81.58	0.58	34		
			83.00 - 84.40 - strongly hematized and semi silicified zone 10% thin quartz veinlets, pyrite to 1% locally			1109	81.58	82.00	0.42	48		
						1178	82.00	83.00	1.00	NIL		
						1110	83.00	84.40	1.40	nil		
84.40	86.35	INTERMEDIATE FELSIC INTRUSIVE	Similar to 3.50 to 8.54. Very massive, medium grain size, very rare quartz veins and occasional mafic clasts. Irregular lower contact.			1111	84.40	86.35	1.95	75		
86.35	91.00	INTERMEDIATE VOLCANIC	Pale creamy grey in colour, locally bleached. Red/Foliation at 045 - 060°. Very weak calcite, no significant sulphides. Irregular lower contact									
			86.35 - 88.47 - 40% irregular quartz veinlets near upper contact, well foliated at 030°			1112	86.35	88.47	1.12	115		
91.00	91.27	FELDSPAR PORPHYRY	Good clear crystal form, 1% py, several thin quartz veinlets			1113	91.00	91.27	020	79		

DIAMOND DRILL RECORD

NAME OF PROPERTY ENGLISH/ZAUNZ PROJECT

HOLE NO. T3-91 SHEET NO. 6

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION	PLANAR FEATURE ANGLE °	CORE SPECIMEN FOOTAGE ↓	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS ↓ ORIG.	ASSAYS ↓ RR	ASSAYS ↓ REJ
91.27	92.00	INTERMEDIATE VOLCANIC	Similar to 86.35 to 91.00			1114	91.27	92.00	0.63	24	-	
92.00	96.06	FELDSPAR PORPHYRY	Similar to 91.00 to 91.20. Very diffuse crystal outlines now but still same unit? Becoming very fine grained aphanitic progressively towards Lower contact, which is hard at 0.5 50.									
			92.00-93.00 - 10% quartz veinlets, minor pyrite			1115	92.00	93.00	1.00	79		
			93.00-94.00 Similar to 92.00 to 93.00			1116	93.00	94.00	1.00	76		
			94.00-95.00 - 5% quartz veins Wisp translucent silicification			1117	94.00	95.00	1.00	93		
			95.00-96.06 - very fine grain size, almost cherty appearance			1118	95.00	96.06	1.06	48		
96.06	99.47	INTERMEDIATE VOLCANIC	Similar to 86.35 to 91.00. Contains several medium grained, mafic dykes, exhibiting grada tional or bed contacts. Foliation at 060°									
			96.06 96.80 - FLANK SAMPLE- includes 45 cm mafic dyke at Lower Contact			1119	96.06	96.80	0.74	nil		
99.47	100.32	INTERMEDIATE FELSIC DYKE ?	Dull red brown, massive, fine to medium grain size qz. ie siliceous. No carbonate present.			1120	99.47	100.32	0.85	14		
100.32	108.85	BASALT	Only weak calcite alteration, well foliated at 045° Locally several zones of more intermediate volcanics,									
			104.00-104.71 - 5% irregular quartz veinlets.			1121	104.00	104.71	0.71	nil		
108.85	109.85	INTERMEDIATE FELSIC DYKE	Similar to 99.47-100.32.			1122	108.85	109.85	1.00	nil		

DIAMOND DRILL RECORD

NAME OF PROPERTY ENGLISH/ZAWITZ PROJECT

HOLE NO. T3-91 SHEET NO. 7

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION	PLANAR FEATURE ANGLE °	CORE SPECIMEN FOOTAGE ↓	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS ↓ ORIG.	ASSAYS ↓ RR	ASSAYS ↓ REJ
108.85	110.00	BASALT	Similar to 100.32 - 108.85									
	110.00	END OF HOLE	CORE STORED AT TIMMINS DRILL CORE LIBRARY, TIMMINS, ONTARIO									
			The core was lamped - Nothing of interest.									
			A 0.6 Metre length of BW casing was left in the hole.									

Tintina Mines Limited

DRILLING COMPANY: NOREX DRILLING Limited	COLLAR ELEVATION:	AZIMUTH: 295°	TOTAL FOOTAGE: 50.0M	DIP OF HOLE AT: collar -45° / 50.0M -44°	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM: From collar, 60M West and 45M south to post 3, claim 1158661	CORE SIZE - BQ	HOLE NO.: T4-91 / PAGE NO.: 1
DATE HOLE STARTED: Sept 12/91 / DATE COMPLETED: Sept 13/1991	DATE LOGGED: Sept 16, 1991	LOGGED BY: WILLIAM C KERR					CLAIM NO.: 1158661
PURPOSE: To Test "E330" showing and coincident IP ANOMALY	SYSTEM: METRIC / IMPERIAL	SUBMITTED BY (Signature):				LOCATION: 43+00N 5+55E (ESSO GRID)	PROPERTY NAME: ENGLISH/ZANTE PROJECT

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION	PLANAR FEATURE ANGLE °	CORE SPECIMEN FOOTAGE +	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS PPB GOLD ORIG.	ASSAYS PPB GOLD RR	ASSAYS PPB GOLD REJ
0.0	2.0	CASING,										
2.0	12.0	MAFIC-INTERMEDIATE DYKE	Massive, predominently medium blue grey in colour, several more chloritic coarser grained sections. No carbonate present. Cut by 10% quartz veinlets, up to 2 cm wide. Vein attitude is irregular but predominently at 035° Quartz veins have associated pyrite rich alteration rims. Several veins have purplish tinge. Very sharp well defined lower contact at 090°									
			2.0-3.0 - 15% irregular quartz veinlets with associated heavy pyrite running veins in country rock			1123	2.0	3.0	1.0	374		
			3.0-4.0 - similar to 2.0-3.0			1124	3.0	4.0	1.0	487	525	
			4.0-5.0 - Similar to 2.0-3.0, 10% quartz veinlets			1125	4.0	5.0	1.0	185		
			5.0-6.0 - one 8 cm quartz veinlet at 035°, disseminated pyrite to 10% at margins.			1126	5.0	6.0	1.0	250		
			6.0-6.62 - Flume sample, only minor quartz veinlets.			1127	6.0	6.62	0.62	99		
			9.61 11.00 Several areas of irregular quartz veining and brecciation with associated heavy pyrite mineralization. local pale colored quartz.			1128	9.61	11.00	1.39	357	250	
			11.00-12.00 Several thin 1-2 cm quartz veinlets with minor pyrite			1129	11.00	12.00	1.00	120		
12.00	50.0	BASALT KOMATIITE	Very soft, massive, dark green, medium									

DIAMOND DRILL RECORD

NAME OF PROPERTY ENGLISH/ZAYITE PROJECT

HOLE NO. T4-91 SHEET NO. 2

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION	PLANAR FEATURE ANGLE °	CORE SPECIMEN FOOTAGE +	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS + ORIG.	ASSAYS + RR	ASSAYS + REJ
			grain size. Pervasive fine grained Carbonate and qz foliation parallel veinlets throughout the unit. Occasional very coarse grain size locally. Several areas especially ufground 17.0 metres have symmetrical "zoned selvage" type boundaries - probably polysuturing observed on surface. Only minor rare manposite alteration usually associated with quartz veins.									
			12.0- 13.0 - 10% quartz and quartz carbonate veinlets at high angles strongly foliated near contact at 080°.			1130	12.0	13.0	1.0	7		
			13.0- 14.0 - 15% barren quartz and quartz carbonate veinlets and veins, predominently at 078°			1131	13.0	14.0	1.0	nil		
			16.0- 17.0 - 20% irregular quartz carbonate veinlets, no pyrite.			1132	16.0	17.0	1.0	nil		
			17.85- 18.50 - 15% rusty oxidized thin quartz carbonate veinlets, no significant sulphides			1133	17.85	18.50	0.65	nil		
			20.0- 20.067 - 20% irregular quartz carbonate veinlets minor manposite no sulphides			1134	20.0	20.67	0.67	nil		
			21.37- 22.26 - Two - 4 cm quartz manposite veins at 050° and 075°, no significant sulphides.			1135	21.37	22.26	0.89	nil		
			23.0- 24.0 - 15% irregular quartz carbonate alteration, minor manposite locally.			1136	23.00	24.00	1.0	Nil		
			26.25- 27.17 Syenite - Dike dyke. Very coarse grain size, poor in quartz pink white in colour. 40% pink felspars, with 1% disseminated pyrite. Upper contact sharp at 040° Lower contact sharp at 090°			1137	2625	2717	092	72	106	
			30.00- 31.00 - 30% irregular quartz manposite veining, 1% pyrite			1138	30.00	31.00	1.00	nil		

Occasional

DIAMOND DRILL RECORD

NAME OF PROPERTY ENGLISH / ZANITZ PROJECT

HOLE NO. T4-91 SHEET NO. 3

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION	PLANAR FEATURE ANGLE °	CORE SPECIMEN FOOTAGE ↓	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS ↓ ORIG.	ASSAYS ↓ RR	ASSAYS ↓ REJ
			32.00-32.60- 15% crosscutting quartz and quartz carbonate veinlets, no significant sulphides.			1139	32.00	32.60	0.60	nil		
			35.00-35.45 - SYENITE - Very fine to fine grain size pink in colour cut by 15% quartz veinlets with 5% disseminated pyrite. Contacts not positively observed, but probably at 080°			1140	35.00	35.45	0.45	154		
			35.45-36.56 - 25% quartz veins and veinlets predominently at 050° minor maripositie with pyrite			1141	35.45	36.56	1.11	nil		
			38.00-39.00- 5% to 10% irregular oxidized quartz and quartz carbonate veinlets & local brecciation			1142	38.00	39.00	1.00	nil		
			40.0-41.0 - 15% quartz and quartz carbonate veinlets generally at 065-070°. No significant sulphides.			1143	40.0	41.0	1.0	nil		
						1144	41.00	41.62	0.62	nil		
			41.62-42.40 SYENITE - Fine grain size, pink with 5% disseminated pyrite. Hematized contacts also locally ankerite alteration. Lower contact for 80 cm into ultramafic is pyrite to 20%.			1145	41.62	42.53	0.91	86		
			42.53-43.29- FAULT - strongly chloritic Local strong clay gouge. Only minor pyrite.			1146	42.53	43.29	0.76	34		
			46.00-46.67- strong chloritic section 4% quartz - ankerite			1147	46.00	46.67	0.67	nil		
	500	END OF HOLE										

- CORE STORED AT THE TIMMINS DRILL CORE LIBRARY, TIMMINS, Ontario
- The core was sampled - Nothing of interest.
- A 0.6 Metre length of RIB [illegible] hole

Tintina Mines Limited

DRILLING COMPANY: NORD DRILLING LIMITED	COLLAR ELEVATION	AZIMUTH: 295°	TOTAL FOOTAGE: 50.0M	DIP OF HOLE AT: collar -45°	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM: From collar, 109 M. west and 137 M. south to post 3, claim P1158661	CORE SIZE - BQ	HOLE NO.: T5-91 / PAGE NO.: 1
DATE HOLE STARTED: Sept 13/1991 / DATE COMPLETED: Sept 14/1991	DATE LOGGED: Sept 16/17 1991	LOGGED BY: WILLIAM C KERR	50M ft -45°			LOCATION: 44+00N 5+50E ESSO GRID	CLAIM NO.: 1158661
PURPOSE: To Test Lithogeochemical anomaly and Coincident IP anomaly	SYSTEM: METRIC ✓ / IMPERIAL	SUBMITTED BY (Signature)	ft			PROPERTY NAME: ENGLISH/LEGUTE Project	

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION	PLANAR FEATURE ANGLE °	CORE SPECIMEN FOOTAGE +	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS PPB GOLD ORIG.	ASSAYS PPB GOLD RR	ASSAYS PPB GOLD REJ
0.0	2.0	CASING										
2.0	7.72	BASALT KOMATIITE	Pale medium green in colour, medium to coarse grain size very soft. Extensive ankerite/ pressure. Generally at least 10% quartz carbonate stringers and foliation parallel veinlets. Several areas of manganese to near quartz vein selvedges. Rims. Only very minor sulphides. Gradational, indistinct lower contact									
7.72	19.53	MAFIC-INTERMEDIATE DYKE	Similar to 2.0 to 12.0 in hole T4-91. Generally fine to medium grain size, medium green to grey green in colour, soft and moderately calcareous. 5% quartz veins at generally shallow angles some parallel to core axis. Several veins are pyritized to 40% especially to vein boundaries. 12.0 matrix - veinlets are galena bearing in rare splashes. Local veins accompanied by pinkish alteration. Indistinct lower contact.									
			8.0-9.0 - 20 cm white quartz vein at 0x5° with local semi-massive pyrite, also thin quartz veinlets with associated 20% pyrite			1148	8.0	9.0	1.0	593	737	
			9.0-10.0 - 1 to 2% disseminated pyrite, Locally 7% near vein margins.			1149	9.0	10.0	1.0	994		
			10.0-11.0 - Client sample - 1% disseminated pyrite			1150	10.0	11.0	1.0			
			11.0-12.0 - Several pinkish vein bleached			1151	11.0	12.0	1.0	n.s. 192		

DIAMOND DRILL RECORD

NAME OF PROPERTY ENGLISH/ZAYATZ PROJECT

HOLE NO. T5-91 SHEET NO. 2

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION	PLANAR FEATURE ANGLE °	CORE SPECIMEN FOOTAGE ↓	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS ↓ ORIG.	ASSAYS ↓ RR	ASSAYS ↓ REJ
			Silicified zones with 7-8% disseminated pyrite. Very strongly silicified 10% pyrite at lower contact of sample. Numerous splashes galena									
			12.0-13.0 - 50 cm irregular quartz veins with 20% disseminated and semi-massive pyrite locally. Occasional splash galena			1152	12.0	13.0	1.0	713	682	
			13.0-14.0 - 2 to 3% disseminated pyrite, one 2 cm quartz vein near Lower contact			1153	13.0	14.0	1.0	148		
			14.0-15.0 - stockwork type coarse pyrite cubes near upper contact over 20 cm.			1154	14.0	15.0	1.0	206		
			15.0-16.0 - Flank sample only - 5 cm quartz vein at lower contact only minor pyrite			1155	15.0	16.0	1.0	43		
			16.0-17.0 - More siliceous portion of dyke. 5% cross cutting Quartz veinlets with 5 cm semi-massive pyrite at contact.			1156	16.0	17.0	1.0	588		
			17.0-18.0 - 5% thin quartz veinlets parallel to core axis with abundant pyrite			1157	17.0	18.0	1.0	319		
17.53	50.0	BASALT KOMATIITE	similar to 2.0 to 7.72.									
			20.0-21.0 - 40% pervasive garnet to and foliation parallel (at 080°) thin veinlets - Characteristic sample.			1158	20.0	21.0	1.0	NIL		
			29.08-30.73 SYENITE DYKE Fine grain size massive, Pink with 10% chloritized flecks to 1 cm size. Rare quartz veinlets, pyrite to 1% Locally. Indistinct contacts.			1159	29.08	30.00	0.92	89		
						1160	30.00	30.73	0.73	75		

DIAMOND DRILL RECORD

NAME OF PROPERTY ENGLISH/ZAVITZ PROJECT

HOLE NO. T5-91 SHEET NO. 3

FOOTAGE FROM	FOOTAGE TO	ROCK TYPE	DESCRIPTION	PLANAR FEATURE ANGLE *	CORE SPECIMEN FOOTAGE ↓	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM	SAMPLE FOOTAGE TO	SAMPLE LENGTH	ASSAYS ↓ ORIG.	ASSAYS ↓ RR	ASSAYS ↓ REJ
			30.73-31.75- PLANK sample - Poly sutured Komatiite.			1161	30.73	31.75	1.02	n.i		
			31.75-32.45 SYENITE DYKE, similar to 29.98 to 30.73. sharp contacts at 045°			1162	31.75	32.45	0.70	n.i		
			35.81-37.00 - brecciated zone, cemented by carbonate			1163	35.81	37.00	1.19	n.i		
			37.00-38.50 - PLANK sample - several chloritic mud. slips, 40° Ankerite, 2 cm white quartz vein at lower contact			1164	37.00	38.50	1.50	n.i		
			38.50-40.18- SYENITE DYKE - Similar to 26.25 to 27.17 in T4-91. (Coarser grain variety)			1165	38.50	39.30	0.80	n.i		
						1166	39.30	40.18	0.88	n.i		
			46.25-47.00 SYENITE - Fine grain size, 2% pyrite Locally, silicified very fine grained bleached contacts.			1168	46.25	47.00	0.75	n.i		
						1169	47.00	47.18	0.18	n.i		
			45.00-46.25 - strongly brecciated zone, cemented by ankerite. 6 cm quartz vein at 045° at Lower contact, mino- maripasite.			1167	45.00	46.25	1.25	34	31	
			- CORE STORED AT THE Timmins DRILL CORE LIBRARY - TIMMINS, ONTARIO									
			- THE CORE WAS SAMPLED - NOTHING OF INTEREST.									
			- A 6 metre length of BW casing was left in the hole.									

APPENDIX

D

APPENDIX

E

REFERENCES:

Esso Minerals Canada, Bridge, D. A., 1988:
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Chevron Canada Resources Limited, Tihor, L., 1984:
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Granges Exploration Canada AB, Watson, D., 1974:
Airborne Electromagnetic Survey by Questor Surveys Limited for Granges Exploration Canada AB, English Township Area. Assessment Files, Ministry of Northern Development and Mines, Timmins, Ontario.

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William C. Kerr
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1010 Michener Boulevard
P.O. Box 6165 PMS
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Ontario

Ministry of Northern Development and Mines

Ministère du Développement du Nord et des Mines

Geoscience Approvals Section
Mining Lands Branch
159 Cedar Street, 4th Floor
Sudbury, Ontario
P3E 6A5

Toll Free: 1-800-465-3880
Telephone: (705) 670-7264
Fax: (705) 670-7262

Our File: 2.14486
Your File: W9160-00270

Mining Recorder
Ministry of Northern Development
and Mines
60 Wilson Avenue
Timmins, Ontario
P24 2S7

March 16, 1992

Dear Sir:

SUBJECT: APPROVAL OF ASSESSMENT WORK SUBMITTED ON MINING CLAIM P 1158661 ET AL. ENGLISH AND ZAVITE TWPS.

The assessment work credits for the Geophysics Survey, section 14, Assays section 17, reinterpretation of Airborne Geophysics, section 18(9) Mining Act Regulations, submitted on the above work report have been approved as of March 11, 1992.

Please indicate this approval on your records.

Yours sincerely,

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

TAA/jl
Enclosures:

cc: Assessment Files Office
Toronto, Ontario

Resident Geologist
Timmins, Ontario

Ministry of Northern Development and Mines

Ontario

Report of Work Conducted After Recording Claim

Mining Act

Transaction Number: W9160.00270

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.

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

42A03SE0260 2.14486 ZAVITZ

900

Recorded Holder(s)	Client No.
TINTINA MINES LIMITED	202167
Address	**Telephone No.**
SUITE 804, 920 YONGE STREET, TORONTO, ONT, M4W.3C7	(416)929-2944 FAX.929-2945
Mining Division	**Township/Area**
PORCUPINE	ENGLISH & ZAVITZ TWP.
M or G Plan No.	
G3938 & M1189	

Dates Work Performed From: FEB. 1/91 To: NOV 30/91

Work Performed (Check One Work Group Only)

	Work Group	Type
X	Geotechnical Survey	MAPPING, PROSPECTING & SAMPLING ON GRID; AIRBORNE GEOTEM REINTERP.
	Physical Work, Including Drilling	
	Rehabilitation	
	Other Authorized Work	
	Assays	
	Assignment from Reserve	

RECEIVED
MAR 03 1992
MINING LANDS SECTION

RECORDED
DEC 17 1991
Receipt

Total Assessment Work Claimed on the Attached Statement of Costs $ 46,466.

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
GEORGEX EXPLORATION CONTRACTORS.(L/C)	953 RAILWAY ST. TIMMINS, ONT. P4N.2P4.
GEODATEM AIRBORNE CONSULTANTS	28 WESTVIEW CR., PALGRAVE, ONT. L0N.1P0
SWASTIKA LABORATORIES	BOX 10, SWASTIKA, ONTARIO, P0K 1T0
W.KERR EXPLOITS EXPLORATION CORP.	BOX 6165 PMS, SOUTH PORCUPINE, ONT. P0N.1K0 → REPORT CO-AUTHOR
A. ALI (INDEPENDANT CONTRACT GEOLOGIST)	#207 - 5 PARAGUAY FOREST DR. WILLOWDALE, ONT. M2J1L2
S.SABAG (DEMIN MANAGEMENT CORP.)	804-920 YONGE ST., TORONTO, ONT. M4W.3C7 → REPORT CO-AUTHOR

(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	Recorded Holder or Agent (Signature)
	DEC 16/91	SABAG. S.F.SABAG V.P. per. TINTINA MINES

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: S.F. SABAG, SUITE 804, 920 YONGE ST. TORONTO, ONT. M4W.3C7

Telephone No.	Date	Certified By (Signature)
(416)929-2944	DEC 16/91	SABAG.

For Office Use Only

Total Value Cr. Recorded	Date Recorded	Mining Recorder	Received
$46,466.00	DEC. 17th/91		RECEIVED DEC 17 1991
	Deemed Approval Date: MARCH 16th/92	Date Approved	
	Date Notice for Amendments Sent		

0241 (03/91)

Ministry of Northern Development and Mines

Ontario

Report of Work Conducted After Recording Claim

Mining Act

Transaction Number: 11/e.

COPY

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) 670-7284.

Instructions:
- Please type or print and submit in duplicate.
- Refer to the Mining Act and Regulations for requirements of filing assessment work or consult the Mining Recorder.
- A separate copy of this form must be completed for each Work Group.
- Technical reports and maps must accompany this form in duplicate.
- A sketch, showing the claims the work is assigned to, must accompany this form.

Recorded Holder(s): TINTINA MINES LIMITED		Client No.
Address: SUITE 804, 920 YONGE STREET, TORONTO, ONT, M4W.3C7		Telephone No. (416)927-1944 FAX 927-1945
Mining Division: PORCUPINE	Township/Area: ENGLISH & ZAVITZ TWP.	M or G Plan No.: G3938 & M1189
Date Work Performed: From: FEB 1/91 To: NOV 30/91	NOTE: FOR CLAIMS 1176591 TO 1176597 WORK DATE IS MARCH 15/91 TO NOV 30/91	

Work Performed (Check One Work Group Only)

	Work Group	Type
X	Geotechnical Survey	MAPPING, PROSPECTING & SAMPLING ON GRID; AIRBORNE GEOTEM REINTERP.
	Physical Work, Including Drilling	
	Rehabilitation	
	Other Authorized Work	
	Assays	
	Assignment from Reserve	

Total Assessment Work Claimed on the Attached Statement of Costs $ 46,446.

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
GEORGEX EXPLORATION CONTRACTORS (LTD)	353 RAILWAY ST., TIMMINS ONT. P4N.2P4.
GEODATEM AIRBORNE CONSULTANTS	28 WESTVIEW CR., PALGRAVE, ONT. L0N.1P0
SWASTIKA LABORATORIES	BOX 10, SWASTIKA, ONTARIO, P0K 1T0
W.KERR. EXPLOITS EXPLORATION CORP.	BOX 6165 PMS, SOUTH PORCUPINE, ONT. P0N.1R0 → REPORT CO-AUTHOR
A. ALI. (INDEPENDENT CONTRACT GEOLOGIST)	UNIT - 5 PARKWAY FOREST DR. WILLOWDALE, ONT. M2J1L2
S. SABAG (DEMIN MANAGEMENT CORP.)	804-920 YONGE ST., TORONTO, ONT. M4W.3C7 → REPORT CO-AUTHOR

(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 16/91	Recorded Holder or Agent (Signature): S. SABAG. S.F. SABAG V.P. per. TINTINA MINES

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: S.F. SABAG, SUITE 804, 920 YONGE ST. TORONTO, ONT. M4W.3C7		
Telephone No.: (416)929-1944	Date: DEC 16/91	Certified By (Signature): SABAG.

For Office Use Only

Total Value Cr. Recorded	Date Recorded	Mining Recorder	Received Stamp
	Deemed Approval Date	Date Approved	
	Date Notice for Amendments Sent		

Attachment A: Geotechnical Work

13-Dec-91

TINTI[illegible] MINES LIMITED: English-Zavitz Project Assessment Work Report

Work Report Number for Applying Reserves	Claim Number	Number Of Claim Units	Value Of Assessment Work Done On This Claim	Value Applied To This Claim	Value Assigned From This Claim	Reserve: Work To Be Claimed At A Future Date
	1156661	1	664 663.80	2,000.00		
	1156662	1	663.80	2,000.00		
	1156665	1	663.80	2,000.00		
	1176599	1	663.80	2,000.00		
	1176598	1	663.80	2,000.00		
	1156664	1	663.80	2,000.00		
	1156666	1	663.80	2,000.00		
	1170738	1	663.80	2,000.00		
	1156667	1	663.80	2,000.00		
	1156669	1	663.80	2,000.00		
	1170740	1	663.80	2,000.00		
	1156668	1	663.80	1,200.00		
	1155067	1	663.80	400.00	198 197.80	86.00
	1155068	1	663.80	400.00	264 263.80	
	1155069	1	663.80	400.00	263.80	
	1156401	1	663.80	400.00	263.80	
	1156402	1	663.80	400.00	263.80	
	1156403	1	663.80	400.00	263.80	
	1156404	1	663.80	400.00	263.80	
	1156663	1	663.80	400.00	263.80	
	1156670	1	663.80	400.00	263.80	
	1170739	1	663.80	400.00	263.80	
	1170741	1	663.80	400.00	263.80	
	1170742	1	663.80	400.00	263.80	
	1170743	1	663.80	400.00	263.80	
	1170744	1	663.80	400.00	263.80	
	1170745	1	663.80	400.00	263.80	
	1170746	1	663.80	400.00	263.80	
	1170747	1	663.80	400.00	263.80	
	1170789	1	663.80	400.00	263.80	
	1170790	1	663.80	400.00	263.80	
	1170791	1	663.80	400.00	263.80	
	1171659	1	663.80	400.00	263.80	
	1171660	1	663.80	400.00	263.80	
	1171661	1	663.80	400.00	263.80	
	1171662	1	663.80	400.00	263.80	
	1171663	1	663.80	400.00	263.80	
	1171664	1	663.80	400.00	263.80	
	1171665	1	663.80	400.00	263.80	
	1171666	1	663.80	400.00	263.80	
	1176591	1	663.80	400.00	263.80	
	1176592	1	663.80	400.00	263.80	
	1176593	1	663.80	400.00	263.80	
	1176594	1	663.80	400.00	263.80	
	1176595	1	663.80	400.00	263.80	
	1176596	1	663.80	400.00	263.80	
	1176597	1	663.80	400.00	263.80	
	1171667	1	663.80	400.00	263.80	
	1171668	1	663.80	400.00	263.80	
	1171669	1	663.80	400.00	263.80	
	1171670	1	663.80	400.00	263.80	
	1171671	1	663.80	400.00	263.80	
	1171672	1	663.80	400.00	263.80	
	1171673	1	663.80	400.00	263.80	
	1171674	1	663.80	400.00	263.80	
	1171644	1	663.80	400.00	263.80	
	1171645	1	663.80	400.00	263.80	
	1171646	1	663.80	400.00	263.80	
	1171647	1	663.80	400.00	263.80	
	1171648	1	663.80	400.00	263.80	
	1171649	1	663.80	400.00	263.80	
	1171650	1	663.80	400.00	263.80	
	1171651	1	663.80	400.00	263.80	
	1171652	1	663.80	400.00	263.80	
	1171653	1	663.80	400.00	263.80	
	1171654	1	663.80	400.00	263.80	
	1171655	1	663.80	400.00	263.80	
	1171656	1	663.80	400.00	263.80	
	1171657	1	663.80	400.00	263.80	
	1171658	1	650 ~~663.80~~	400.00	250 ~~263.80~~	
	70		46,466.00	46,400.00	15,232	86.00
	Total Number Claims		Total Value Work Done	Total Value Work Applied	Total Assigned From	Total Reserve

DATA
Dec 16/91

Ministry of Northern Development and Mines

Ontario

Ministère du Développement du Nord et des mines

Statement of Costs for Assessment Credit

État des coûts aux fins du crédit d'évaluation

Mining Act/Loi sur les mines

Transaction No./N° de transaction: W9160.00570

Personal information collected on this form is obtained under the authority of the **Mining Act**. This information will be used to maintain a record and ongoing status of the mining claim(s). Questions about this collection should be directed to the Provincial Manager, Minings Lands, Ministry of Northern Development and Mines, 4th Floor, 159 Cedar Street, Sudbury, Ontario P3E 6A5, telephone (705) 670-7264.

Les renseignements personnels contenus dans la présente formule sont recueillis en vertu de la **Loi sur les mines** et serviront à tenir à jour un registre des concessions minières. Adresser toute quesiton sur la collece de ces renseignements au chef provincial des terrains miniers, ministère du Développement du Nord et des Mines, 159, rue Cedar, 4e 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		
	Field Supervision Supervision sur le terrain		
Contractor's and Consultant's Fees Droits de l'entrepreneur et de l'expert-conseil	Type LINECUTTING	1,030.00	
	AIRBORNE REINTERP.	1,900.00	
	ASSAY LAB	3,325.25	
	CONSULTANTS ON CONTRACT	30,480.06	36,735.31
Supplies Used Fournitures utilisées	Type PRINTING	578.79	
	GENERAL SUPPLIES	2,517.22	
	FUEL	410.85	
			3,506.86
Equipment Rental Location de matériel	Type ATCO FIELD PORTABLE	511.50	
	CAMPGEAR & EQUIPMENT	1,200.00	
			1,711.50
	Total Direct Costs Total des coûts directs		41,953.67

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 TRUCK RENTAL	887.42	
	SHIPPING/FREIGHT	418.87	
			1,306.29
Food and Lodging Nourriture et hébergement	LODGING/FOOD & GEN. TRAVEL	3,206.10	3,206.10
Mobilization and Demobilization Mobilisation et démobilisation			
	Sub Total of Indirect Costs Total partiel des coûts indirects		4,512.39
	Amount Allowable (not greater than 20% of Direct Costs) Montant admissible (n'excédant pas 20 % des coûts directs)		4,512.39
	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)**		46,466.06

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 soumis.

RECORDED
DEC 17 1991
Receipt

Filing Discounts

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

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

Total Value of Assessment Credit	Total Assessment Claimed
× 0.50 =	

Remises pour dépôt

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

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

Valeur totale du crédit d'évaluation	Évaluation 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 VICE PRESIDENT (Recorded Holder, Agent, Position in Company) I am authorized

to make this certification

Attestation de l'état des coûts

J'atteste par la présente :
que les montants indiqués sont le plus exact possible et que ces dépenses ont été engagées pour effectuer les travaux d'évaluation sur les terrains indiqués dans la formule de rapport de travail ci-joint.

Et qu'à titre de _____ (titulaire enregistré, représentant, poste occupé dans la compagnie) je suis autorisé

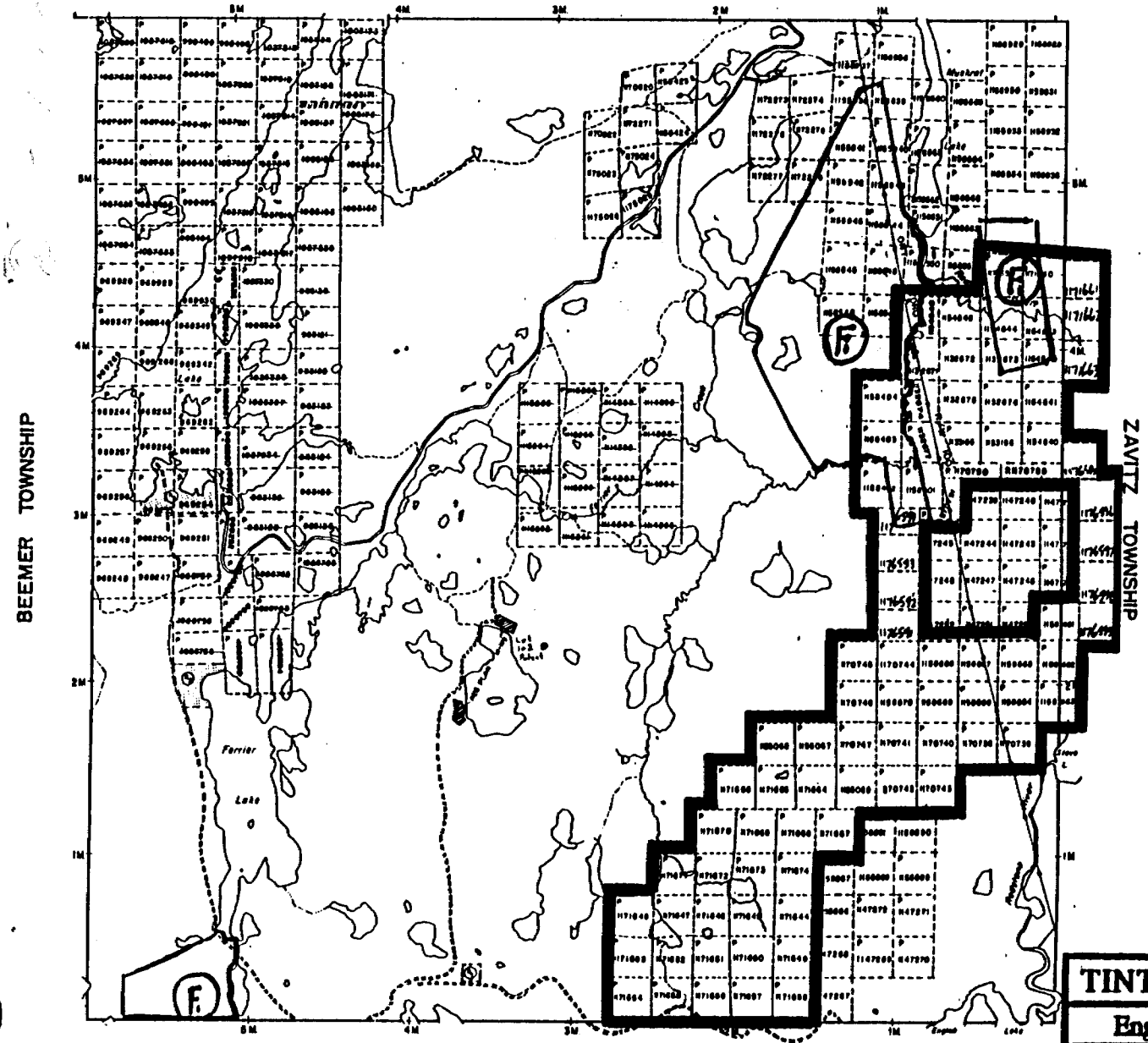
à faire cette attestation.

Signature S.FSABAG
S.FSABAG pour TINTINA MINES

Date DEC 16/91

0212 (04/91)

Nota : Dans cette formule, lorsqu'il désigne des personnes, le masculin est utilisé au sens neutre.



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	∝
RESERVATION	⊖
CANCELLED	●
SAND & GRAVEL	⊖

SCALE: 1 INCH = 40 CHAINS

FEET 0 1000 2000 4000 6000 8000

METRES 0 500 1000 (1 KM) 2000 (2 KM)

THIS TWP IS SUBJECT TO FOREST ACTIVITIES IN 1990. FURTHER INFORMATION AVAILABLE ON FILE. (F)

TOWNSHIP

ENGLISH

M.N.R. ADMINISTRATIVE DISTRICT

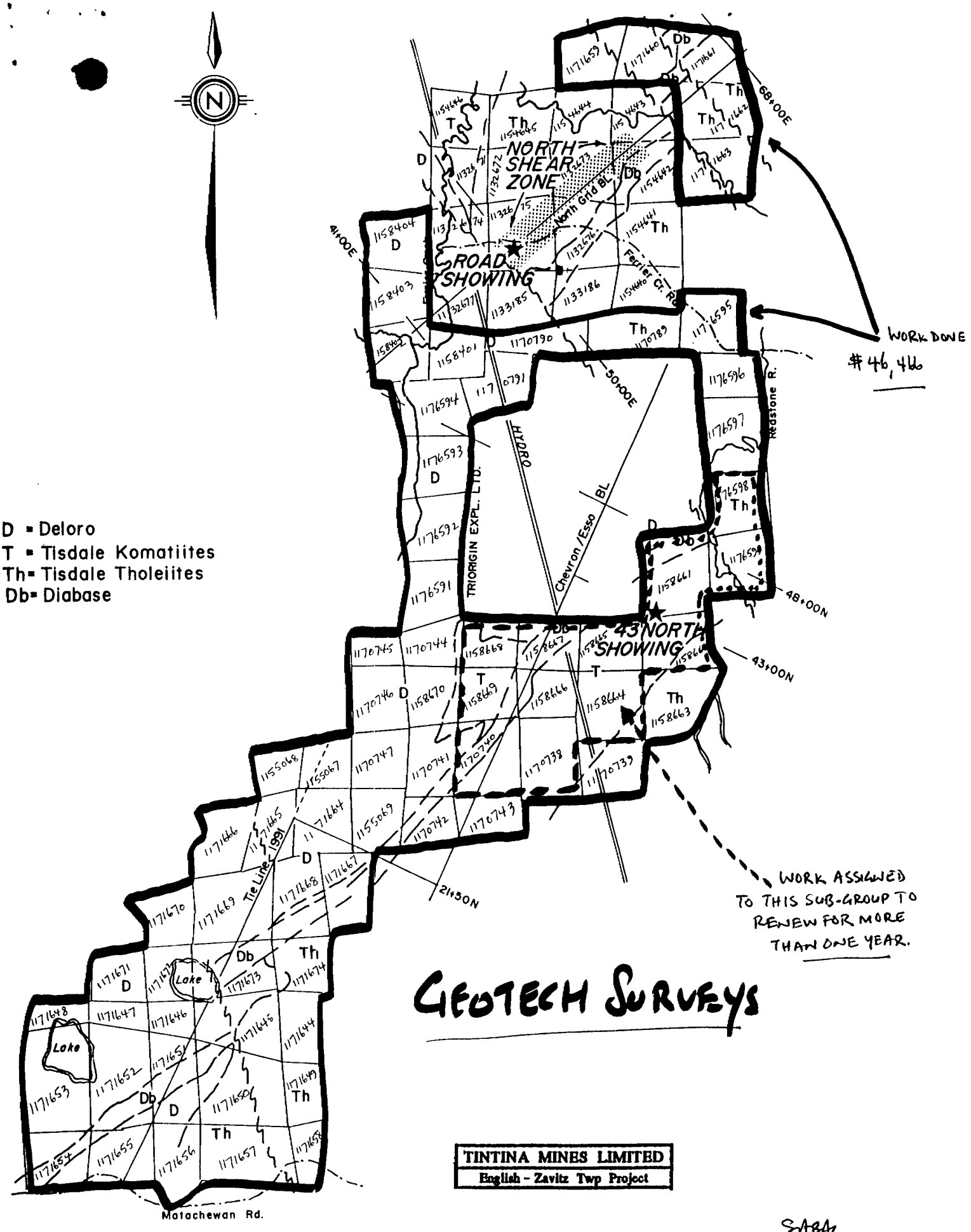
TIMMINS

MINING DIVISION

PORCUPINE

TINTINA MINES LIMITED

English - Zavitz Twp Project


N
D = Deloro
T = Tisdale Komatiites
Th = Tisdale Tholeiites
Db = Diabase
NORTH SHEAR ZONE
North Grid BL
ROAD SHOWING
Ferrier Ch. Rd.
68+00E
41+00E
50+00E
WORK DONE
#46, 46
Redstone R.
HYDRO
TRIORGIN EXPL. LTD.
Chevron/Esso BL
48+00N
43 NORTH SHOWING
43+00N
21+50N
Tie Line 1991
Lake
Matachewan Rd.
WORK ASSIGNED TO THIS SUB-GROUP TO RENEW FOR MORE THAN ONE YEAR.
GEOTECH SURVEYS
TINTINA MINES LIMITED
English - Zavitz Twp Project
SABAG.
Dec 16/91

2.14466

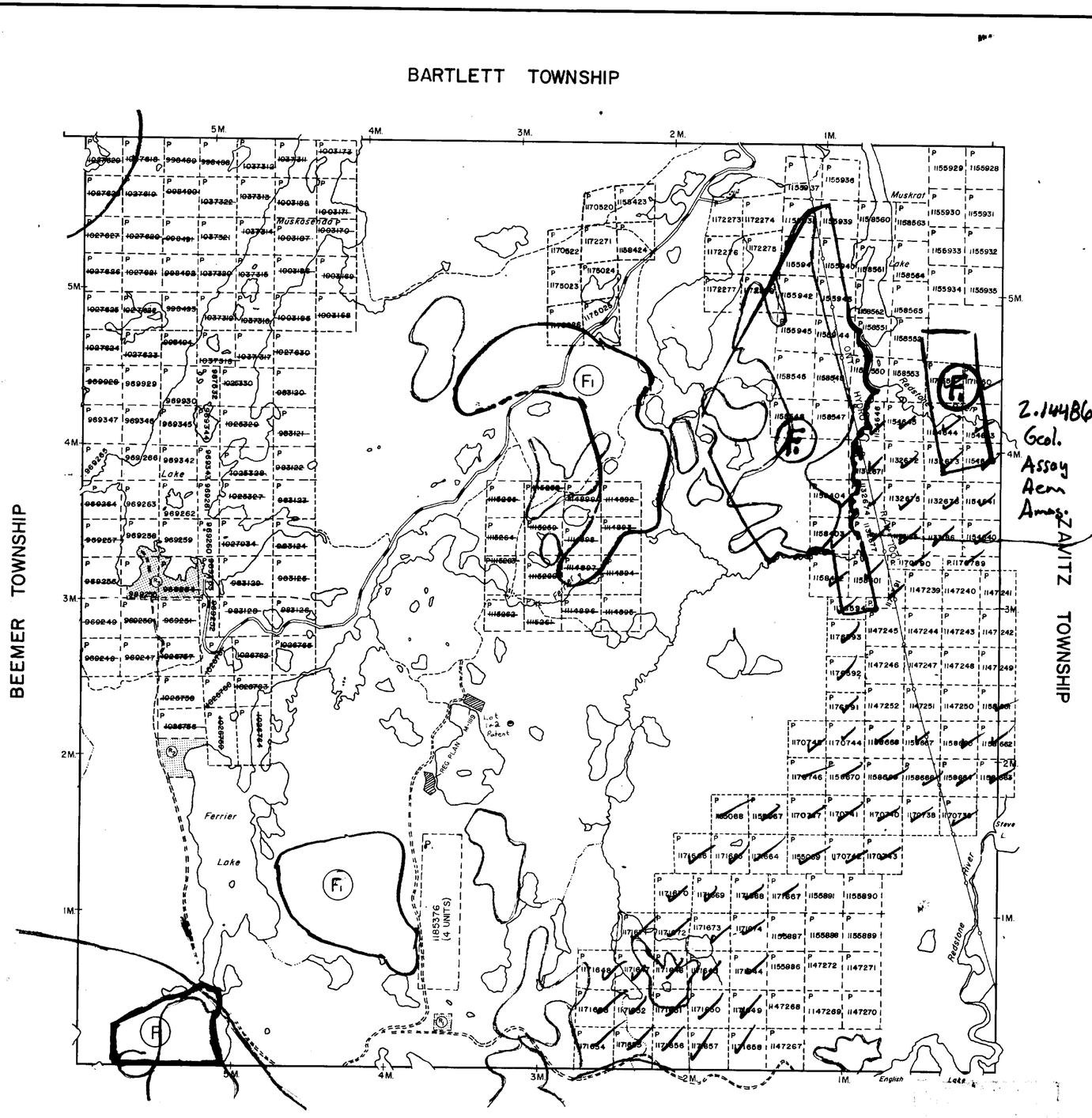
REFERENCES

AREAS WITHDRAWN FROM DISPOSITION

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

	Description	Order No.	Date	Disposition	File
(R1)	SEC.36/80	W.18/77	28/02/77	S.R.O.	83582
(R2)	SEC.36/80	W.19/78	10/04/78	S.R.O	188543
(R3)	SEC.36/80	W.30/78	02/06/78	S.R.O	192219

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOPMENT AND MINES, FOR ADDITIONAL INFORMATION ON THE STATUS OF THE



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	Ⓢ

SCALE: 1 INCH = 40 CHAINS

FEET 0 1000 2000 4000 6000 8000
METRES 0 200 1000 (1 KM) 2000 (2 KM)

THIS TWP. IS SUBJECT TO FOREST ACTIVITIES IN 1991/92 FURTHER INFORMATION AVAILABLE ON FILE.

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

TOWNSHIP

ENGLISH

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

Ontario
Ministry of Natural Resources
Ministry of Northern Development and Mines

Date SEPTEMBER 1990
ACTIVATED : SEPT. 25/90 S.R.

Number G-3938

G-3938 ENGLISH TWP.

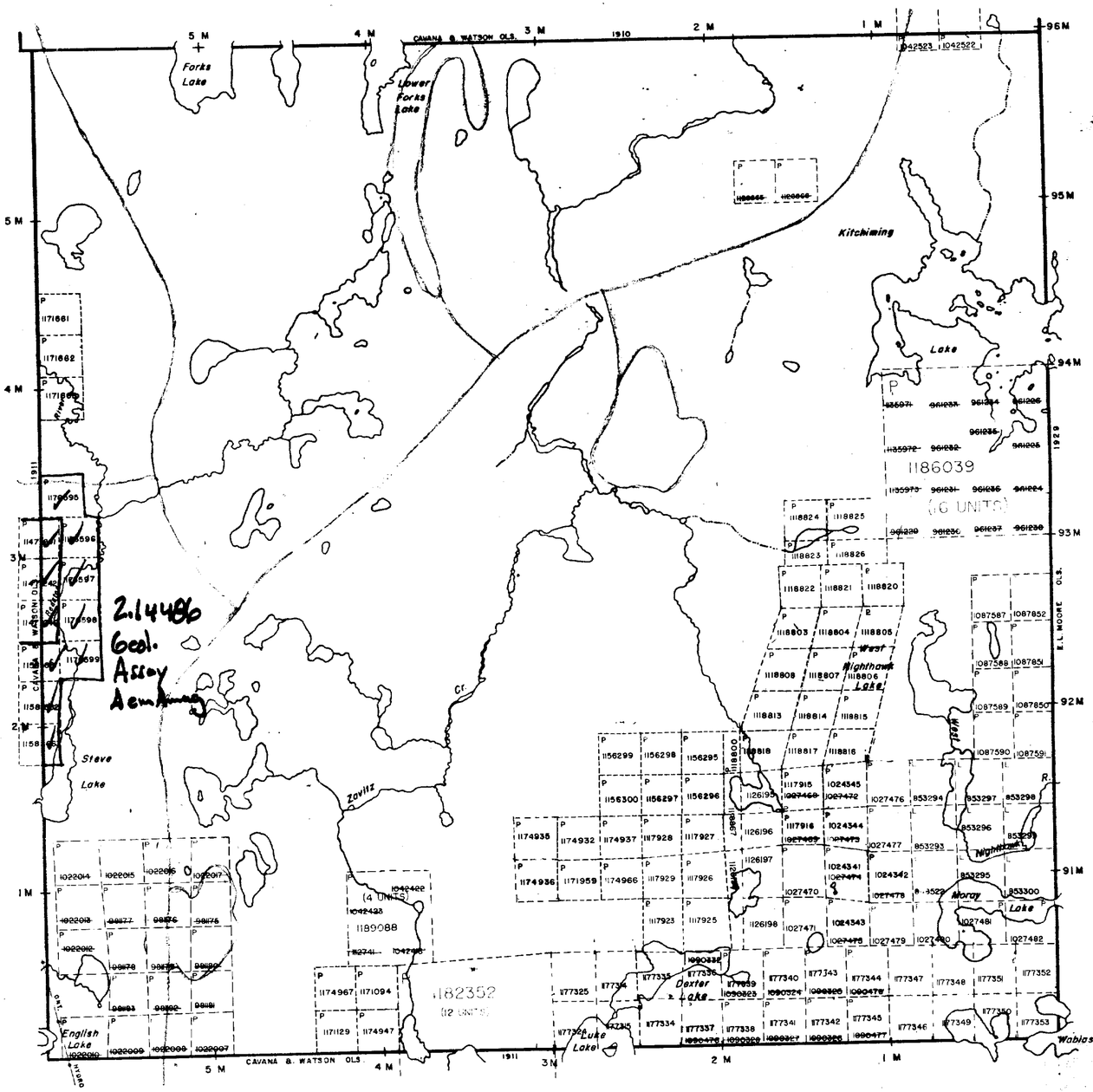
42A03SE0200 2.14486 ZAVITZ

Geikie Twp.(M.320)

English Twp.(M.787)

Hincks Twp.(M.223)

Hutt Twp.(M.943)



THE TOWNSHIP
OF

ZAVITZ

DISTRICT OF
SUDBURY

PORCUPINE
MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND

PATENTED LAND	(P)
CROWN LAND SALE	C.S.
LEASES	(L)
LOCATED LAND	Loc.
LICENSE OF OCCUPATION	L.O.
MINING RIGHTS ONLY	M.R.O.
SURFACE RIGHTS ONLY	S.R.O.
ROADS	
IMPROVED ROADS	
KING'S HIGHWAYS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINES	
CANCELLED	C

NOTES

400' SURFACE RIGHTS RESERVATION ALONG THE SHORES OF ALL LAKES AND RIVERS.

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

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

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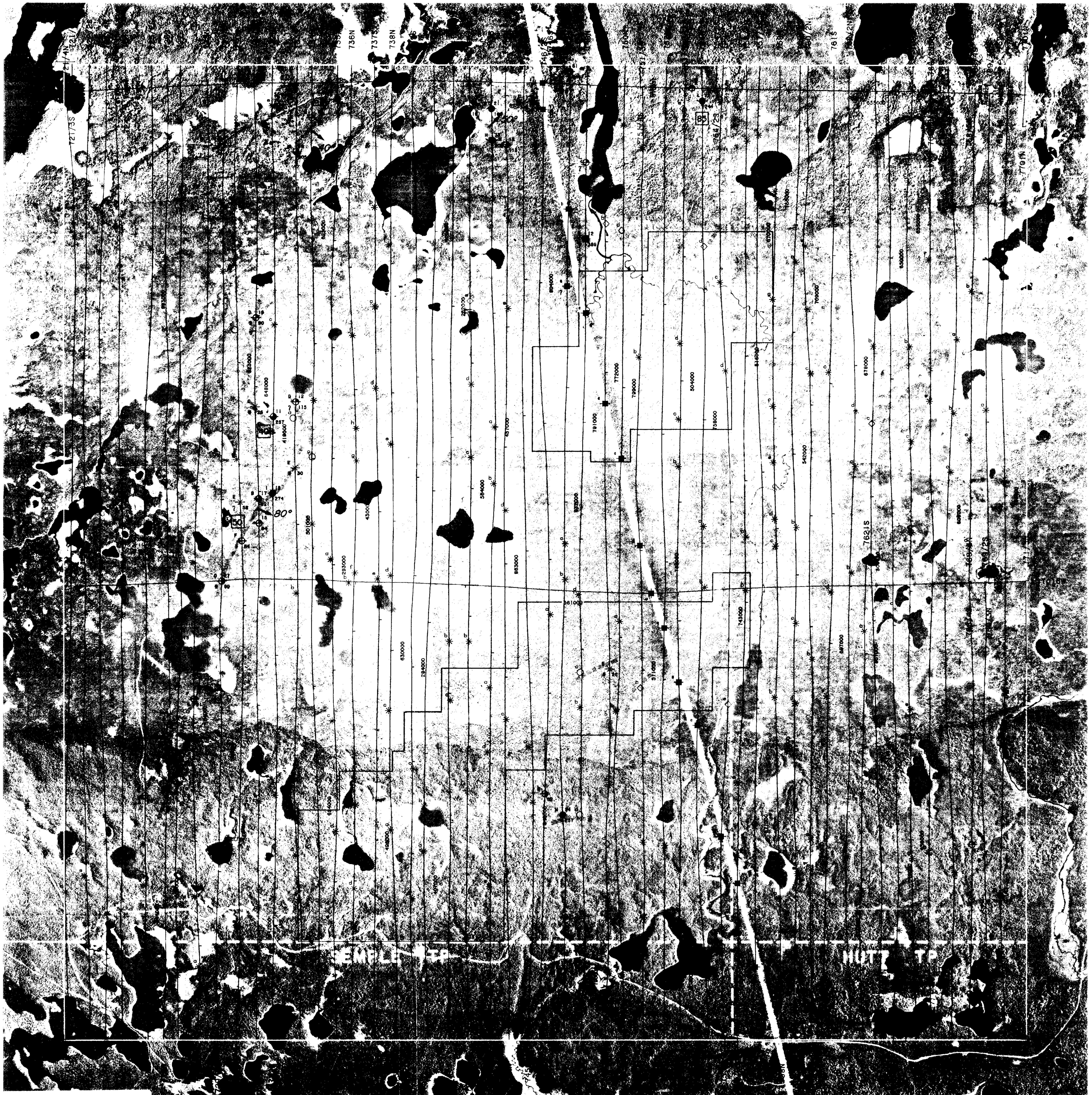
PLACED ON ACTIVE FILE. CHECKED 92/03/90. MKT. MKT.

FEB 26 1992

PLAN NO. M. 1189

DEPARTMENT ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH



Ministry of Northern Development and Mines

Ontario

MINES AND MINERALS DIVISION

ONTARIO GEOLOGICAL SURVEY

GEOPHYSICAL/GEOCHEMICAL SERIES

MAP 81397

SHINING TREE AREA

Airborne Electromagnetic Survey

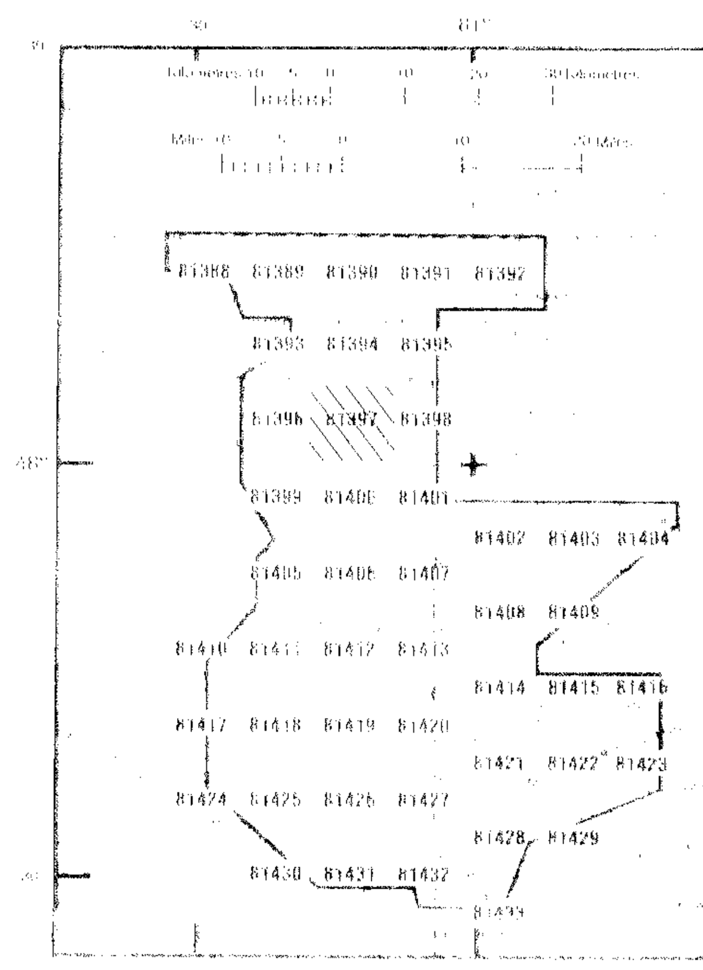
Scale 1:31 680

NTS Reference: 42 A/3

ODM-GSC Aeromagnetic Map: 921G

ODM Geological Compilation Map: 2205

This map is published with the permission of V.G. Milne, Director, Ontario Geological Survey.



LOCATION MAP

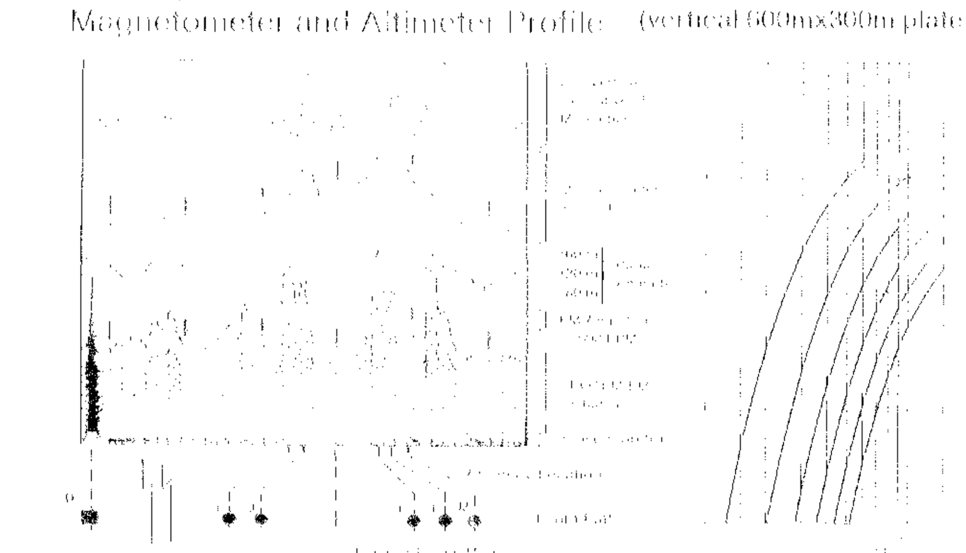
GEOTEM® Peak Response Symbols

INTERPRETATION LEGEND

Interpretation by GEODATEM AIRBORNE CONSULTANTS

Representative GEOTEM® Magnetometer and Altimeter Profile

Conductance Nomogram



DESCRIPTIVE NOTES

The aircraft (C-FDKM) is equipped with the Geoterrex GEOTEM® airborne EM system, a Scintrex single cell, split beam, cesium vapour magnetometer and a MADACS digital data acquisition system. GEOTEM® is a digital high power time domain EM system with a peak moment of 4.5 × 10⁵ Am². Current waveform is a half sine wave with a pulse duration of 3000 microseconds and a repetition rate of 300 pulses per second. The horizontal axis receiver coil is nominally 127 m behind and 56 m below the vertical axis transmitter loop.

The quantitative interpretation of the GEOTEM® data is accomplished by comparing the resultant EM responses with type curves obtained from mathematical model studies. The channel amplitude ratios of a response are mainly a function of the conductance of its source. The response magnitude varies with conductor depth and geometry. The reference nomogram for the survey is a vertical plate, produced from a thin sheet model with 600 m strike length and 300 m depth extent, located at ground surface.

The GEOTEM® System will respond to conductive overburden, near surface horizontal conducting layers, cultural sources and bedrock conductors. Discrimination of natural conductors is based on the rate of transient decay, magnetic correlation and the response shape, together with the response pattern and topography. Cultural responses are identifiable by examining the power line monitor and the flight track film to locate cultural sources.

The aeromagnetic total field contours were generated from digitally recorded data with sampling intervals of 1.0 second. The magnetic data were: (i) corrected for diurnal variations by subtraction of the digitally recorded base station magnetic data; (ii) levelled to the tie line data; (iii) interpolated onto a regular 0.25 cm grid, at the map scale of 1:20 000, using a modified Akima (1970) technique. No correction has been made for regional variation of the earth's magnetic field.

® Registered Trade Mark of Geoterrex Limited.

CREDITS

Mosaic preparation, data compilation and drafting were done by Geoterrex Limited, Ottawa, Ontario, from June 1989 to September 1990. The mosaic was prepared using Ontario Ministry of Natural Resources 1:15 840 aerial photographs, which were controlled to 1:50 000 topographic maps published by Energy, Mines and Resources, Ottawa. Electromagnetic data and magnetic contours were plotted by Geoterrex Limited, Ottawa, Ontario.

Akima, H. 1970: A new method of interpolation and smooth curve fitting based on local procedures; Journal of the Association for Computing Machinery, v.17, no.4, p.589-602.

Magnetic declination in the area was approximately 10°W in November 1989.

Every possible effort has been made to ensure the accuracy of the information presented on this map; however, the Ontario Ministry of Northern Development and Mines does not assume any liability for errors that occur. Users may wish to verify the data profiles on file for a limited time at the Resident Geologist's office nearest the map area.

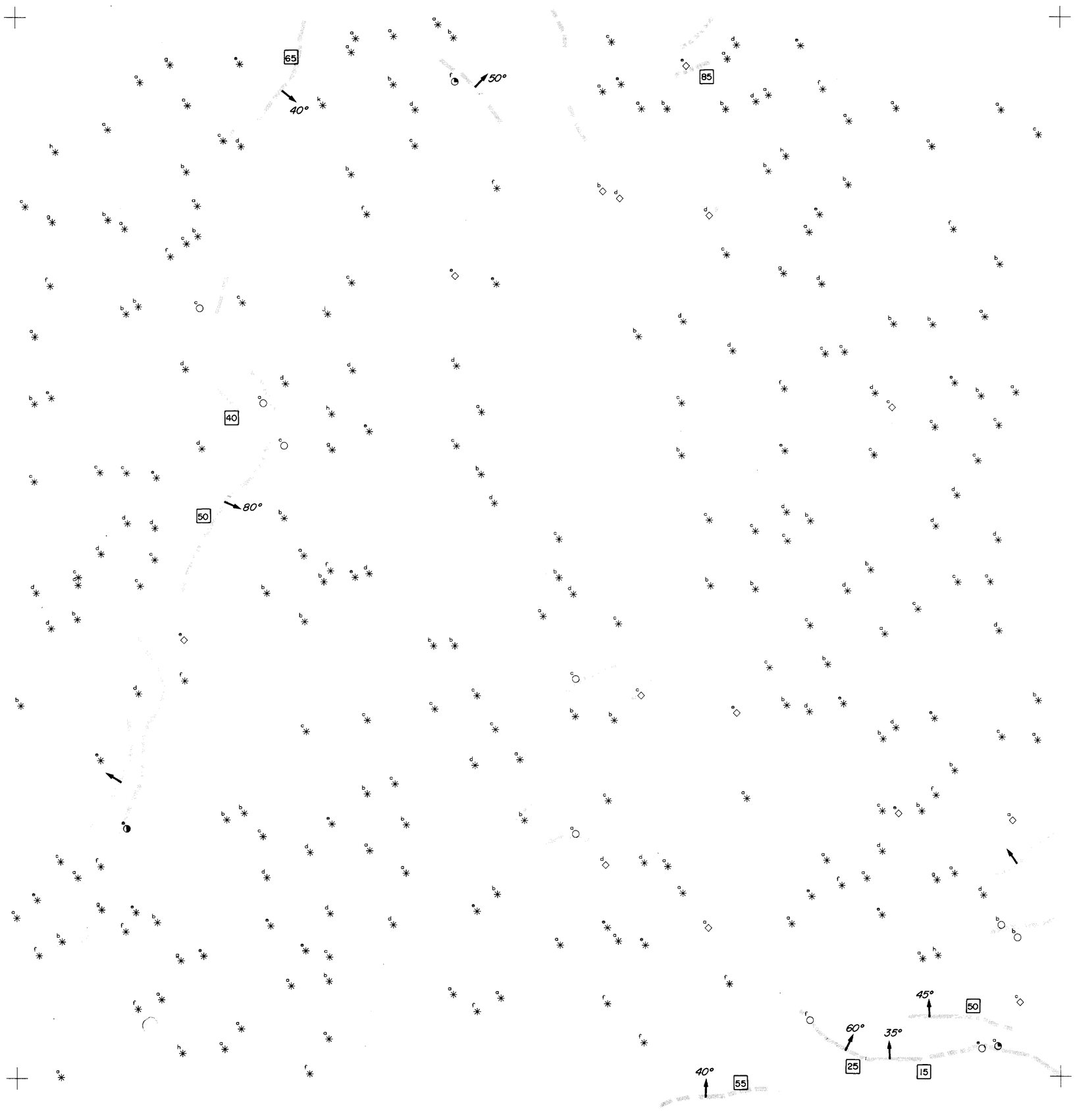
Financial assistance for this project was provided through the Ontario Ministry of Northern Development and Mines' Northern Development Fund.

Issued 1990

Information from this publication may be quoted if credit is given. It is recommended that reference be made in the following form:

Ontario Geological Survey 1990: Airborne electromagnetic and total intensity magnetic survey, Shining Tree area; Ontario Geological Survey, Map 81397, Scale 1:20 000.

NOTE: A set of 1:31 680 scale maps showing topography, flight lines and electromagnetic results accompanies the set of maps and is available free of charge with the purchase of the set of maps.



Ministry of Northern Development and Mines

Ontario

MINES AND MINERALS DIVISION
ONTARIO GEOLOGICAL SURVEY
GEOPHYSICAL/GEOCHEMICAL SERIES

MAP 81397

SHINING TREE AREA

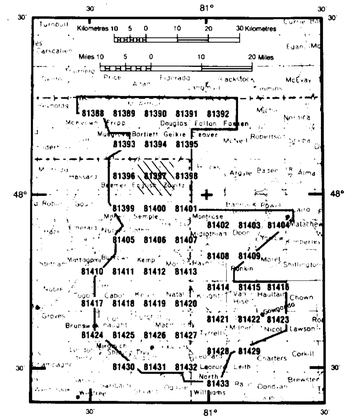
Airborne Electromagnetic Survey

Scale 1:31 680

metres 500 0 1 kilometre
mile 1/4 0 1/2 mile

NTS References: **42 A/3**
ODM-GSC Aeromagnetic Maps: **921 G**
ODM Geological Compilation Map: **2205**

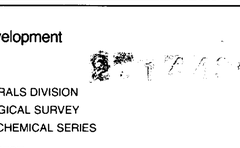
Stock No. **12934**



LOCATION MAP

GEOTEM®Peak Response Symbols

ANOMALY	DECAY INTERVAL CLASSIFICATION
✳ ✳	1-2 Channel (398,549microseconds)
⊕ ◈	3-4 Channel (705,862microseconds)
⊕ ◈	5-6 Channel (1018,1174 microseconds)
◑ ◈	7-8 Channel (1330,1487microseconds)
◑ ◈	9-10 Channel (1643,1799 microseconds)
● ◈	11-12 Channel (1955,2112 microseconds)
BEDROCK POORLY RESPONSE DEFINED	

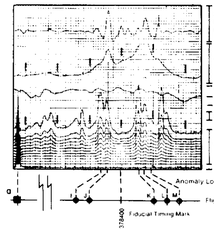


INTERPRETATION LEGEND

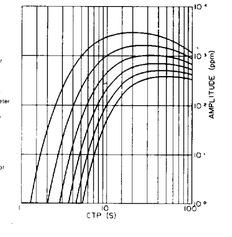
CONDUCTOR AXIS
- Well defined
- Poorly defined
- Uncertain
- Surficial zone
- Wide conductive zone
- Fault
- Vertical conductor
- 60° Conductor dip
- Conductor dip (angle unknown)
- 15 Depth below surface (metres)

Interpretation by: GEODATEM AIRBORNE CONSULTANTS

Representative GEOTEM®, Magnetometer and Altimeter Profile



Conductance Nomogram
(vertical 600mx300m plate 120m below a/c)



DESCRIPTIVE NOTES

The aircraft (C-FDKM) is equipped with the Geoterrex GEOTEM® airborne EM system, a Scintrex single cell, split beam, cesium vapour magnetometer, and a MADACS digital data acquisition system. GEOTEM® is a digital high power time-domain EM system with a peak moment of 4.5 x 10^5 Am^2. Current waveform is a half sine wave with a pulse duration of 1030 microseconds and a repetition rate of 300 pulses per second. The horizontal axis receiver coil is nominally 123 m behind and 56 m below the vertical axis transmitter loop.

The quantitative intérpretation of the GEOTEM® data is accomplished by comparing the resultant EM responses with type-curves obtained from mathematical model studies. The channel amplitude ratios of a response are mainly a function of the conductance of its source. The response magnitude varies with conductor depth and geometry. The reference nomogram for the survey is a vertical plate, produced from a thin sheet model with 600 m strike length and 300 m depth extent, located at ground surface.

The GEOTEM® system will respond to conductive overburden, near-surface horizontal conducting layers, cultural sources and bedrock conductors. Discrimination of natural conductors is based on the rate of transient decay, magnetic correlation and the response shape, together with the response pattern and topography. Cultural responses are identifiable by examining the power line monitor and the flight track film to locate cultural sources.

The aeromagnetic total field contours were generated from digitally recorded data with sampling intervals of 1.0 second. The magnetic data were: (i) corrected for diurnal variations by subtraction of the digitally recorded base station magnetic data, (ii) levelled to the tie line data, (iii) interpolated onto a regular 0.25 cm grid, at the map scale of 1:20 000, using a modified Akima (1970) technique. No correction has been made for regional variation of the earth's magnetic field.

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CREDITS

Mosaic preparation, data compilation and drafting were done by Geoterrex Limited, Ottawa, Ontario, from June 1989 to September 1990. The mosaic was prepared using Ontario Ministry of Natural Resources 1:15 840 aerial photographs, which were controlled to 1:50 000 topographic maps published by Energy, Mines and Resources, Ottawa. Electromagnetic data and magnetic contours were plotted by Geoterrex Limited, Ottawa, Ontario.

Akima, H. 1970. A new method of interpolation and smooth curve fitting based on local procedures, Journal of the Association for Computing Machinery, v. 17, no. 4, p. 589-602.

Magnetic declination in the area was approximately 10°14 W in November 1989

Every possible effort has been made to ensure the accuracy of the information presented on this map; however, the Ontario Ministry of Northern Development and Mines does not assume any liability for errors that occur. Users may wish to verify the data profiles on file for a limited time at the Resident Geologist's office nearest the map area.

Financial assistance for this project was provided through the Ontario Ministry of Northern Development and Mines' Northern Development Fund.

Issued 1990

Information from this publication may be quoted if credit is given. It is recommended that reference be made in the following form:

Ontario Geological Survey 1990. Airborne electromagnetic and total intensity magnetic survey. Shining Tree area; Ontario Geological Survey, Map **81397**, Scale 1:20 000.

NOTE: A set of 1:31 680 scale maps showing topography, flight lines and electromagnetic results accompanies this set of maps and is available free of charge with the purchase of this set of maps.

LEGEND

15 Diabase
- 15 Diabase

12 Minor Felsic Intrusives
- 12a Feldspar Porphyry
- 12b Quartz Porphyry
- 12c Quartz Feldspar Porphyry
- 12d Felsite
- 12e Syenite

11 Mafic Intermediate Intrusives
- 11a Quartz Diorite
- 11b Diorite
- 11c Gabbro

7 Iron Formation
- 7 Iron Formation

5 Felsic Volcanics
- 5a Massive
- 5b Foliated
- 5c Tuffaceous
- 5d Pyroclastics

4 Intermediate Volcanics
- 4a Massive
- 4b Pillowed
- 4c Foliated
- 4d Tuffaceous
- 4e Pyroclastics
- 4f Quartz Sericite Schist

3 Mafic Volcanics
- 3a Massive
- 3b Pillowed
- 3c Foliated
- 3d Tuffaceous
- 3e Pyroclastics

1 Ultramafic Volcanics
- 1a Basalto Komatiite

SYMBOLS

- Claim Post (Located)
- Geological Contact
- Fault
- Bedding
- Foliation
- Pillow Tops
- Float
- Outcrop
- Marsh / Swamp
- Steep Slope / Bench
- Grab Sample Location
- Channel Sample Location
- 25 / (130) Sample Number (ppb gold)

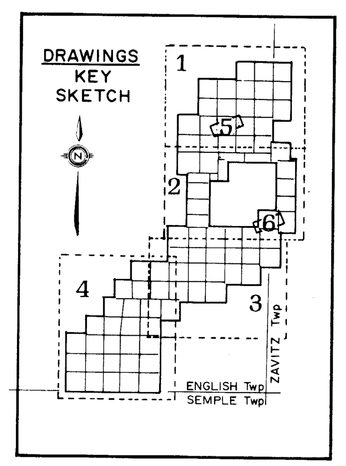
ALTERATION

- cal Calcite
- ac Ankerite
- mp Mariposite
- py Pyrite
- gn Galena

SAMPLE NUMBER SCHEME

WK 1–100 Series	Grab Samples, W.C.Kerr 1990
WK 101–275 Series	Grab Samples, W.C.Kerr 1991
AA 1– .... Series	Grab Samples, A.Ali 1991
15391...etc	Grab Samples, G.S.W.Bruce 1990
1–150 Series	Channel Samples, 1991
Esso519275...etc	Grab Samples, Esso 1967

DRAWINGS KEY SKETCH



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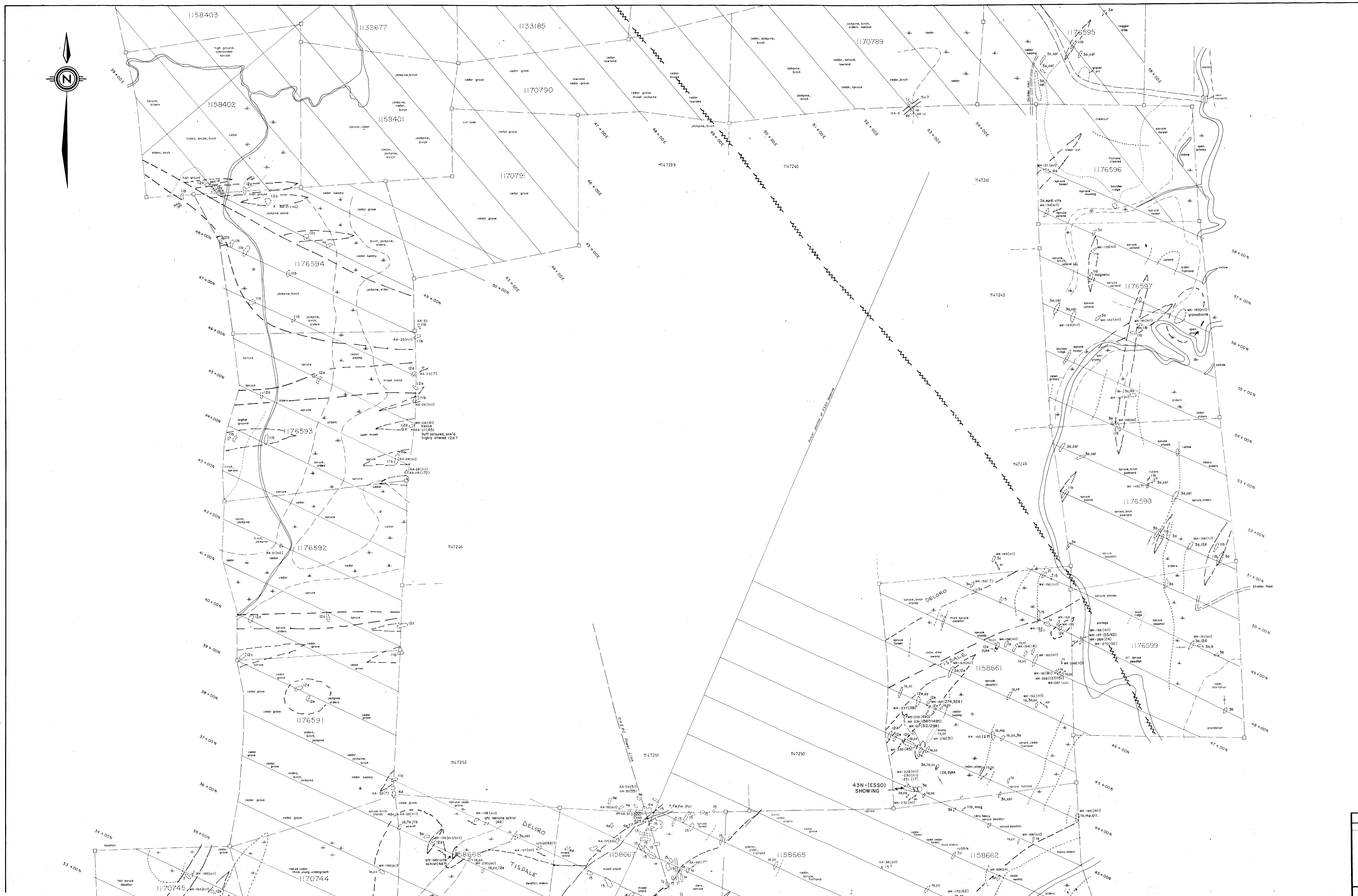
ENGLISH–ZAVITZ PROJECT 1991		
Porcupine Mining District, Ontario		
Property Geology	NTS:	42A/3
	Longitude:	81 14'
	Latitude:	48 04'
	Drawn By:	WMJPH
	Approved By:	WMJSPB
	Date:	Nov 8/91
	Scale:	1 : 2,500
	Drawing No:	1

TINTINA MINES LIMITED

240



LEGEND

15 Diabase
- 15 Diabase

12 Minor Felsic Intrusives
- 12a Feldspar Porphyry
- 12b Quartz Porphyry
- 12c Quartz Feldspar Porphyry
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- 12e Syenite

11 Mafic Intermediate Intrusives
- 11a Quartz Diorite
- 11b Diorite
- 11c Gabbro

7 Iron Formation
- 7 Iron Formation

5 Felsic Volcanics
- 5a Massive
- 5c Foliated
- 5d Tuffaceous
- 5e Pyroclastics

4 Intermediate Volcanics
- 4a Massive
- 4b Pillowed
- 4c Foliated
- 4d Tuffaceous
- 4e Pyroclastics
- 4f Quartz Sericite Schist

3 Mafic Volcanics
- 3a Massive
- 3b Pillowed
- 3c Foliated
- 3d Tuffaceous
- 3e Pyroclastics

1 Ultramafic Volcanics
- 1a Basaltic Komatiite

SYMBOLS

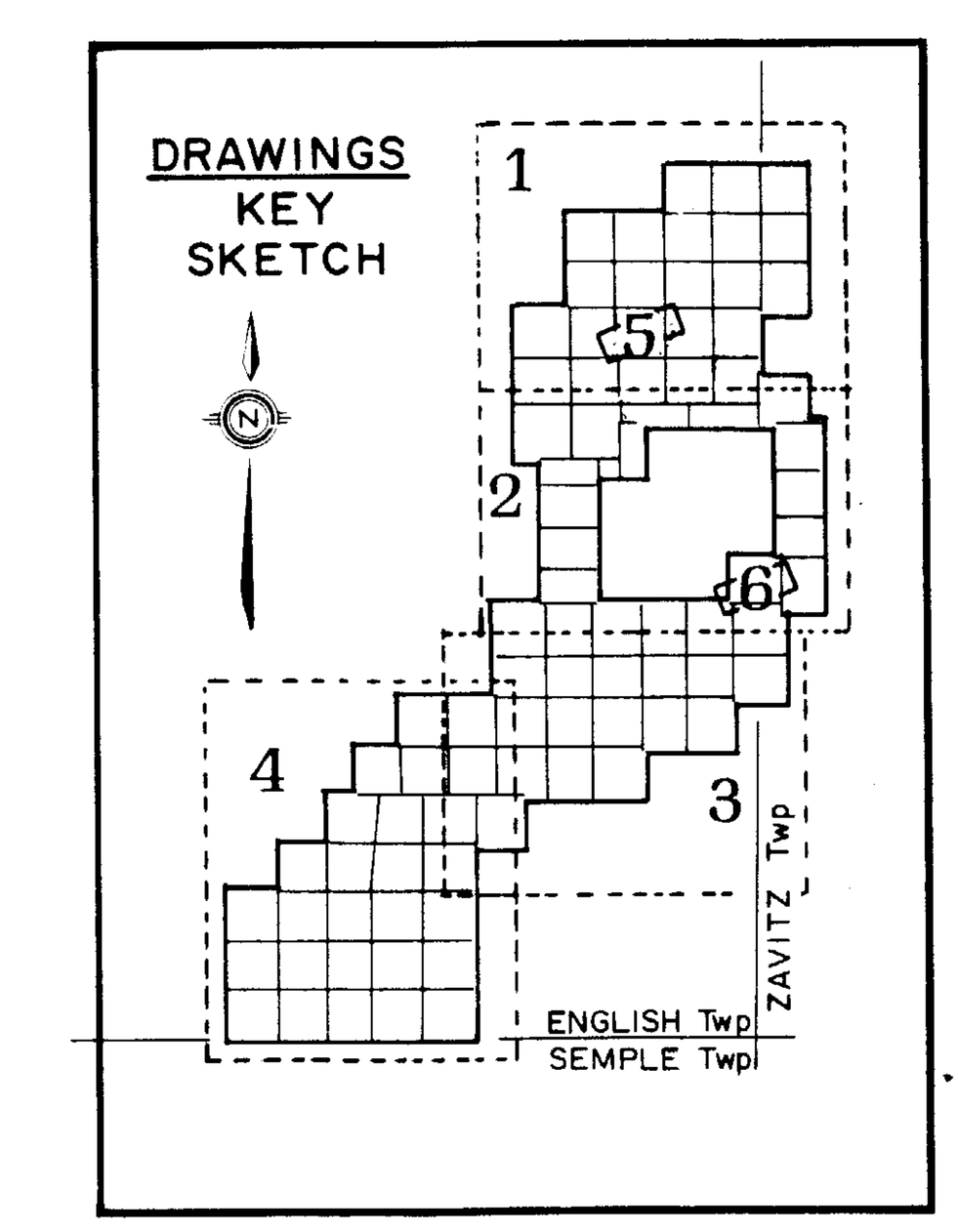
- Claim Post (Located)
- Geological Contact
- Fault
- Bedding
- Foliation
- Pillow Tops
- Float
- Outcrop
- Marsh / Swamp
- Steep Slope / Bench
- Grab Sample Location
- Channel Sample Location
- 251 (30) Sample Number (ppb gold)

ALTERATION

cal	Calcite
cc	Ankerite
mp	Mariposite
py	Pyrite
gn	Galena

SAMPLE NUMBER SCHEME

WK 1-100 Series	Grab Samples, W.C.Kerr 1990
WK 101-275 Series	Grab Samples, W.C.Kerr 1991
AA 1-... Series	Grab Samples, A.Ali 1991
15391...etc	Grab Samples, G.S.W.Bruce 1990
1-159 Series	Channel Samples, 1991
Esso319275..etc	Grab Samples, Esso 1987



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ENGLISH-ZAVITZ PROJECT 1991

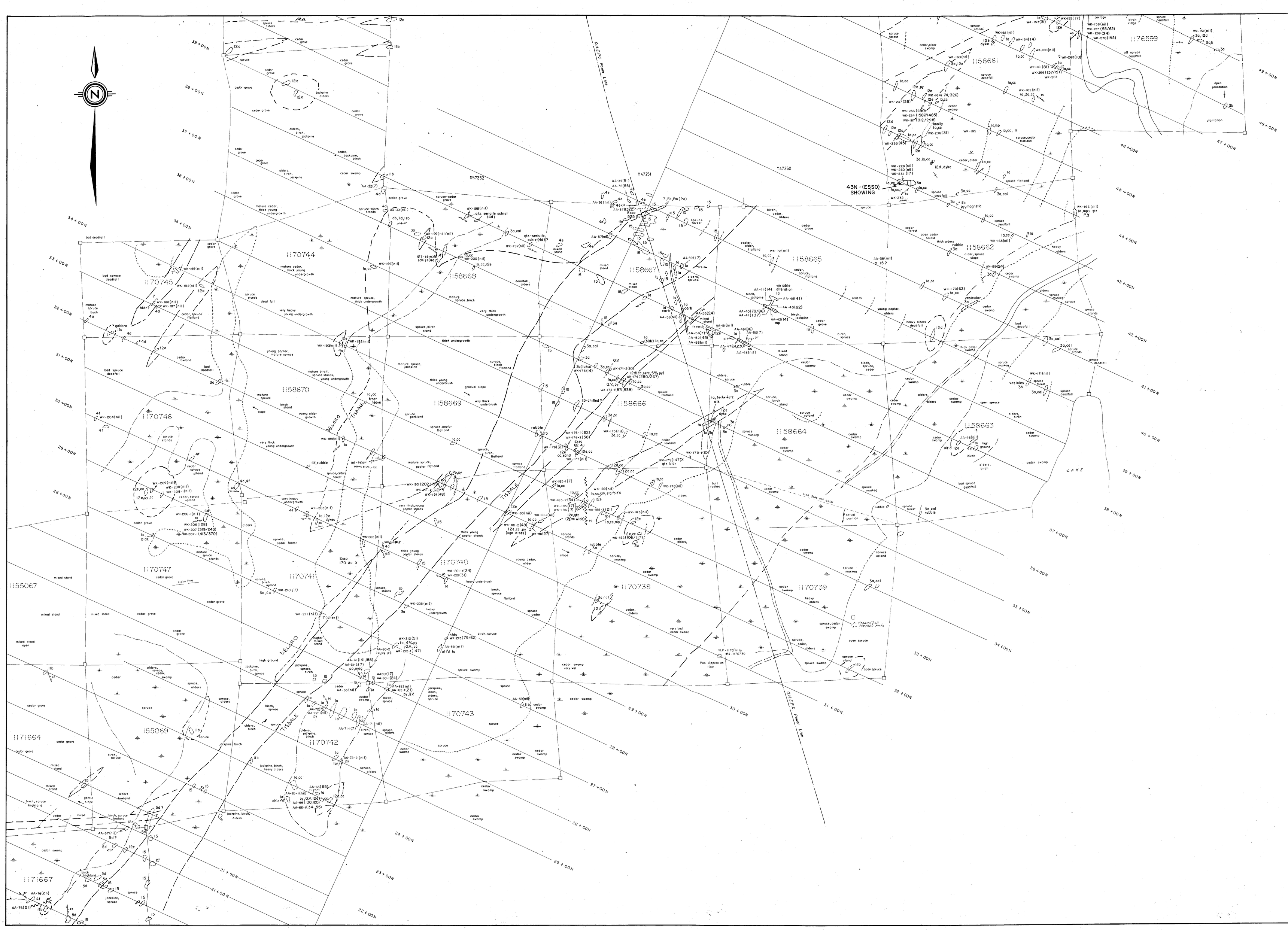
Porcupine Mining District, Ontario

Property Geology

NTS:	42A/3
Longitude:	81 14'
Lattitude:	48 04'
Drawn By:	WK/PH
Approved By:	WK/SFS
Date:	Nov 8/91
Scale:	1 : 2,500
Drawing No:	2

TINTINA MINES LIMITED

250



LEGEND

15 Diabase
- 15 Diabase

12 Minor Felsic Intrusives
- 12a Feldspar Porphyry
- 12b Quartz Porphyry
- 12c Quartz Feldspar Porphyry
- 12d Felsite
- 12e Syenite

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- 11a Quartz Diorite
- 11b Diorite
- 11c Gabbro

7 Iron Formation
- 7 Iron Formation

5 Felsic Volcanics
- 5a Massive
- 5c Foliated
- 5d Tuffaceous
- 5e Pyroclastics

4 Intermediate Volcanics
- 4a Massive
- 4b Pillowed
- 4c Foliated
- 4d Tuffaceous
- 4e Pyroclastics
- 4f Quartz Sericite Schist

3 Malic Volcanics
- 3a Massive
- 3b Pillowed
- 3c Foliated
- 3d Tuffaceous
- 3e Pyroclastics

1 Ultramafic Volcanics
- 1a Basaltic Komatiite

SYMBOLS

- Claim Post (Located)
- Geological Contact
- Fault
- Bedding
- Foliation
- Pillow Tops
- Float
- Outcrop
- Marsh / Swamp
- Steep Slope / Bench
- Grab Sample Location
- Channel Sample Location
- 25+(30) Sample Number (ppb gold)

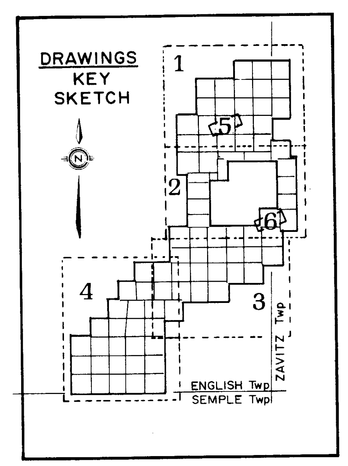
ALTERATION

cal	Calcite
cc	Ankerite
mp	Manipocite
py	Pyrite
gn	Galena

SAMPLE NUMBER SCHEME

WK 1-100 Series	Grab Samples, W.C.Kerr 1990
WK 101-275 Series	Grab Samples, W.C.Kerr 1991
AA 1- ... Series	Grab Samples, A.Ali 1991
16391...etc	Grab Samples, G.S.W.Bruce 1990
1-100 Series	Channel Samples, 1991
Esso319275...etc	Grab Samples, Esso 1967

DRAWINGS KEY SKETCH



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ENGLISH-ZAVITZ PROJECT 1991

Porcupine Mining District, Ontario

Property Geology

NTS:	42A/3
Longitude:	81 14'
Latitude:	48 04'
Drawn By:	WK/PH
Approved By:	WK/BFB
Date:	Nov 8/91
Scale:	1 : 2,500
Drawing No:	3

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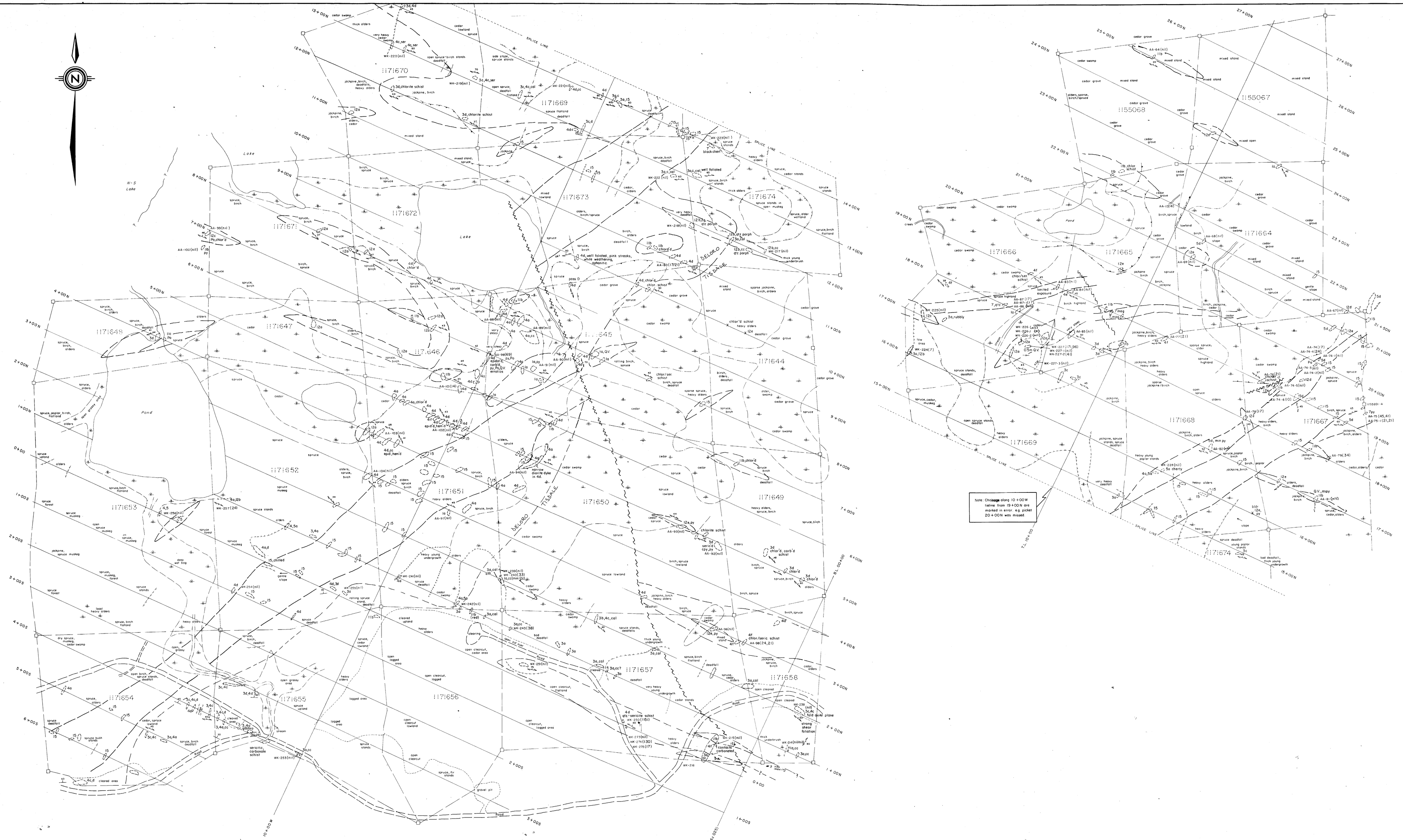

LEGEND

15 Diabase
- 15 Diabase

12 Minor Felsic Intrusives
- 12a Feldspar Porphyry
- 12b Quartz Porphyry
- 12c Quartz Feldspar Porphyry
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- 11b Diorite
- 11c Gabbro

7 Iron Formation
- 7 Iron Formation

5 Felsic Volcanics
- 5a Massive
- 5c Foliated
- 5d Tuffaceous
- 5e Pyroclastics

4 Intermediate Volcanics
- 4a Massive
- 4b Pillowed
- 4c Foliated
- 4d Tuffaceous
- 4e Pyroclastics
- 4f Quartz Sericite Schist

3 Mafic Volcanics
- 3a Massive
- 3b Pillowed
- 3c Foliated
- 3d Tuffaceous
- 3e Pyroclastics

1 Ultramafic Volcanics
- 1a Basalto-Komatiite

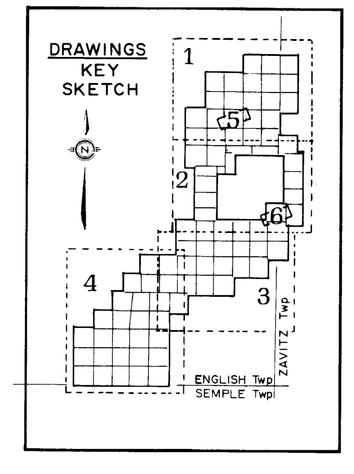
SYMBOLS
- Claim Post (Located)
- Geological Contact
- Fault
- Bedding
- Foliation
- Pillow Tops
- Float
- Outcrop
- Marsh / Swamp
- Steep Slope / Bench
- Grab Sample Location
- Channel Sample Location
- 251/1301 Sample Number (ppb gold)

ALTERATION
- cal Calcite
- ank Ankerite
- mp Manganese
- py Pyrite
- gn Galena

SAMPLE NUMBER SCHEME

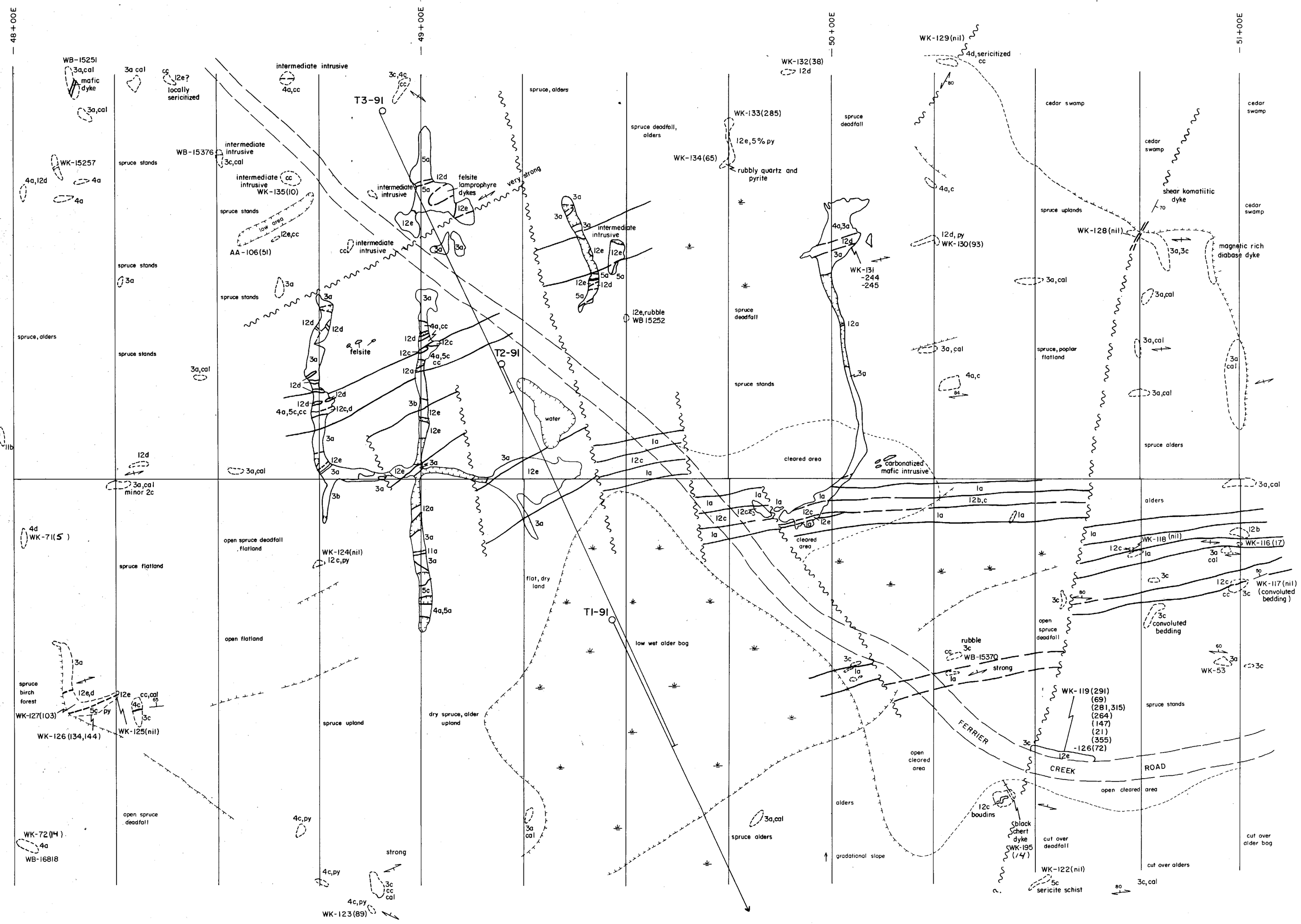
WK 1-100 Series	Grab Samples, W.G.Kerr 1990
WK 101-275 Series	Grab Samples, W.G.Kerr 1991
AA 1- ... Series	Grab Samples, A.Ali 1991
1639?...etc	Grab Samples, G.S.W.Bruce 1990
1-150 Series	Channel Samples, 1991
Esso319075...etc	Grab Samples, Esso 1967

DRAWINGS KEY SKETCH



0 100 m 200 m

ENGLISH–ZAVITZ PROJECT 1991		
Porcupine Mining District, Ontario		
Property Geology	NTS:	42A/3
	Longitude:	81° 14'
	Latitude:	48° 04'
	Drawn By:	WK/PH
	Approved By:	WK/SFS
	Date:	Nov 5/91
	Scale:	1 : 2,500
	Drawing No:	4
TINTINA MINES LIMITED		



LEGEND

15 Diabase
- 15 Diabase

12 Minor Felsic Intrusives
- 12a Feldspar Porphyry
- 12b Quartz Porphyry
- 12c Quartz Feldspar Porphyry
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7 Iron Formation
- 7 Iron Formation

5 Felsic Volcanics
- 5a Massive
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- 5d Tuffaceous
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4 Intermediate Volcanics
- 4a Massive
- 4b Pillowed
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- 4d Tuffaceous
- 4e Pyroclastics
- 4f Quartz Sericite Schist

3 Mafic Volcanics
- 3a Massive
- 3b Pillowed
- 3c Foliated
- 3d Tuffaceous
- 3e Pyroclastics

1 Ultramafic Volcanics
- 1a Basaltic Komatiite

SYMBOLS

- Claim Post (Located)
- Geological Contact
- Fault
- Bedding
- Foliation
- Pillow Tops
- Float
- Outcrop
- Marsh / Swamp
- Steep Slope / Bench
- Grab Sample Location
- Channel Sample Location
- 251(30) Sample Number (ppb gold)

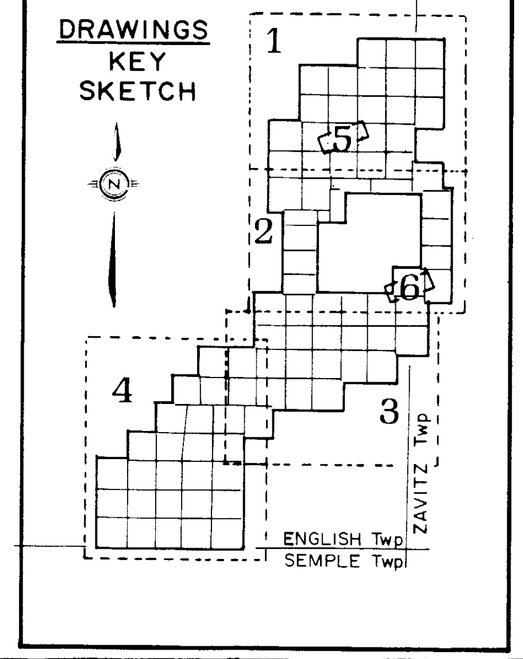
ALTERATION

cal	Calcite
cc	Ankerite
mp	Mariposite
py	Pyrite
gn	Galena

SAMPLE NUMBER SCHEME

WK 1-100 Series	Grab Samples, W.C.Kerr 1990
WK 101-276 Series	Grab Samples, W.C.Kerr 1991
AA 1-... Series	Grab Samples, A.Ali 1991
15391...etc	Grab Samples, G.S.W.Bruce 1990
1-159 Series	Channel Samples, 1991
Esso319275..etc	Grab Samples, Esso 1987

DRAWINGS KEY SKETCH



ENGLISH-ZAVITZ PROJECT 1991

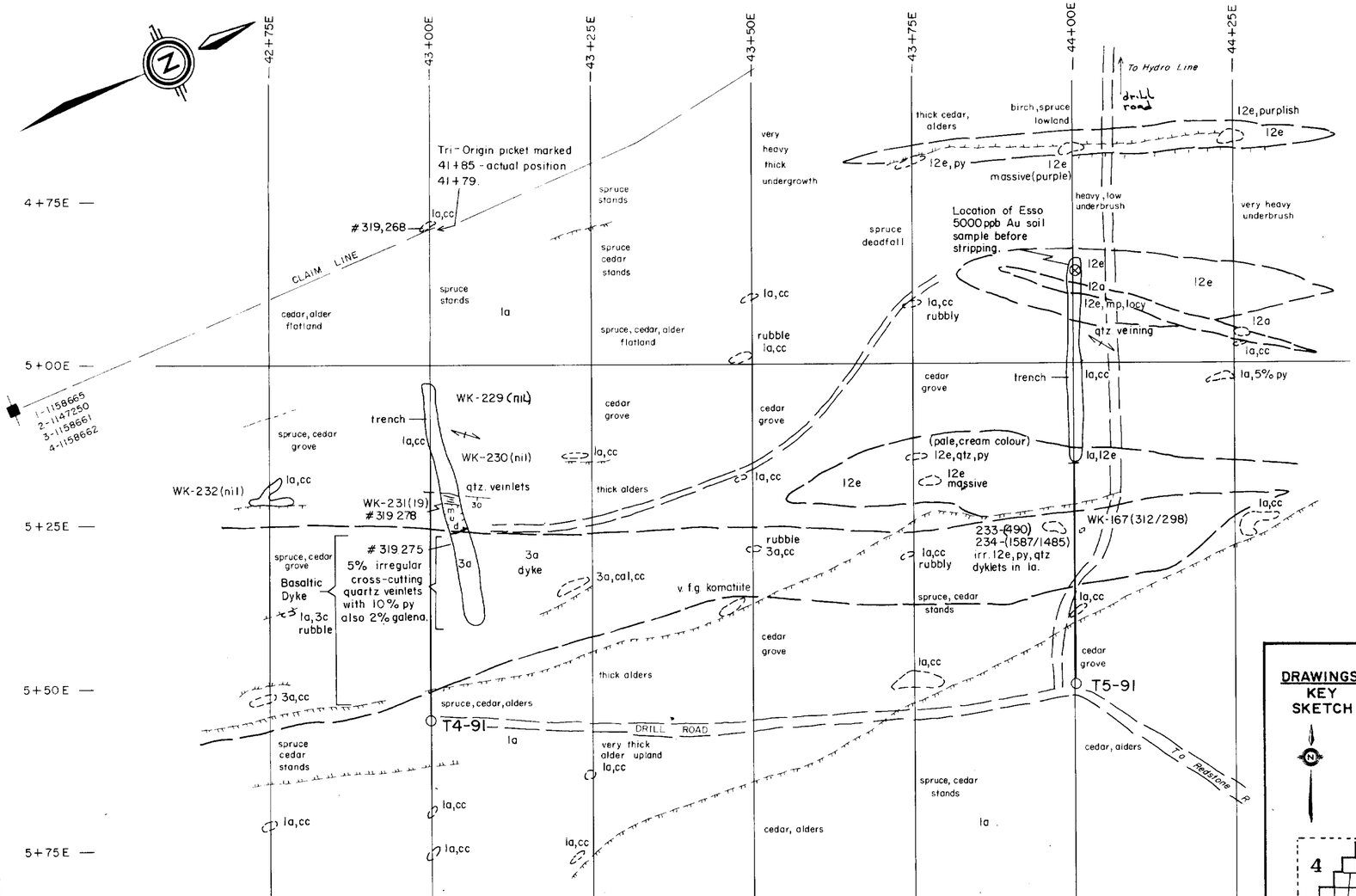
Porcupine Mining District, Ontario

Detailed Geology

North Zone & Road Showing

NTS:	42A/3
Longitude:	81 14'
Lattitude:	48 04'
Drawn By:	WK/PH
Approved By:	WK/SFS
Date:	Nov 8/91
Scale:	1 : 500
Drawing No:	5

TINTINA MINES LIMITED



LEGEND

15 Diabase
- 15 Diabase

12 Minor Felsic Intrusives
- 12a Feldspar Porphyry
- 12b Quartz Porphyry
- 12c Quartz Feldspar Porphyry
- 12d Felsite
- 12e Syenite

11 Mafic Intermediate Intrusives
- 11a Quartz Diorite
- 11b Diorite
- 11c Gabbro

7 Iron Formation
- 7 Iron Formation

5 Felsic Volcanics
- 5a Massive
- 5c Foliated
- 5d Tuffaceous
- 5e Pyroclastics

4 Intermediate Volcanics
- 4a Massive
- 4b Pillowed
- 4c Foliated
- 4d Tuffaceous
- 4e Pyroclastics
- 4f Quartz Sericite Schist

3 Mafic Volcanics
- 3a Massive
- 3b Pillowed
- 3c Foliated
- 3d Tuffaceous
- 3e Pyroclastics

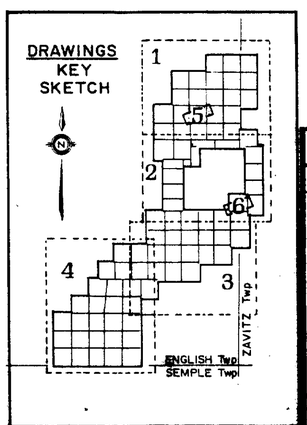
1 Ultramafic Volcanics
- 1a Basaltic Komatiite

SYMBOLS
- Claim Post (Located)
- Geological Contact
- Fault
- Bedding
- Foliation
- Pillow Tops
- Float
- Outcrop
- Marsh / Swamp
- Steep Slope / Bench
- Grab Sample Location
- Channel Sample Location
- 251(30) Sample Number (ppb gold)

ALTERATION
- cal Calcite
- cc Ankerite
- mp Mariposite
- py Pyrite
- gn Galena

SAMPLE NUMBER SCHEME

WK 1-100 Series	Grab Samples, W.C.Kerr 1990
WK 101-275 Series	Grab Samples, W.C.Kerr 1991
AA 1-... Series	Grab Samples, A.Ali 1991
18391...etc	Grab Samples, G.B.W.Bruce 1990
1-159 Series	Channel Samples, 1991
Esso319275..etc	Grab Samples, Esso 1987



ENGLISH-ZAVITZ PROJECT 1991

Porcupine Mining District, Ontario

Detailed Geology

43North Showing

NTS:	42A/3
Longitude:	81 14'
Latitude:	48 04'
Drawn By:	WK/PH
Approved By:	WK/SFS
Date:	Nov 8/91
Scale:	1 : 500
Drawing No:	6

TINTINA MINES LIMITED

48+75E | 49+00E | 49+25E | 49+50E

00+90N | 00+85N | 00+80N | 00+75N | 00+70N | 00+65N | 00+60N | 00+55N | 00+50N | 00+45N | 00+40N | 00+35N | 00+30N | 00+25N | 00+20N | 00+15N | 00+10N | 00+05N | B.L. 00+00 (Az 050°) | 00+05S | 00+10S | 00+15S | 00+20S | 00+25S | 00+30S | 00+35S | 00+40S | 00+45S | 00+50S

T3-91
-45°, Az117°

Aphanitic - f.g. local sericite 5% diss. py heavy carb'n locally.

Some intermediate portions

felsite dyke strongly carb'd, pinkish, f.g., equig.

Patchy irregular syenite dykelets in 5a.

White weathered carb'd felsic dykes.

Pinkish anker'd X-cutting qtz. sts.

Carbonatized shear in mafic volcanics.

gabbro

ROAD

T2-91
-45°, Az117°

EOH 110m (??V)

T1-91
-45°, Az117°

10-cm mafic dyke

Possible contact

Anker'd intermed. intrusive ? f.g med green, massive.

Contact

F.g mass, carb'd rusty weathering

Rusty, locally carb'd Locally sheared (anastomosing) 15% F.D. py (locally concentrated).

12a dyke

carb'd, sheared weathers greenish-red.

10-cm 12e dyke

F.g., sil'd ank'd, mass white weathering

White weathering silicified, locally chloritic, locally sericitic, iron stained.

Sliver of sheared, carbonatized schist.

Mass, F.g. chlor't'd

water

Strongly foliated rubble

strong foliation

Carbonated, crenulated, felsic rock (altered rock)

Locally pyritiferous

mixed 12a,b,c,d,

Carb'd felsic rock, strong crenulation (altered rock)

Chloritized, medium green aphanitic.

3a slightly contorted fol'n.

Vesicular pillowed basalt, well fol'd, contorted

12e dyke F.g., equig. Weathers rusty white

possible faults

mafic dyke

sericitized, chloritized

1.5" contorted Q.V. 12e f.g. carb'd

Pink weathering rusty locally

Ribbony jointing pink weathering 5% F.D. py.

10cm mafic dyke

Well foliated sheared, chl'd

Mafic Dyke

Mafic dyke

Well foliated, chloritized, medium green

Mass, fg, chlor'd

Possibly intermediate white weathering rusty, carbon'd, ank'd 0.5% diss. py

strong

Ser'd, ankeritized, f.g., paper schist rusty, altered rock

Sliver of altered rock pale greenish grey, f.g.

Rusty, carb'd sheared

stretched pillows

10% F.D. py

Jointed, rubbly very pink, rusty locally. F.g. ank'd, mass chloritic alt'n locally.

Sliver of basalt

Sliver of gabbro

folds 008°, 40°E o30°, 60°E

Moderate to strong fol'n chlor'd

F-g Mg, Equig, med green, massive

F.g. mafic dyke

Shears dipping 60°N

rubbly, muddy

Sericite schist Very rusty paper schist 5% py locally conc'd at south end chloritized at North end. Heavy hematite staining Fol'n is cont'd, crenulated.

Well foliated f.g. F.g. light grey equigranular Lehite weathering Local stretched pillows at 050°.

mass, medium green aphanitic

Thin "Ladder" type quartz stringers.

5% anastomosing shearing (prominent) at 30° S, but steeply dipping in each direction

2-3% of 0.2-0.5 in. qtz. stringers Prominent sets of 0.5 in., steeply dipping.

2-3% uniformly diss'd py in relatively fresh syenite.

Felsic, white weathering massive, qtz. & flds phenox.

Med. to light green. Possibly intermediate intrusive phase of syenite Mass, Fg, equig, 3-5% of diss'd 1mm mariposite (odd 1cm bleb). 2-10% V.F.D. py. Conspicuous nodular weathering.

Sample #20 displays bleb of mariposite

Fg, sugary, ankeritized syenite

Contact not visible.

water, mud

SYMBOLS

- Claim Post (Located)
- Geological Contact
- Fault
- Bedding
- Foliation
- Pillow Tops
- Float
- Outcrop
- Marsh / Swamp
- Steep Slope / Bench
- Grab Sample Location
- Channel Sample Location
- 251 (30) Sample Number (ppb gold)

ALTERATION

cal	Calcite
cc	Ankerite
mp	Mariposite
py	Pyrite
gn	Galena

SAMPLE NUMBER SCHEME

WK 1-100 Series	Grab Samples, W.C.Kerr 1990
WK 101-275 Series	Grab Samples, W.C.Kerr 1991
AA 1-... Series	Grab Samples, A.All 1991
15391...etc	Grab Samples, G.S.W.Bruce 1990
1-159 Series	Channel Samples, 1991
Esso319275..etc	Grab Samples, Esso 1987

LEGEND

- 15 Diabase
  - 15 Diabase
- 12 Minor Felsic Intrusives
  - 12a Feldspar Porphyry
  - 12b Quartz Porphyry
  - 12c Quartz Feldspar Porphyry
  - 12d Felsite
  - 12e Syenite
- 11 Mafic Intermediate Intrusives
  - 11a Quartz Diorite
  - 11b Diorite
  - 11c Gabbro
- 7 Iron Formation
  - 7 Iron Formation
- 5 Felsic Volcanics
  - 5a Massive
  - 5c Foliated
  - 5d Tuffaceous
  - 5e Pyroclastics
- 4 Intermediate Volcanics
  - 4a Massive
  - 4b Pillowed
  - 4c Foliated
  - 4d Tuffaceous
  - 4e Pyroclastics
  - 4f Quartz Sericite Schist
- 3 Mafic Volcanics
  - 3a Massive
  - 3b Pillowed
  - 3c Foliated
  - 3d Tuffaceous
  - 3e Pyroclastics
- 1 Ultramafic Volcanics
  - 1a Basaltic Komatiite

0 5 10 m

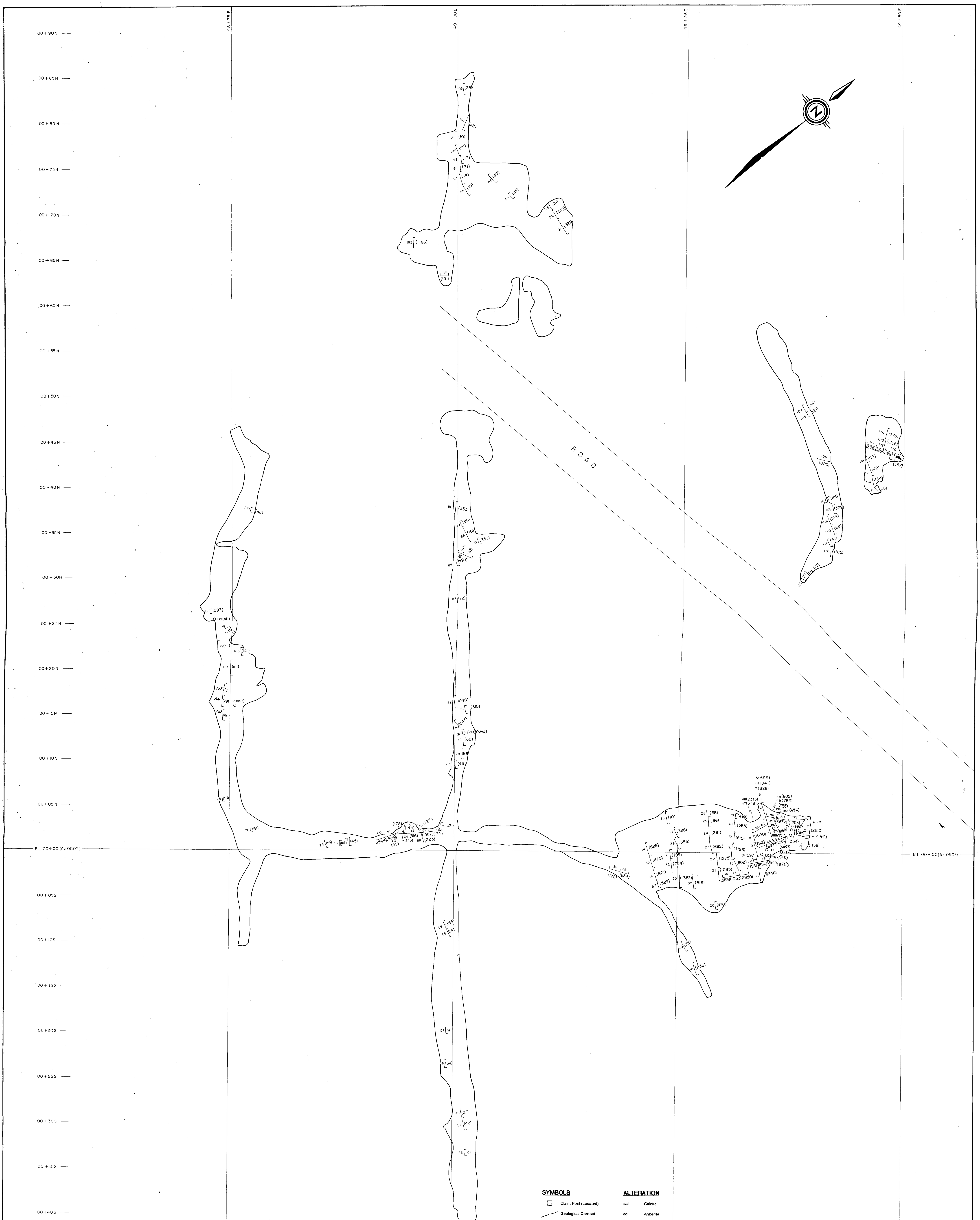
ENGLISH-ZAVITZ PROJECT 1991

Porcupine Mining District, Ontario

Trench Plan - Geology
Road Showing and Vicinity
(West Half)

NTS:	42A/3
Longitude:	81 14'
Latitude:	48 04'
Drawn By:	WK/PH
Approved By:	WK/SFS
Date:	Nov 8/91
Scale:	1 : 125
Drawing No:	7a

TINTINA MINES LIMITED



SYMBOLS

- Claim Post (Located)
- Geological Contact
- Fault
- Bedding
- Foliation
- Pillow Tops
- Float
- Outcrop
- Marsh / Swamp
- Steep Slope / Bench
- Grab Sample Location
- Channel Sample Location
- 251 (30) Sample Number (ppb gold)

ALTERATION

cal	Calcite
cc	Ankerite
mp	Mariposite
py	Pyrite
gn	Galena

SAMPLE NUMBER SCHEME

WK 1-100 Series	Grab Samples, W.C.Kerr 1990
WK 101-275 Series	Grab Samples, W.C.Kerr 1991
AA 1-... Series	Grab Samples, A.Ali 1991
15391...etc	Grab Samples, G.S.W.Bruce 1990
1-159 Series	Channel Samples, 1991
Esso319275..etc	Grab Samples, Esso 1987

SCALE 1:125

0 5 10 m

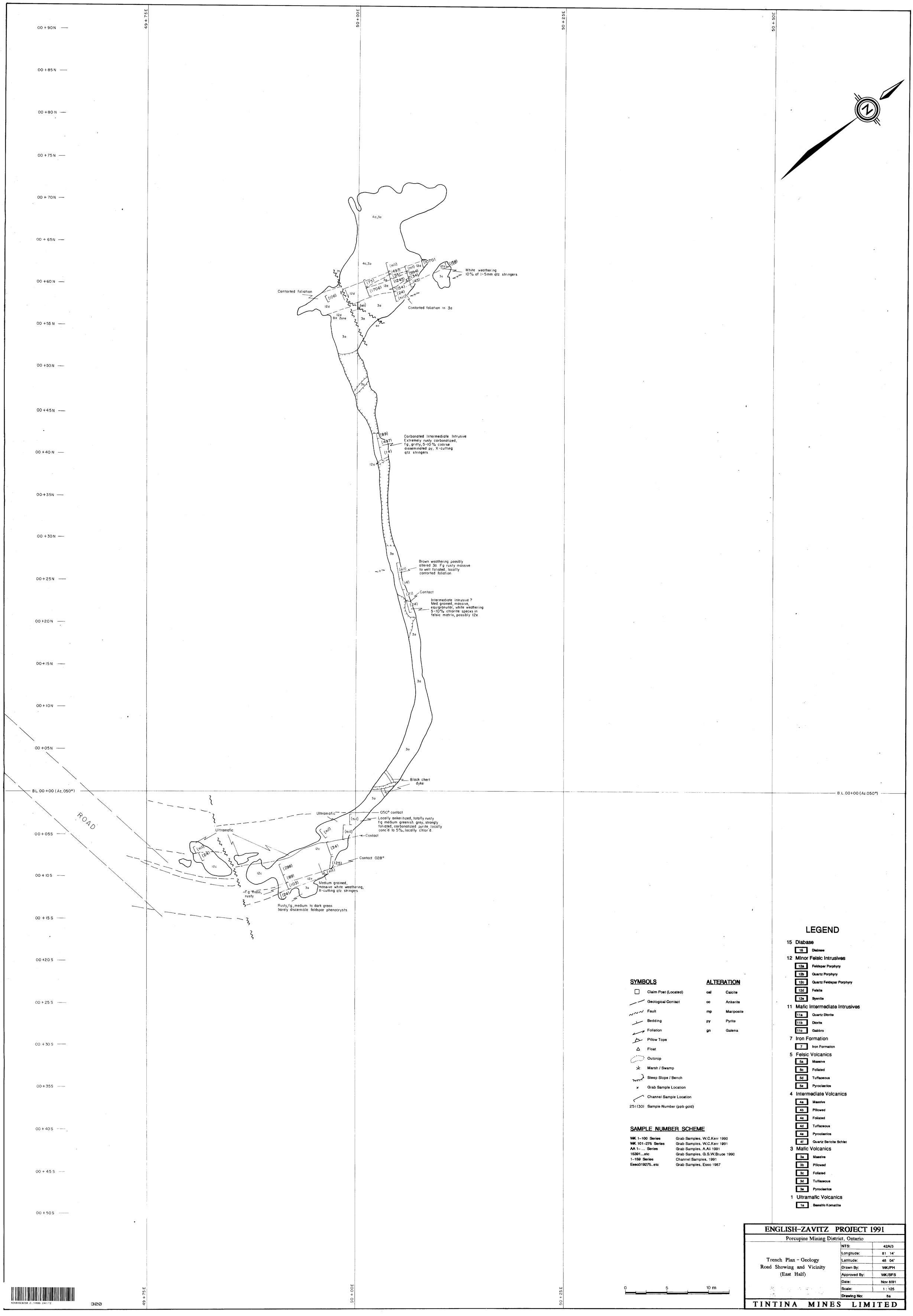
ENGLISH-ZAVITZ PROJECT 1991

Porcupine Mining District, Ontario

Trench Plan - Sample Overlay
Road Showing and Vicinity
(West Half)

NTS:	42A/3
Longitude:	81 14'
Lattitude:	48 04'
Drawn By:	WK/PH
Approved By:	WK/SFS
Date:	Nov 8/91
Scale:	1:125
Drawing No:	7b

TINTINA MINES LIMITED



SYMBOLS

- Claim Post (Located)
- Geological Contact
- Fault
- Bedding
- Foliation
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- Grab Sample Location
- Channel Sample Location
- 251 (30) Sample Number (ppb gold)

ALTERATION

cal	Calcite
cc	Ankerite
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gn	Galena

SAMPLE NUMBER SCHEME

WK 1-100 Series	Grab Samples, W.C.Kerr 1990
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AA 1-... Series	Grab Samples, A.Ali 1991
15391...etc	Grab Samples, G.S.W.Bruce 1990
1-159 Series	Channel Samples, 1991
Esso319275..etc	Grab Samples, Esso 1987

0 5 10 m

LEGEND

- 15 Diabase
  - 15 Diabase
- 12 Minor Felsic Intrusives
  - 12a Feldspar Porphyry
  - 12b Quartz Porphyry
  - 12c Quartz Feldspar Porphyry
  - 12d Felsite
  - 12e Syenite
- 11 Mafic Intermediate Intrusives
  - 11a Quartz Diorite
  - 11b Diorite
  - 11c Gabbro
- 7 Iron Formation
  - 7 Iron Formation
- 5 Felsic Volcanics
  - 5a Massive
  - 5c Foliated
  - 5d Tuffaceous
  - 5e Pyroclastics
- 4 Intermediate Volcanics
  - 4a Massive
  - 4b Pillowed
  - 4c Foliated
  - 4d Tuffaceous
  - 4e Pyroclastics
  - 4f Quartz Sericite Schist
- 3 Mafic Volcanics
  - 3a Massive
  - 3b Pillowed
  - 3c Foliated
  - 3d Tuffaceous
  - 3e Pyroclastics
- 1 Ultramafic Volcanics
  - 1a Basaltic Komatiite

ENGLISH-ZAVITZ PROJECT 1991

Porcupine Mining District, Ontario

Trench Plan - Geology
Road Showing and Vicinity
(East Half)

NTS:	42A/3
Longitude:	81 14'
Latitude:	48 04'
Drawn By:	WK/PH
Approved By:	WK/SFS
Date:	Nov 8/91
Scale:	1 : 125
Drawing No:	8a

TINTINA MINES LIMITED

49+75E

50+00E

50+25E

50+50E

00+90N

00+85N

00+80N

00+75N

00+70N

00+65N

00+60N

00+55N

00+50N

00+45N

00+40N

00+35N

00+30N

00+25N

00+20N

00+15N

00+10N

00+05N

B.L. 0+00 (Az 050°)

B.L. 00+00 (Az 050°)

00+05S

00+10S

00+15S

00+20S

00+25S

00+30S

00+35S

00+40S

00+45S

00+50S

ROAD

131 (nil)
132 (1497)
133 (55)
134 (1245)
135 (154
136 (24)
137 (nil)
138 (1706)
139 (75)
140 (106)
141 (nil)
125 (158)
126 (1070)
127 (45)
128 (34)
129 (994)
130 (nil)
142 (497)
143 (89)
144 (14)
145 (nil)
146 (14)
147 (21)
148 (24)
149 (nil)
150 (nil)
151 (34)
152 (25)
153 (nil)
154 (24)
155 (103)
156 (89)
157 (298)
158 (nil)
159 (24)
177 (nil)

SYMBOLS

- Claim Post (Located)
- Geological Contact
- Fault
- Bedding
- Foliation
- Pillow Tops
- Float
- Outcrop
- Marsh / Swamp
- Steep Slope / Bench
- Grab Sample Location
- Channel Sample Location
- 25! (30) Sample Number (ppb gold)

ALTERATION

cal	Calcite
cc	Ankerite
mp	Mariposite
py	Pyrite
gn	Galena

SAMPLE NUMBER SCHEME

WK 1-100 Series	Grab Samples, W.C.Kerr 1990
WK 101-275 Series	Grab Samples, W.C.Kerr 1991
AA 1- ... Series	Grab Samples, A.Ali 1991
15391...etc	Grab Samples, G.S.W.Bruce 1990
1-159 Series	Channel Samples, 1991
Esso319275..etc	Grab Samples, Esso 1987

0 5 10 m

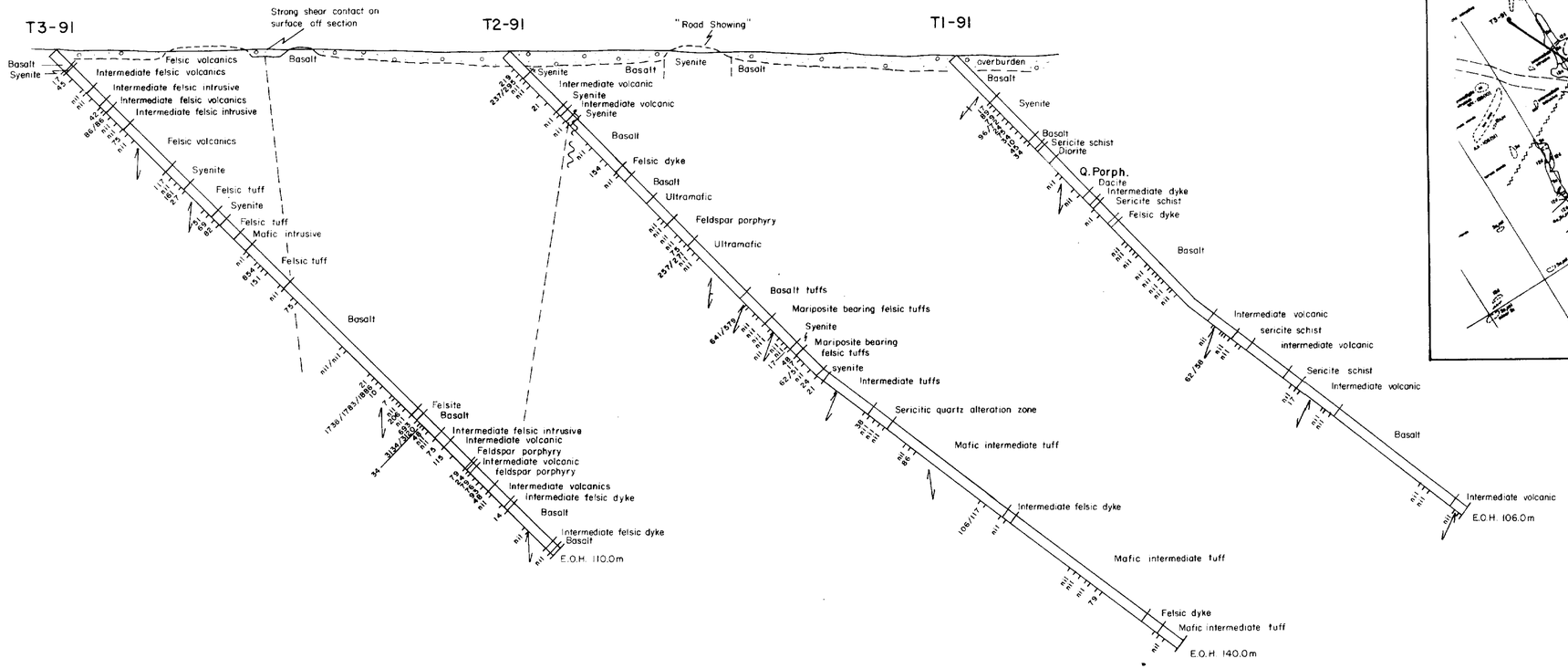
ENGLISH-ZAVITZ PROJECT 1991

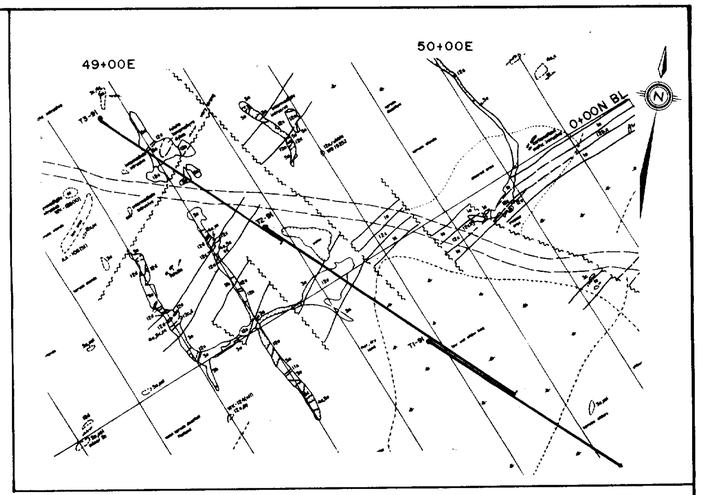
Porcupine Mining District, Ontario

Trench Plan - Sample Overlay
Road Showing and Vicinity
(East Half)

NTS:	42A/3
Longitude:	81 14'
Latitude:	48 04'
Drawn By:	WK/PH
Approved By:	WK/SFS
Date:	Nov 8/91
Scale:	1 : 125
Drawing No:	8b

TINTINA MINES LIMITED





0 25m

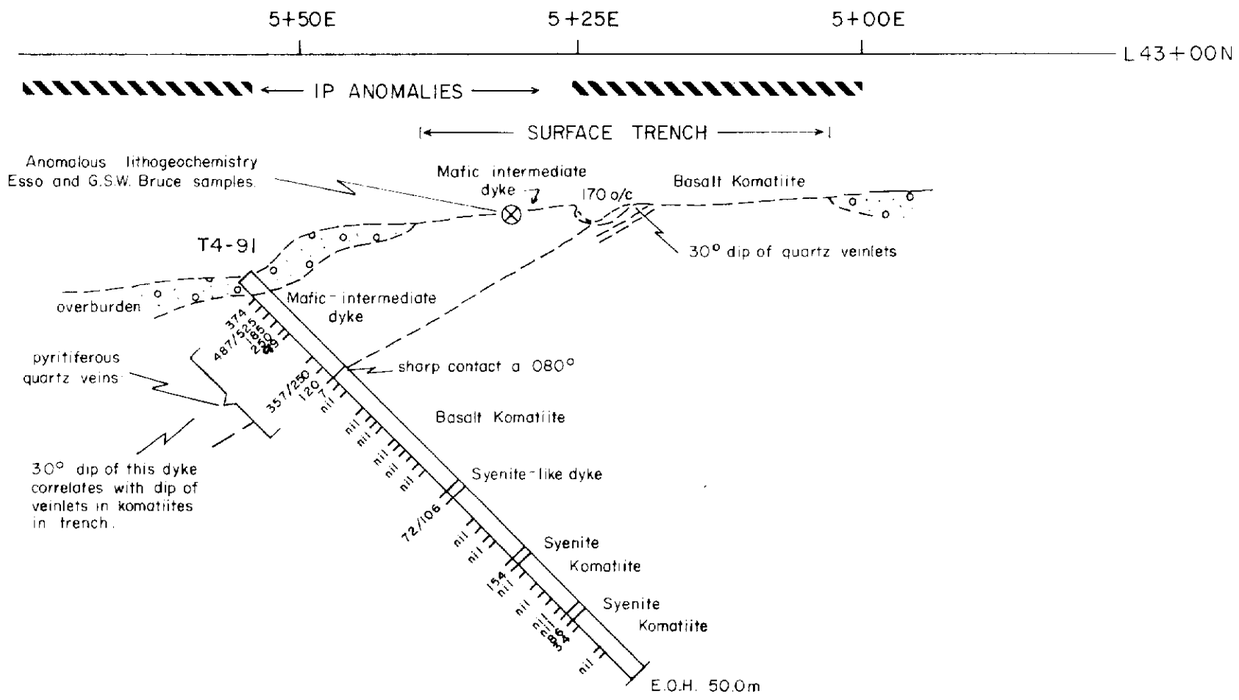
ENGLISH-ZAVITZ PROJECT 1991

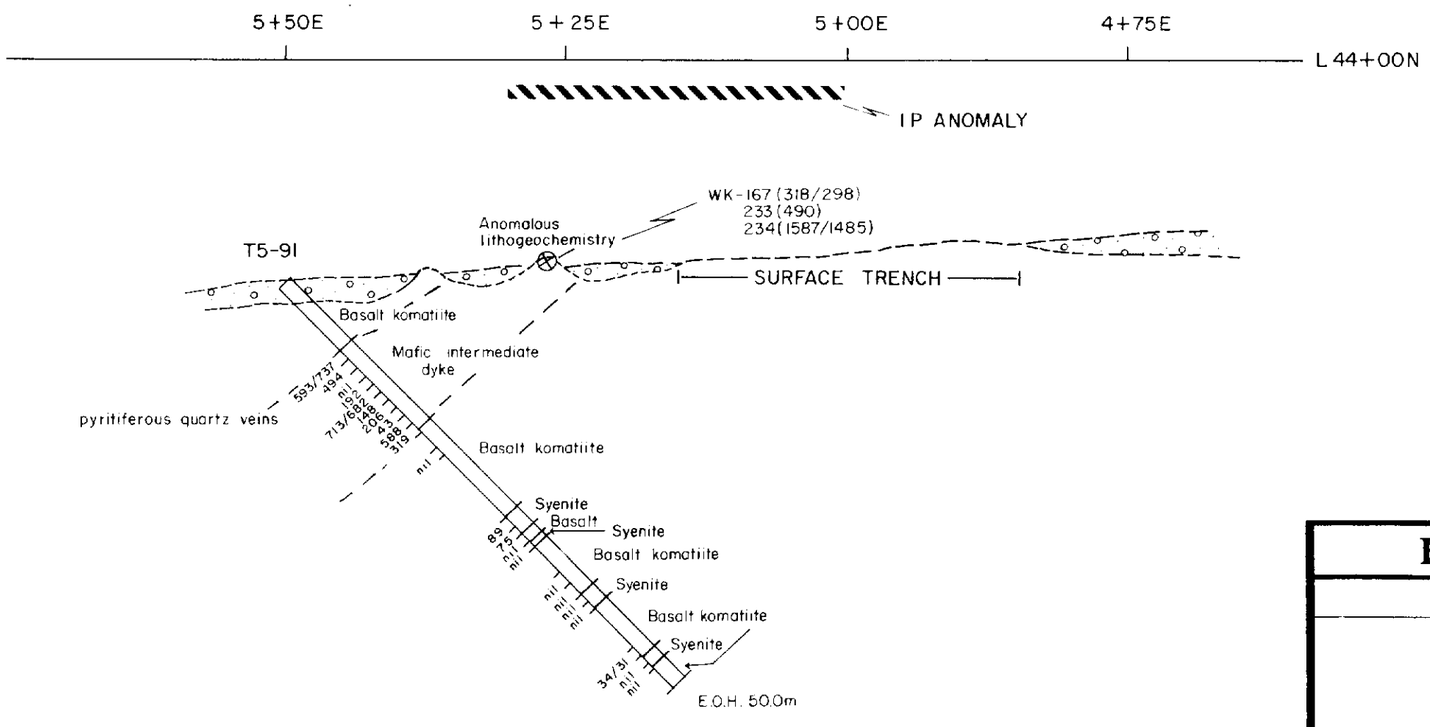
Porcupine Mining District, Ontario

Drill Hole Section
ddh T1-91, T2-91, T3-91
Road Showing and Vicinity

NTS:	42A/3
Longitude:	81 14'
Lattitude:	48 04'
Drawn By:	WK/PH
Approved By:	WK/SFS
Date:	Nov 8/91
Scale:	1 : 500
Drawing No:	9

TINTINA MINES LIMITED





(Looking Southwest)

ENGLISH-ZAVITZ PROJECT 1991		
Porcupine Mining District, Ontario		
Drill Hole Sections ddh T4-91 and T5-91 43North Showing	NTS:	42A/3
	Longitude:	81 14'
	Latitude:	48 04'
	Drawn By:	WK/PH
	Approved By:	WK/SFS
	Date:	Nov 8/91
	Scale:	1 : 500
	Drawing No:	10
TINTINA MINES LIMITED		