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**Preliminary Geochemical and Geological Assessment  
of the  
THOR 1-7 Claims**

Omineca Mining Division  
NTS 94D/15W

Latitude 56°50'N Longitude 126°40'W

FILMED

for  
Electrum Resource Corporation

by  
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**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

June 30, 1993

22,957

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## Summary and Conclusions

The THOR 1-7 claims were staked to cover a number of small magnetic highs flanking larger anomalies related to Early Jurassic intrusives cutting Takla Group mafic volcanic rocks. The smaller anomalies were thought to possibly reflect the presence of satellitic intrusive stocks. In other areas of British Columbia such as the Mount Milligan region, this geological environment has been shown to have potential for significant porphyry style copper-gold mineralization. The important Kemess copper-gold deposits are located approximately 18 kilometres to the north of the THOR property.

Previous work in the general area by a number of companies was aimed at paleoplacer gold and shear-hosted vein situations. Even though one report describes widespread malachite, chalcopyrite and/or magnetite on fractures in Takla rocks, the porphyry potential of this area was never addressed. Electrum Resource Corporation carried out reconnaissance level prospecting, rock and silt sampling to determine the extent of copper mineralization and to evaluate the claims' potential for significant porphyry style mineralization.

A number of copper occurrences are present on the property, in particular on the THOR 3 claim. Limited prospecting this year revealed a previously unknown showing consisting of a series of sericitized and silicified monzonite to quartz monzonite dykes intruding chloritized Takla Group basaltic volcanics and in places constituting the matrix to breccia. The intrusive is invariably mineralized with disseminated and fracture-controlled chalcopyrite and malachite along with lesser bornite. Quartz veins and stringers up to several mm in width may be present and magnetite-filled fractures together with quartz-magnetite veins up to several cm in width are common. A six metre chip sample contained 0.482% Cu and 0.23 g Au/t. Selected material contained up to 1.8% Cu and 0.53 g Au/t. This occurrence is bounded to the east by a wide zone of intense quartz calcite epidote veining.

Several other occurrences on the THOR 3 claim consist of shear hosted veins containing various base metal sulphides. Zone A consists of abundant bornite, chalcopyrite and pyrite together with secondary copper minerals in fractured chloritized and carbonatized Takla volcanics. Samples returned values of up to 8.56% Cu and 2.34 g Au/t over 1.5 metres. Zone B includes at least two quartz veins with pyrite and/or galena. Zone C consists of a series of shear hosted quartz-calcite-pyrite sphalerite galena veins situated in a zone at least 25 metres wide.

The fact that significant levels of copper and gold together with magnetite-filled fractures are associated with monzonitic intrusive rock at the Thor Zone suggests potential for porphyry style copper gold mineralization. A large flanking zone of intense quartz calcite epidote veining may represent hydrothermal alteration associated with the mineralizing event which produced the Thor Zone. Base metal enriched veins such as those at the A, B, and C zones are interpreted as possibly representing peripheral veins to such a system.

In general, alteration and mineralization intensity on the THOR 3 claim increase to the west, suggesting that a larger system with which the above mineralization and alteration are associated may lie under overburden west of the Thor Zone, on the THOR 5-7 claims. Although the Moose Valley fault separating Takla Group rocks from Upper Cretaceous Sustut basinal sediments is present in this area, its location is not precisely known. In any case, a number of other copper occurrences are spatially related to it on a regional scale and may in fact be genetically related. The association between porphyry systems and major faults is well known.

## **Recommendations**

Further work on the THOR claims should include the following:

- a) More detailed (1:5,000) mapping, prospecting and rock sampling on the THOR 3, 5, 6 and 7 claims. The geology in this area has only been partly evaluated at a reconnaissance level and additional showings and altered zones could be present.
- b) Cut a grid of E-W lines spaced at 500 metres on the THOR 5, 6 and 7 claims as well as the lower slopes on the THOR 3 claim. This would be used to control a reconnaissance IP survey which would aid in determining the presence or absence of significant sulphide mineralization under overburden here. At the same time, the depth of the latter and a more precise location for the Moose Valley fault could be estimated.
- c) Should the results of (a) and (b) warrant it, a second stage of work would involve more detailed IP, ground magnetics and drill-testing of any targets generated.

## Introduction

The THOR 1-7 claims were staked in the summer of 1992 on the basis of a number of regional magnetic anomalies together with geological characteristics suggesting potential for porphyry copper-gold deposits. The property is situated approximately 20 kilometres south of the KEMESS copper-gold deposit being drilled by El Condor Resources. Previous workers had staked the THOR area on the basis of extremely high values of gold and platinum in heavy mineral concentrates from stream sediment samples and in subsequent work programs, had collected a large number of rock samples containing significant levels of copper and gold. Although all of the previous work was focussed on the precious metals potential in small veins and shears, the widespread occurrence of fracture-controlled copper mineralization with significant gold values suggested to the writer that the area had potential for porphyry copper-gold mineralization.

Electrum retained the writer to conduct a reconnaissance level program of prospecting, silt and rock sampling on the new claims. The writer and P.A. Ronning of New Caledonian Geological spent four days on the property in the period July 7-10, 1992.

## Location and Access

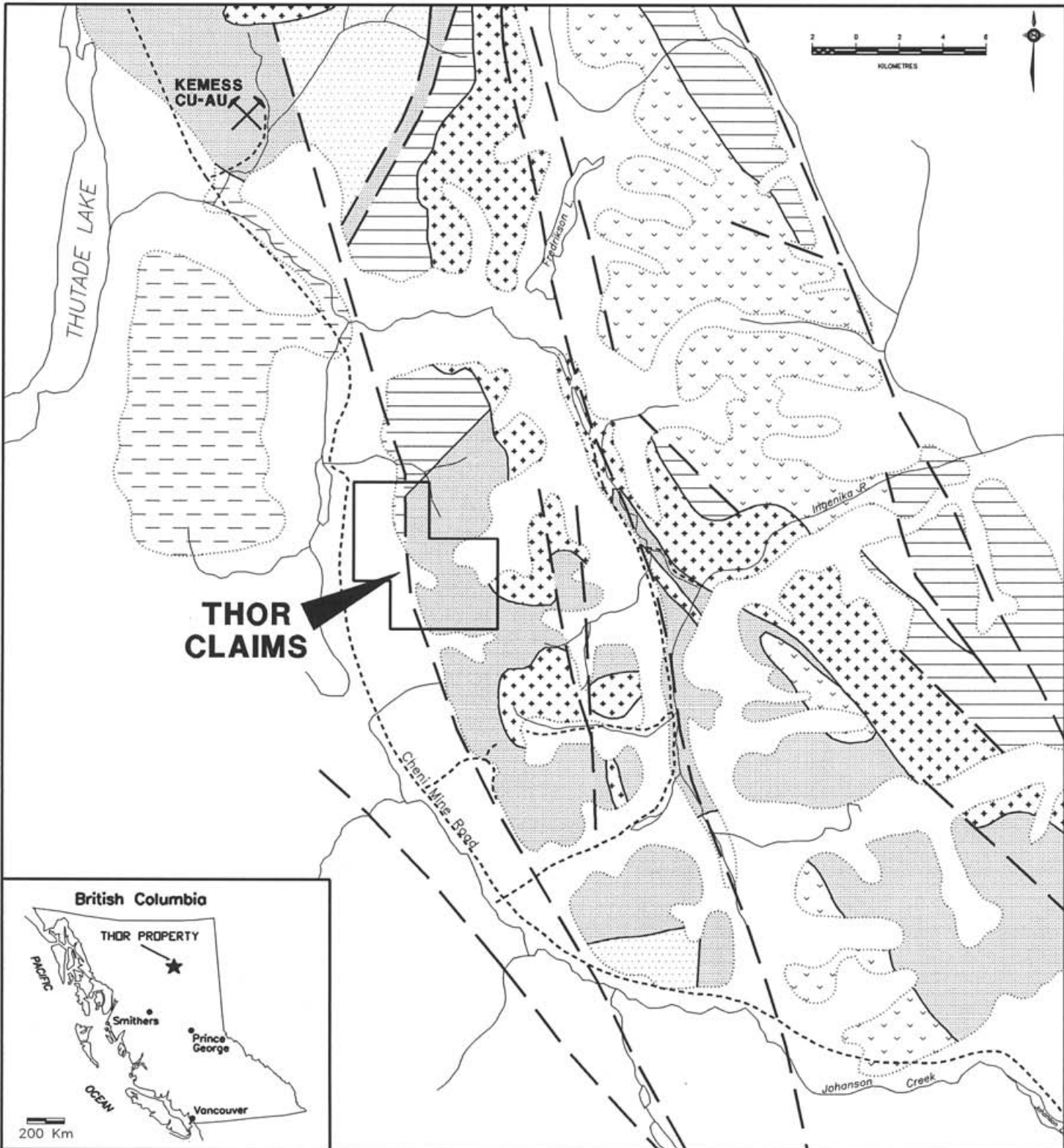
The claims are situated approximately 220 km due north of Smithers, B.C., centred at Latitude 56°50'N and Longitude 126°40'W (Fig. 1). The NTS sheet is 94D/15W. The Cheni Mine Road passes within 500 metres of the western claim boundary. Access to the eastern portion of the property may be more convenient by helicopter, especially from temporary bases often located along the Cheni Road between Aiken Lake and the Toodoggone area. Airstrips, also along the Cheni Road, are located 9 kilometres to the south at Moose Valley and in the Sturdee River Valley some 50 kilometres to the north.

Topography on the property is steep, with elevations ranging from 1300 to 2000 metres ASL. Conifer forest is typical of slopes below 1500 metres while dwarf conifers are found between about 1500 and 1700 metres. Alpine grasses are characteristic of elevations over 1700 metres.

## Tenure

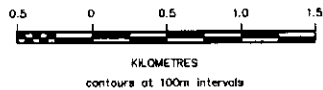
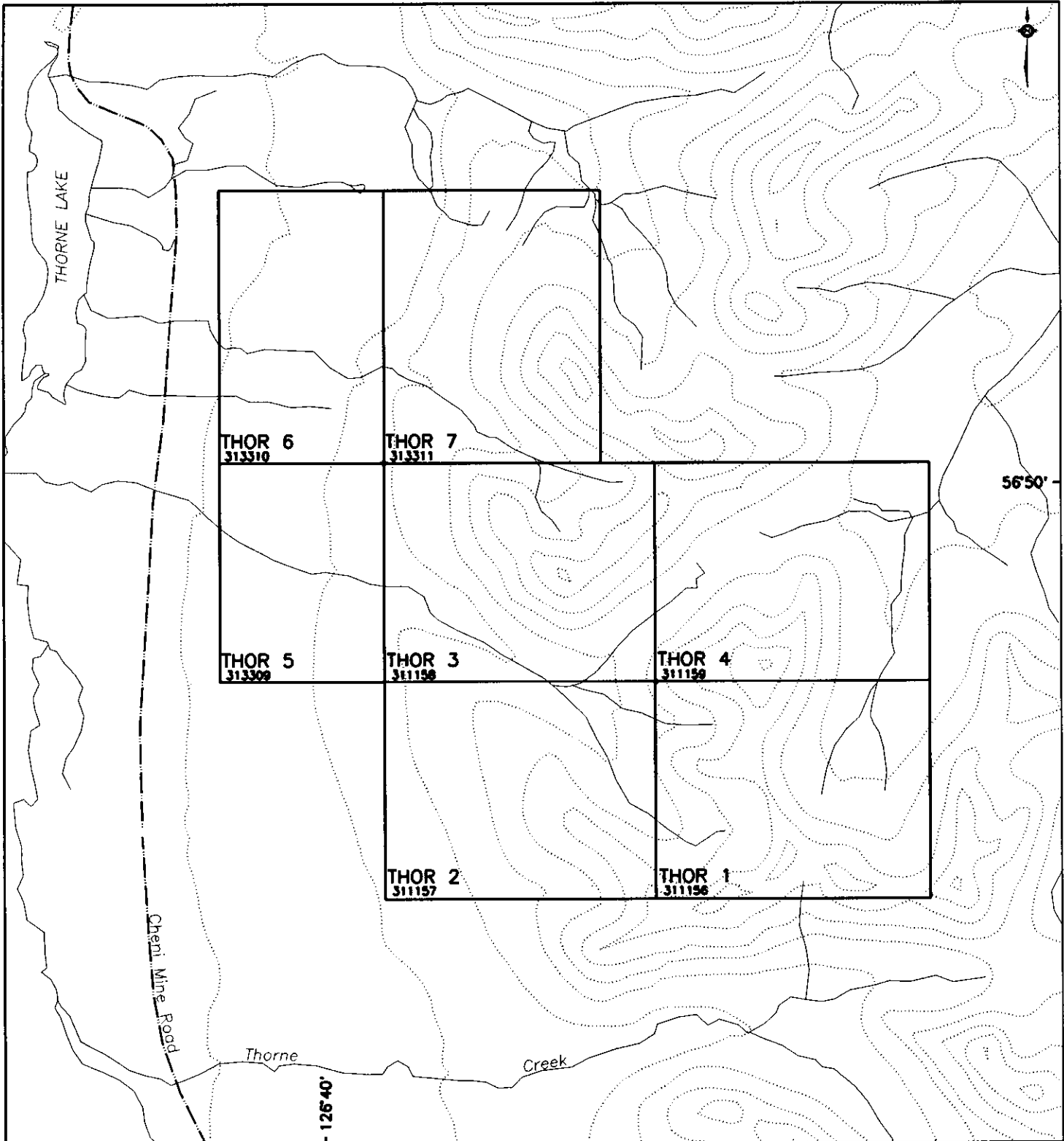
The claims comprising the ATTY property are wholly owned by Electrum Resources Corporation and their particulars are listed in Table One:

Table One				
Name	Units	Old Record Number	New Tenure No.	Expiry
THOR 1	20		311156	July 7, 1993
THOR 2	20		311157	July 7, 1993
THOR 3	20		311158	July 7, 1993
THOR 4	20		311159	July 7, 1993
THOR 5	12		313309	Sept. 10, 1993
THOR 6	15		313310	Sept. 10, 1993
THOR 7	<u>20</u>		313311	Sept. 9, 1993
	127			



	uK Sustut Gp sediments		eK qtz diorite to granite
	IJ Hazelton Gp volcanics		eJr diorite to qtz monzodiorite
	uTr Takla Gp volcanics, sediments		geological contact
	Paleozoic sediments, volcanics		fault
			gross outcrop limit

<b>ELECTRUM RESOURCE CORP.</b>		
<b>THOR PROPERTY</b>		
<b>PROPERTY LOCATION</b>		
Date: Nov 1992	Drawn by: STARRARD GEOLOGICAL	No: THOR.DWG
Scale: As Shown	Revised:	Page: 1



**ELECTRUM RESOURCE CORP.**

**THOR PROPERTY**

**CLAIM LOCATIONS**

Date: Nov 1992	Drawn by: STANBARD GEOLOGICAL	File: thorclam.dwg
Scale: As Shown	Sheet: 2	Page: 2

## **History of Work**

The earliest record of work indicates that BP Minerals conducted a regional stream sediment sampling program in the 1970's and later staked two claims over what is now the southern half of the THOR 2 claim and the area to the south. The claims were staked on the basis of two Cu-Zn-As and Au-Ag silt anomalies. Silt, soil, talus fines and rock samples were collected from two gossanous areas on the ridge along the current south property boundary. Low precious metals values led to the abandonment of the BP claims.

In 1984, Falconbridge Ltd. optioned a large claim block, located mainly to the west of the current claims but partly overlapping the THOR 3,5,6 and 7 claims, from Asitka-Gunsteel Resource Corporation. Exploration was aimed at determining the paleoplacer gold potential of the Upper Cretaceous to Early Tertiary Sustut Basin sediments. A program of silt, soil and rock sampling was carried out in 1984 but gold values in the sediments were low and the claims were allowed to lapse.

Asamera Minerals conducted a regional heavy mineral in stream sediments survey in 1987 and in 1988, staked six claims covering the area of the current claims on the basis of very high gold and platinum values in the stream draining the centre of the property. In that year and in 1989, several small programs of silt and rock sampling together with prospecting were completed. High gold and/or silver and/or base metal values were found in some small veins and shear zones in the northwest part of the property while sporadic high silver and base metal values were detected in some of the small gossans to the south that were sampled previously by BP Minerals. Asamera concluded that none of the occurrences had the potential for significant tonnage in vein type situations and allowed the claims to lapse in 1992. The porphyry potential of this area was not addressed.

## **Regional Geology**

The THOR property is underlain mainly by mafic volcanics of the Upper Triassic Takla Group, in particular the Savage Mountain Formation consisting of augite-feldspar phyric basaltic flows, breccias and tuffs (Fig. 1). Immediately to the north, these rocks are in contact with Permian Asitka Group volcanics, argillite and limestone. Both groups are intruded by Early Jurassic stocks, plugs and dykes ranging in composition from diorite to quartz monzodiorite. A subsequent period of intrusive activity in Early Cretaceous time emplaced a number of quartz diorite to granodiorite stocks and plutons.

The area is structurally complicated, with numerous generally northwesterly trending faults which have separated the above lithologies into many small and scattered fault blocks. The McConnell Range, within which the THOR property is situated, is bounded on the west by the Moose Valley Fault and on the east by the Ingenika Fault, both of which are splays off the Pinchi Fault, a major regional break. Grabens within this faulted system have been filled with basinal siltstones, sandstones, conglomerates and minor coal seams of the Upper Cretaceous to Eocene Sustut Group.

Many occurrences of copper and/or gold are known in the area, the most significant of which to date is the Kemess copper-gold porphyry being worked by El Condor Resources. Immediately east of the McConnell Range in which the property is located, placer gold was mined in the McConnell Creek drainage earlier this century.

## **Regional Magnetism**

The THOR area was originally selected on the basis of several interesting magnetic anomalies visible on the 1:250,000 scale regional magnetic map published by the federal government. Recontouring of this data with newer and more sophisticated computer software has in many other areas revealed



additional detail in regional magnetic patterns. It was thought that new treatment of the regional data in the THOR area might improve the resolution of the anomalies on the published map and aid in prioritizing areas requiring further exploration.

The magnetic data for NTS areas 94D/9,10,15 and 16 was purchased from the Geophysical Data Centre in Ottawa where it had been gridded using a 200 metre cell size and a Transverse Mercator projection. The data has been corrected for regional trends. Further contouring and processing were carried out for Electrum using version 4.06 of TOPO, a commercial software package published by Golden Software of Denver, Colorado and the AXIS software package published by Geonex Aerodat Inc.

Unfortunately, the recontoured data showed no additional detail over and above what is visible on published maps (Fig. 3). The THOR property wholly encompasses one positive magnetic high and partly covers two others. All three exhibit magnetic relief of a few hundred nT. They flank larger and stronger highs to the east associated with Early Jurassic intrusives cutting Takla Group volcanic rocks and may reflect the presence of satellitic intrusions of the same age. In other areas of British Columbia, such satellitic stocks have potential for significant porphyry-style copper-gold mineralization.

A larger positive anomaly is situated immediately west of the property, within an area underlain by Sustut Group sediments. The latter fill a fault bounded basin between blocks of Takla Group rocks and may overlie a downdropped block of the same. It is possible that the broad magnetic high here reflects these underlying volcanics and intrusions therein.

### **Property Geology**

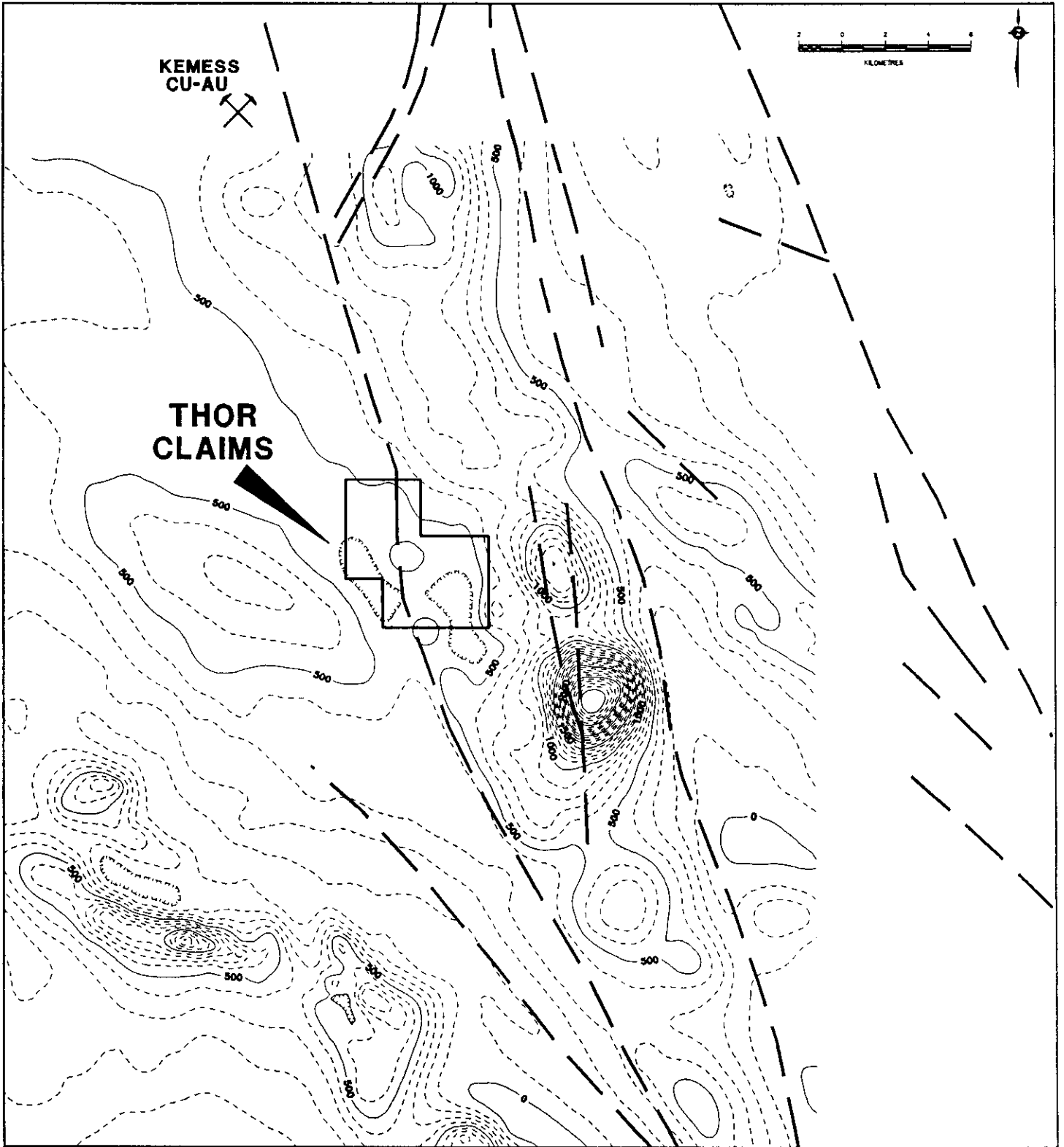
The western portion of the property is underlain mainly by augite and plagioclase phyric basaltic flows of the Savage Mountain Formation (Fig. 4). Fragmental textures were observed in places. Although most of these units are massive and show little variation, it is believed that bedding strikes northerly and dips to the west at a moderate angle. Minor variations in lithology include occasional fragmental units and some narrow serpentinized intervals which may have originally been pyroxenite. The latter appear to be thin fault-bounded slices.

Near the eastern claims boundary, thinly and well-bedded argillite is in fault contact with carbonatized and sericitized andesite. Alteration in the latter is almost certainly related to the fault. Near the fault, the argillite may be silicified and is veined with quartz in places. Traces of pyrite were occasionally observed but a number of rock samples returned values at background levels for all elements determined. Both lithologies are described for the Takla Group in this area (Richards, 1976) but they are essentially identical to rocks the GSC mapped as Permian Asitka Group immediately north of the THOR 7 claim. It may be that the latter were misidentified in the GSC mapping program.

Two main intrusive bodies are known on the THOR claims. The largest essentially bounds the property to the east and is an unaltered fine to medium grained diorite to quartz diorite. A smaller stock of hornblende diorite, also largely unaltered, occupies most of the THOR 2 claim. Several conspicuous north trending quartz feldspar porphyry dykes are present and are probably related to Cretaceous intrusive activity.

### **Mineralization**

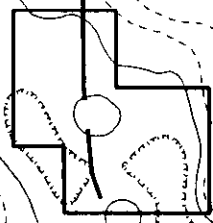
A number of mineral occurrences are known from the Asamera and BP work. Most of these were described as veins and/or shears with varying amounts of some or all of the following: pyrite,



**KEMESS  
CU-AU**



**THOR  
CLAIMS**



magnetic contours at 100 nT intervals

— — — — — fault

<b>ELECTRUM RESOURCE CORP.</b>		
<b>THOR PROPERTY</b>		
<b>REGIONAL MAGNETICS</b>		
Date Nov 1992	Drawn by <b>STANICARD GEOLOGICAL</b>	File THORMAG.DWG
Scale As Shown	Revised	Sheet 2

chalcopyrite, sphalerite, pyrrhotite, galena, malachite and azurite. Analytical results for sampling are plotted on Figure 5.

Thor Zone

This occurrence was discovered in the 1992 work program during the investigation of an area reported by Asamera to have abundant malachite stained float. Although a number of Asamera's sample flags were found with remnants of float samples along the hillside here, none were present at the showing, which appeared to be untouched and is previously unreported.

The showing consists of scattered outcrops within an area of about 100 metres by 50 metres located immediately above the tree line. Strongly chloritized Takla Group basalts are cut by a number of sericitized and silicified monzonite to quartz monzonite dykes up to 2 metres wide (Plate A). In at least one place, the intrusive constitutes the matrix to brecciated volcanic rocks (Plate B). It is generally highly fractured, as are the host volcanics, and is invariably mineralized with disseminated and fracture-controlled chalcopyrite and malachite along with lesser bornite. Quartz veins and stringers up to several mm in width may be present and magnetite-filled fractures together with quartz-magnetite veins up to several cm in width are common.

A number of representative grab samples and chip samples were taken and the results are summarized in Table Two:

<b>Table Two Thor Zone Sampling</b>				
Sample No.	Type	Lithology	% Cu	g Au/t
THCR 8	selected grab	angular intrusive float	0.414	131 ppb
THCR 9	selected grab	angular intrusive float	1.800	0.53
THCR 10	6m chip	fractured volcanic in place	0.482	0.23
THCR 11	2m chip	intrusive dyke in place	2.347	1.52

Immediately above this showing is a zone of stockwork quartz-carbonate-epidote veining outcropping as steep cliffs for over 500 metres. Fracturing and veining are intense (Plate C). Although the steep terrain prevented a traverse across and detailed examination of this material, it does not appear to be significantly sheared and is probably not related to a major throughgoing structure. It is possible that it represents fracturing and hydrothermal alteration related to an intrusive at depth or to the west of the THOR occurrence.

Zone A

Zone A consists of a brittle shear zone about five metres wide and trending 340° in Takla Group rocks. Fractures within the shear are oriented at 80/50S and 340/75S. Within the shear, basaltic volcanics are chloritized and carbonatized. Chalcopyrite and bornite occur as disseminations and massive pods a few centimetres across. Exposed surfaces have heavy coatings of malachite, azurite and possibly chalcocite. Three chip samples, each approximately 1.5 meters wide, were collected in sequence from left to right across Zone A and results are tabulated in Table Three.

**Table Three  
A Zone Sampling**

Sample No.	Type	Lithology	% Cu	g Au/t
92-15-1	1.5m chip	fractured volcanic in place	0.748	1.21
92-15-2	1.5m chip	fractured volcanic in place	8.560	2.34
92-15-3	1.5m chip	fractured volcanic in place	6.935	2.11

A similar occurrence was found about 50 metres west and 10 metres downslope from Zone A in the course of staking additional claims. Other smaller copper showings are present in the general vicinity. These have not yet been sampled.

### Zone B

At least two quartz veins are present in Takla volcanics at this site. The volcanics are in places shattered and healed by a network of hairline calcite veinlets and may exhibit intense iron oxide staining. One quartz vein has been exposed in a small hand pit and is vuggy with up to 40% pyrite. The other is also vuggy, heavily iron-stained and carries galena in places. Samples of the veins contained up to 63.6 ppm Ag, 2.59 g Au/t, 3577 ppm Pb, 710 ppm Zn and 889 ppm As.

### Zone C

Mineralization here is related to a set of anastomosing shears up to 25 metres wide and exposed over a strike length of 75-100 metres. Several different vein types are present within the sheared zones, including py on fractures, calcite-pyrite sphalerite and quartz-pyrite sphalerite galena. The latter may be weakly banded in places. The shears are developed in chloritized Takla basalts and have an intensely chloritized and fractured or brecciated envelope. This occurrence is interpreted as possible peripheral veining associated with porphyry style mineralization.

Two selected grab samples (THCR-6,7) were taken and returned values of up to 3668 ppm Zn, 24.7 ppm Cd, 889 ppm As, 216 ppm Pb and 768 ppb Au.

### Zone E

Zone E is a small gossan developed at the contact between hornblende diorite and Takla volcanics, the latter being laced with calcite veinlets and cut by a number of aplitic dykes. BP Minerals personnel described a pyrite vein with discontinuous pods and disseminations of pyrite together with traces of malachite on fractures. A sample taken by them contained 1388 ppm Cu and 15 ppb Au. Two selected samples (PR-2,3) taken in the current program contain up to 1651 ppm Cu and 751 ppb Au.

### Zone F

Zone F was described by BP Minerals as a 15 metre wide shear with stringers and pods of pyrite together with traces of chalcopyrite and pyrrhotite in epidotized and chloritized Takla volcanics. One sample was reported to contain 1011 ppm Cu and 10 ppb Au. Asamera collected several samples

containing over 1000 ppm Cu from "a series of sub-parallel shears with amphibole-pyrite and quartz-pyrite veining." Other sulphides present in the quartz veins include sphalerite, galena and malachite. This showing was not visited in the current program.

### **Heavy Mineral Geochemistry**

Twenty four samples of heavy mineral concentrates were collected from stream sediments using the "Barakso pan". All samples were further processed at Min-En Laboratories where a heavy mineral concentrate was prepared using heavy liquid separation. The non-magnetic fraction was then analyzed for 30 elements by ICP and for gold by fire assay preparation and AAS. All results are tabulated in Appendix A and gold values are plotted on Figure 5.

In general, values for most elements determined are low. It should be noted that only three samples are from streams draining the area containing the more significant copper occurrences and one of these is anomalous in gold (sample THM-19 @ 864 ppb Au). None of the three are anomalous in copper. Two were from sites well downstream from the ideal sample site at the break in slope. The other is directly below outcropping copper mineralization. It may be that copper is hydromorphically rather than mechanically dispersed in this area.

One other sample from the northwestern part of the property returned an elevated gold value (sample THM-18 @ 1493 ppb). Sample THM-3 containing 1576 ppb Au was taken in a stream draining an area with minor sphalerite and pyrite in quartz veins near the centre of the THOR 1-4 block. The high gold value reported by Asamera for the stream draining the centre of the THOR 1-4 block was not reproduced. This may be due to local placer accumulation at the sample site.

## References

- Heberlein, D.R. (1984): Assessment Report on the 1984 Geological and Geochemical Exploration Activities on the Goldway 11 Claim Group, BCMEMPR Assessment Report 13459.
- Lehtinen, J. (1984): Geology and Geochemistry of the Asitka Properties for Asitka Resource Corp., Gunsteel Resources Inc. and Falconbridge Ltd., BCMEMPR Assessment Report 13001.
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- Monger, J.W.H. (1977): "Lower Mesozoic Rocks in McConnell Creek Map Area (94D), British Columbia, GSC Paper 76-1a, pp. 51-55.
- Richards, T.A. (1976): 1:250,000 Scale Geological Map of the McConnell Creek Map Area (94D E), GSC Open File 342.
- Richards, T.A. (1977): "Takla Project (Reports 10-16): McConnell Creek Map Area (94D, East Half), B.C.", GSC Paper 76-1a, pp. 43-50.

**Statement of Qualifications**

I, C.F. Staargaard, of 1470 Doran Road, North Vancouver, B.C., hereby certify that:

a) I am a consulting geologist with offices at 912-510 West Hastings St., Vancouver, B.C.

b) I have the following degrees:

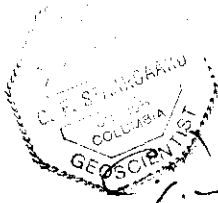
1977	B.Sc. Geology	The Pennsylvania State University
1981	M.Sc. Geochemistry	Queen's University, Kingston, Ontario

c) I am a member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia.

d) I have been continuously employed in mineral exploration in Canada, the USA and South America since 1979 and seasonally since 1975.

e) This report is based on available information together with my personal observations on the THOR property

f) I have an interest in the THOR property.

  
*C.F. Staargaard*  
Vancouver, B.C.

**Appendix A**  
**Analytical Results**





**MINERAL  
• ENVIRONMENTS  
LABORATORIES**  
(DIVISION OF ASSAYERS CORP.)

SPECIALISTS IN MINERAL ENVIRONMENTS  
CHEMISTS • ASSAYERS • ANALYSTS • GEOCHEMISTS

**VANCOUVER OFFICE:**

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**SMITHERS LAB.:**

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TELEPHONE (604) 847-3004  
FAX (604) 847-3005

Assay Certificate

2V-0685-RA1

Company: **JOHN BARAKSO**  
Project:  
Attn: **JOHN BARAKSO**

Date: **JUL-30-92**  
Copy 1. JOHN BARAKSO, NORTH VANCOUVER, B.C.

We hereby certify the following Assay of 12 ROCK samples submitted JUL-21-92 by JOHN BARAKSO.

Sample Number	AU-FIRE g/tonne	AU-FIRE oz/ton	CU %
THCR-01			.005
THCR-02			.007
THCR-03			.012
THCR-06	0.46	.013	.003
THCR-07	0.73	.021	.004
THCR-08			.414
THCR-09	0.53	.015	1.800
THCR-10	0.23	.007	.482
THCR-11	1.52	.044	2.347
PR THOR 92-01			.061
PR THOR 92-02			.013
PR THOR 92-03	0.74	.022	.194
PR THOR 92-04			.135
PR THOR 92-05	0.56	.016	.020
PR THOR 92-06	2.59	.076	.027
PR THOR 92-10			.014
PR THOR 92-11			.030
PR THOR 92-12			.024
PR THOR 92-16	0.51	.015	4.790
PR THOR 92-15-1	1.21	.035	.748
PR THOR 92-15-2	2.34	.068	8.560
PR THOR 92-15-3	2.11	.062	6.935

Certified by \_\_\_\_\_ 

MIN-EN LABORATORIES



**MINERAL  
• ENVIRONMENTS  
LABORATORIES**  
(DIVISION OF ASSAYERS CORP.)

SPECIALISTS IN MINERAL ENVIRONMENTS  
ANALYSIS

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**Geochemical Analysis Certificate**

**2V-0685-RG1**

Company: **JOHN BARAKSO**

Date: **JUL-28-92**

Project:

Copy 1. JOHN BARAKSO, NORTH VANCOUVER, B.C.

Attn: **JOHN BARAKSO**

*We hereby certify* the following Geochemical Analysis of 12 ROCK samples submitted JUL-21-92 by JOHN BARAKSO.

Sample Number	BA-TOTAL PPM
THCR-01	1159
THCR-02	574
THCR-03	30
THCR-06	3
THCR-07	143
THCR-08	1396
THCR-09	35
THCR-10	289
THCR-11	145
PR THOR 92-01	296
PR THOR 92-02	355
PR THOR 92-03	122
PR THOR 92-04	269
PR THOR 92-05	19
PR THOR 92-06	50
PR THOR 92-10	37
PR THOR 92-11	378
PR THOR 92-12	18
PR THOR 92-16	49
PR THOR 92-15-1	354
PR THOR 92-15-2	117
PR THOR 92-15-3	110

Certified by \_\_\_\_\_

**MIN-EN LABORATORIES**

COMP: JOHN BARAKSO

PROJ:

ATTN: JOHN BARAKSO

MIN-EN LABS — ICP REPORT

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

(604)980-5814 OR (604)988-4524

FILE NO: 2V-0685-RJ1

DATE: 92/07/30

\* ROCK \* (ACT:F31) PAGE 1 OF 2

SAMPLE NUMBER	AG PPM	AL PPM	AS PPM	B PPM	BA PPM	BE PPM	BI PPM	CA PPM	CD PPM	CO PPM	CU PPM	FE PPM	K PPM	LI PPM	MG PPM	MN PPM	MO PPM	NA PPM	NI PPM	P PPM	PB PPM	SB PPM	SR PPM	TH PPM	TI PPM	V PPM	ZN PPM	GA PPM	SN PPM	W PPM	CR PPM
THCR-01	.1	5850	1	6	602	.1	5	8400	.1	5	45	19730	1030	6	3460	180	27	690	20	2980	32	2	22	2	654	184.9	99	1	1	10	210
THCR-02	.1	28310	1	16	72	.1	11	34860	.1	10	60	35100	320	7	10280	460	32	580	7	2940	1	1	61	1	1753	206.7	48	1	1	9	144
THCR-03	.1	45740	1	24	25	.1	17	56130	.1	24	104	36920	160	3	8670	481	1	70	17	900	1	1	17	1	2566	158.5	104	1	1	8	131
THCR-06	.1	13080	1	19	1	.1	28	61580	.1	15	23	136170	260	9	10020	48902	2	20	111	210	165	1	37	1	374	59.9	122	1	1	7	1
THCR-07	.1	10720	889	14	32	.1	21	15240	24.7	50	44	143510	1500	4	6160	34438	13	20	28	510	216	1	9	1	487	46.0	3668	1	1	7	92
THCR-08	.1	16680	1	10	118	.1	13	13390	.1	13	3725	36080	1770	8	15780	1267	6	450	5	960	11	1	87	1	1863	113.5	79	1	5	7	118
THCR-09	.1	24300	1	19	7	.1	1	16310	.1	23	>10000	111460	1100	17	21530	909	62	250	1	780	6	1	23	1	416	589.6	96	1	1	9	57
THCR-10	.1	33120	1	19	287	.1	10	40090	.1	22	4307	51750	2180	28	31210	998	1	1210	22	720	1	1	82	1	1740	176.4	65	1	1	6	114
THCR-11	7.5	14160	1	31	136	.1	1	7940	.1	28	>10000	119790	1880	8	5780	767	1250	400	1	350	31	11	17	1	166	283.9	140	1	1	7	58
PR THOR 92-01	.1	17850	1	10	41	.1	10	13340	.1	17	571	30940	680	10	18910	426	8	1330	26	750	1	1	47	1	1683	97.1	38	1	1	10	204
PR THOR 92-02	1.2	4170	1	4	137	.1	2	2430	.1	11	130	30030	2230	1	600	25	14	470	1	830	10	1	8	2	26	8.2	11	1	1	4	114
PR THOR 92-03	.5	18680	1	12	92	.1	3	53260	.1	17	1651	33400	2070	25	18520	1056	77	170	19	950	11	1	47	1	50	107.2	76	1	1	4	64
PR THOR 92-04	.1	39760	1	24	65	.1	24	34350	.1	51	1212	74390	1410	18	22860	1706	1	700	1	1110	1	1	102	1	5110	262.1	949	1	1	5	18
PR THOR 92-05	1.5	4040	218	4	9	.1	5	7870	.1	63	168	49790	550	1	1130	136	5	40	1	80	17	1	10	1	257	23.9	56	1	1	11	288
PR THOR 92-06	63.6	2780	889	6	15	.1	90	1410	.1	15	214	108730	630	1	550	75	11	20	1	170	3577	1	5	1	340	45.2	710	1	1	7	185
PR THOR 92-10	.6	35870	1	20	9	.1	19	43010	.1	30	108	51400	240	11	26270	852	1	130	4	1310	24	1	341	1	3225	156.4	71	1	1	5	89
PR THOR 92-11	.2	23940	1	13	92	.1	22	17730	.1	31	263	48580	1190	7	9270	406	1	2620	1	1030	5	1	99	1	4153	154.1	42	1	2	5	63
PR THOR 92-12	.1	4370	1	3	1	.1	5	2690	.1	12	205	45630	100	3	2910	310	2	40	3	130	43	1	5	1	316	357.8	68	1	1	20	402
PR THOR 92-16	>200.0	4000	32	8	16	.1	13	3500	12.9	14	>10000	99580	1120	2	1680	285	4	290	1	30	1268	74	24	1	621	29.4	2571	1	1	11	132
PR THOR 92-15-1	39.1	28700	1	16	18	.1	5	43860	.1	19	6921	38440	1740	21	42210	881	3	200	45	670	2	1	38	1	1954	213.9	161	1	2	6	113
PR THOR 92-15-2	>200.0	22450	1	18	13	.1	1	6660	.1	50	>10000	94030	1140	16	25950	570	12	270	302	700	97	61	20	1	636	149.8	228	1	1	14	92
PR THOR 92-15-3	149.8	24740	1	18	16	.1	1	18010	.1	41	>10000	97130	1140	17	29870	900	1	680	175	460	63	43	37	1	2096	175.7	165	1	1	12	75



COMP: JOHN BARAKSO  
 PROJ:  
 ATTN: JOHN BARAKSO

**MIN-EN LABS — ICP REPORT**  
 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2  
 (604)980-5814 OR (604)988-4524

FILE NO: 2V-0685-HJ1  
 DATE: 92/08/31  
 \* HEAVY MINERAL SILT \* (ACT:F31)

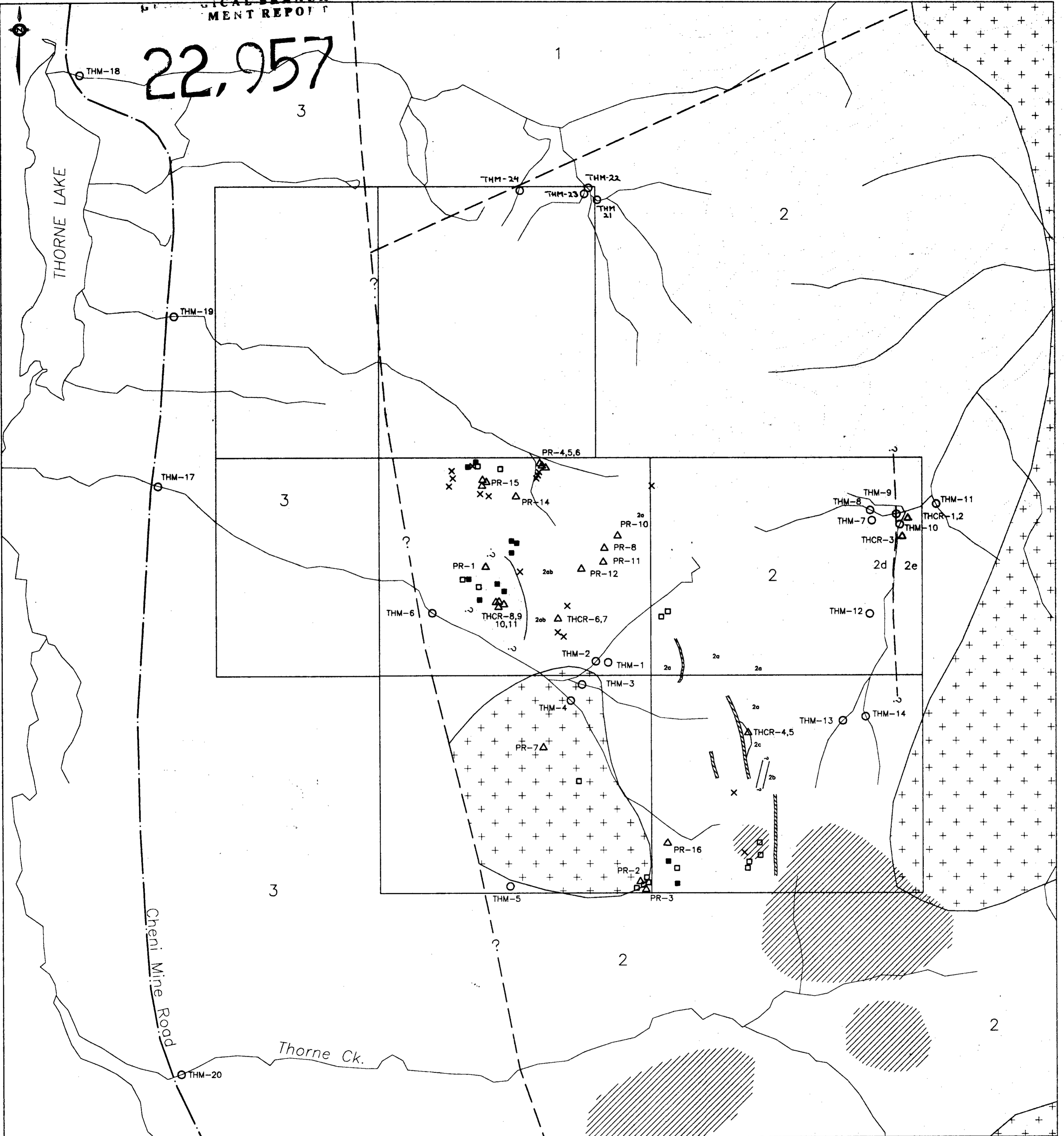
SAMPLE NUMBER	AG PPM	AL %	AS PPM	B PPM	BA PPM	BE PPM	BI PPM	CA %	CD PPM	CO PPM	CU PPM	FE %	K %	LI PPM	MG %	MN PPM	MO PPM	NA %	NI PPM	P PPM	PB PPM	SB PPM	SR PPM	TH PPM	TI PPM	V PPM	ZN PPM	GA PPM	SN PPM	W PPM	CR PPM	AU PPB
THM-01	.1	1.61	1	13	59	.1	16	1.32	.1	23	56	9.74	.04	6	.79	605	1	.02	1	580	1	1	70	1	3697	369.0	63	1	2	12	168	5
THM-02	.1	1.46	1	12	47	.1	15	1.45	.1	21	46	8.49	.03	6	.81	611	1	.02	1	530	1	1	77	1	3568	329.3	51	1	3	10	109	24
THM-03	.1	1.24	1	13	47	.1	17	1.41	.1	26	49	11.63	.03	5	.66	691	1	.01	1	590	1	1	71	1	3913	440.4	62	1	2	13	154	1576
THM-04	.1	1.30	1	14	57	.1	17	1.45	.1	33	83	>15.00	.05	7	.71	702	1	.02	1	960	1	1	76	1	4406	537.8	60	1	2	14	162	40
THM-05	.1	1.24	1	15	63	.1	15	1.45	.1	29	34	15.00	.04	4	.55	779	1	.01	1	630	1	1	80	1	4266	555.9	57	1	2	16	219	135
THM-06	.1	1.49	1	15	80	.1	17	1.59	.1	29	72	>15.00	.04	7	.81	776	1	.02	1	890	1	1	62	1	4167	544.8	65	1	2	14	163	57
THM-07	.1	2.30	1	13	20	.1	20	1.80	.1	24	60	5.82	.02	7	1.53	561	1	.01	9	420	1	1	152	1	4127	222.3	62	1	4	9	114	21
THM-08	.1	2.09	1	12	40	.1	16	1.60	.1	24	85	5.62	.03	7	1.58	614	1	.01	13	480	1	1	94	1	3241	194.3	60	1	3	8	113	26
THM-09	.1	1.74	1	10	28	.1	16	1.42	.1	22	71	5.67	.03	6	1.35	539	1	.01	12	440	1	1	84	1	3053	198.1	55	1	3	9	117	80
THM-10	.1	1.10	1	11	49	.1	13	1.19	.1	23	48	9.99	.02	5	.69	538	1	.01	1	640	1	1	37	1	2824	374.6	57	1	1	11	135	13
THM-11	.1	1.55	1	11	43	.1	19	1.55	.1	20	37	7.95	.03	6	.79	643	1	.01	1	610	1	1	96	1	3909	281.0	51	1	3	8	81	44
THM-12	.1	1.26	1	9	36	.1	15	1.16	.1	16	26	5.84	.02	5	.74	451	1	.01	1	380	1	1	62	1	3260	234.3	43	1	2	8	86	5
THM-13	.1	1.22	1	10	43	.1	15	1.25	.1	18	41	6.73	.03	5	.72	510	1	.01	1	420	1	1	65	1	3021	259.2	42	1	2	7	76	57
THM-14	.1	1.33	1	10	58	.1	14	1.25	.1	21	67	6.85	.03	6	.88	540	1	.02	12	790	1	1	44	1	2950	268.3	75	1	2	8	99	27
THM-15	.1	1.92	1	13	68	.1	19	1.63	.1	27	173	8.86	.05	7	1.10	672	1	.01	1	650	1	1	162	1	3749	319.2	56	1	3	11	131	32
THM-16	.1	2.54	1	13	23	.1	17	2.27	.1	23	81	4.34	.03	6	1.42	419	1	.02	23	480	1	1	259	2	3019	154.6	31	1	3	9	138	27
THM-17	.1	1.45	1	13	71	.1	16	1.57	.1	24	60	11.06	.04	6	.76	647	1	.02	1	760	1	1	70	1	3814	410.8	56	1	2	12	149	22
THM-18	.1	1.00	1	12	78	.1	9	1.17	.1	33	40	>15.00	.02	4	.57	826	1	.01	1	600	1	1	50	1	2774	588.6	44	1	1	14	167	1493
THM-19	.1	.89	1	12	64	.1	13	1.08	.1	28	24	>15.00	.03	4	.39	699	1	.01	1	560	1	1	54	1	3749	604.9	47	1	1	17	218	864
THM-20	.1	1.06	1	12	64	.1	17	1.24	.1	27	34	13.48	.03	4	.57	733	1	.01	1	570	1	1	57	1	4023	516.1	60	1	2	15	182	180
THM 21	.1	1.36	1	3	41	.5	9	1.24	.1	18	64	3.74	.01	5	1.07	388	2	.01	20	780	16	3	82	2	1739	124.4	58	2	1	6	62	8
THM 22	.1	1.32	1	3	26	.5	10	1.08	.1	23	136	4.38	.02	6	1.09	379	1	.04	15	540	17	3	66	1	1749	134.8	63	1	1	6	75	12
THM 23	.1	1.26	1	4	39	.4	11	1.22	.1	17	144	4.41	.02	6	.96	384	1	.02	7	690	11	3	65	2	1840	155.2	41	2	1	5	57	30
THM 24	.1	.87	1	26	90	.6	9	.95	.1	16	15	6.58	.02	5	.49	407	1	.01	1	530	13	1	52	2	1969	259.4	38	1	1	8	95	253

**Appendix B**

**Statement of Costs**

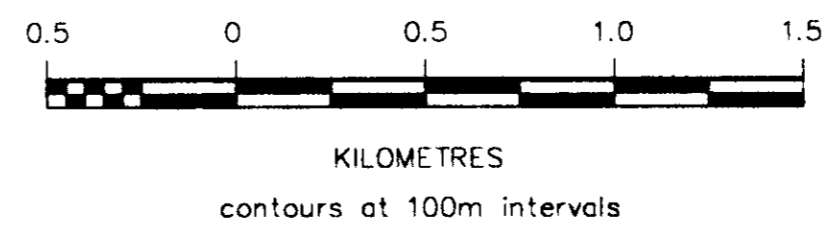
Travel Days	8 man-days @ \$375/day	3,000.00
Geological Field Work	8 man-days @ \$375/day	3,000.00
Geophysical	1 man-day @ \$375/day	375.00
Report and Drafting	3 man-days @ \$375/day	750.00
Maps, Publications and Airphotos		170.56
Expediting		75.00
Field Equipment	radio rentals, misc. supplies	161.39
Phone		24.07
Travel Expenses	motel, groceries, truck mileage and fuel	1,448.94
Helicopter	3.6 hours @ \$804.50	1,932.93
Analytical Costs	22 rock samples @ \$24.25 each	533.50
	24 heavy mineral samples @ \$49.50 each	1,188.00
		<hr/>
	Subtotal	12,659.39
	GST	886.16
		<hr/>
	Total	\$13,545.55

22,957



3	uK Sustut Group sediments		gossan	▲ rock sample (%Cu,ppb Au)
2	uTr-lJr Takla Group a) augite-feldspar phyric int-maf volcanic flows b) int-mafic fragmental c) pyroxenite d) carb-ser altered andesite e) thinly bedded argillite		qtz-epidote-calcite alteration	○ HM sample (ppb Au)
1	P Asitka Group sediments, limestone		qtz feldspar porphyry dyke	□ >1000 ppm Cu
	Omineca Intrusions diorite to granodiorite		fault	× >1000 ppb Au
			geological contact	■ Cu+Au: above thresholds

Asamera Rock Sampling

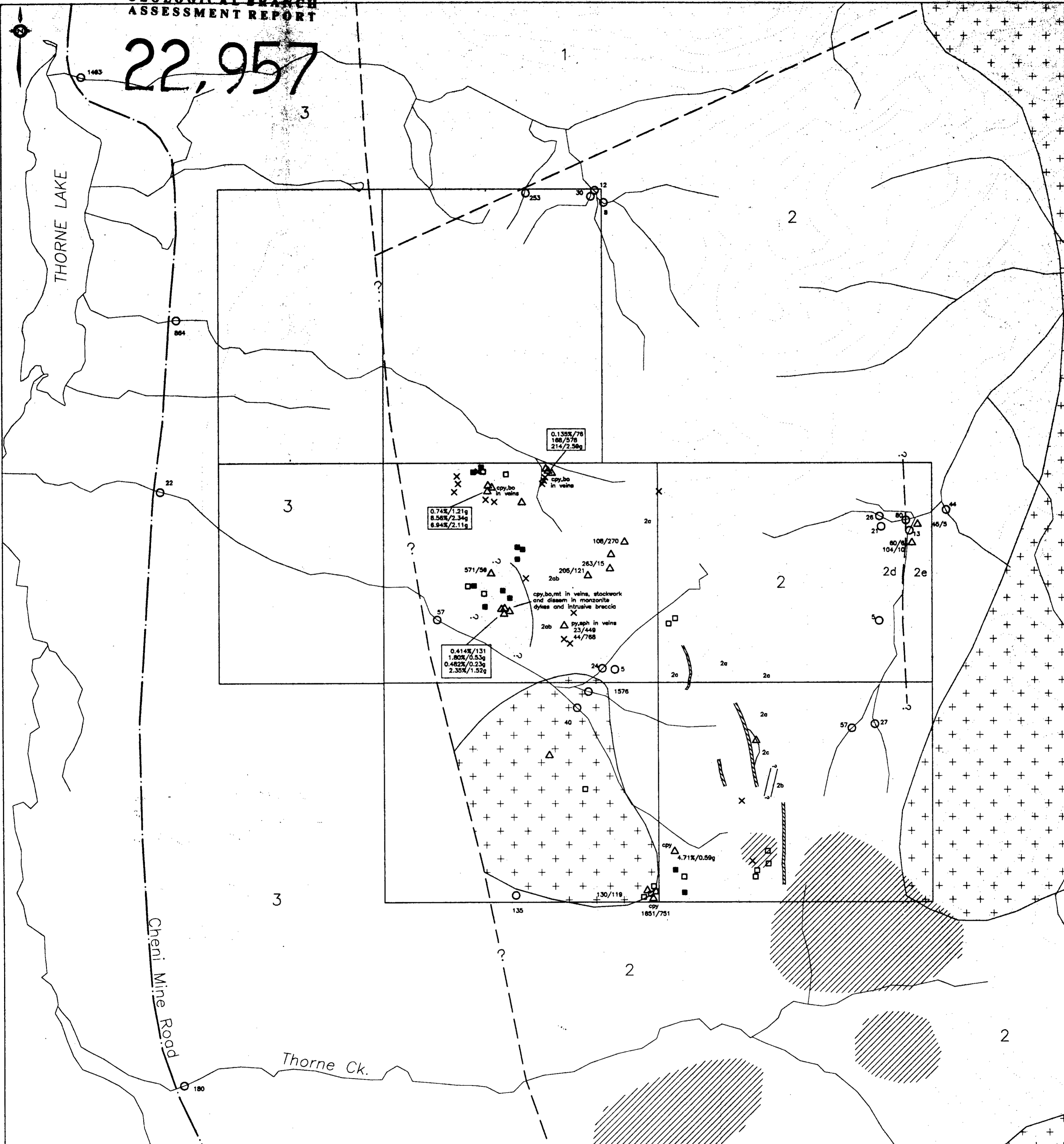


**ELECTRUM RESOURCE CORP.**  
**THOR PROPERTY**

SUMMARY GEOLOGY  
 AND SAMPLE LOCATIONS

Date:	Drawn by:	File:
Nov 1992	STAARGAARD GEOLOGICAL	THOR.DWG
Scale:	Revised:	Figure:
As Shown		04

22,957



- 3 uK Sustut Group sediments
- 2 uTr-Ijr Takla Group
  - a) augite-feldspar phyric int-maf volcanic flows
  - b) int-mafic fragmental pyroxenite
  - c) carb-ser altered andesite
  - d) thinly bedded argillite
- 1 P Asitka Group sediments, limestone
- + + + Omineca Intrusions diorite to granodiorite

- gossan
- qtz-epidote-calcite alteration
- qtz feldspar porphyry dyke
- fault
- geological contact

▲ rock sample (%Cu,ppb Au)  
 ○ HM sample (ppb Au)  
 □ >1000 ppm Cu  
 × >1000 ppb Au  
 ■ Cu+Au: above thresholds

Asamera Rock Sampling

0.5 0 0.5 1.0 1.5

KILOMETRES

contours at 100m intervals

**ELECTRUM RESOURCE CORP.**

**THOR PROPERTY**

SUMMARY GEOLOGY WITH  
COPPER AND GOLD GEOCHEMISTRY

Date: Nov 1992	Drawn by: STARGAARD GEOLOGICAL	File: THOR.DWG
Scale: As Shown	Revised:	Figure: 5