

87-618-16266

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

16,266

ASSESSMENT REPORT FOR

WORK DONE ON THE

H & H GROUP OF CLAIMS

N.T.S. 93 K/16~~W~~

OMINECA MINING DIVISION

Situated at Coordinates:  $59^{\circ} 56'$   
 $55^{\circ} 51' N$   
 $124^{\circ} 15' W$   
 $16' 30''$

Owner(s): NORANDA EXPLORATION COMPANY, LIMITED  
(NO PERSONAL LIABILITY)

R. Haslinger

Operator: Noranda Exploration Company, Limited

FILMED

By: Gordon Maxwell

October, 1987

## TABLE OF CONTENTS

	PAGE
SUMMARY .....	1
INTRODUCTION .....	2
LOCATION AND ACCESS .....	2
CLAIM STATISTICS .....	2
TOPOGRAPHY & VEGETATION .....	2
REGIONAL GEOLOGY .....	3
LOCAL GEOLOGY .....	3
GEOCHEMISTRY:	
METHODS .....	3
OBSERVATIONS .....	3
CONCLUSIONS .....	4
RECOMMENDATIONS .....	4
APPENDIX I     Statement of Qualifications	5
APPENDIX II    Costs/Cost Breakdown	6
APPENDIX III   Analytical Procedure	7, 8

### LIST OF FIGURES

1	Location Map	1:8,000,000	2a
2	Claim Map	1:50,000	2b

### LIST OF MAPS

1	Geology	1:5,000	in pocket
2	Soil Geochemistry Cu/Au	1:5,000	"
3	Soil Geochemistry Pb/Zn	1:5,000	"
4	Soil Geochemistry Ag/As	1:5,000	"

SUMMARY:

The H&H 4, 5 and 6 claims were acquired to cover an area of fairly abundant outcrop immediately adjacent the TAS property. The owner of the property, R. Haslinger of Fort St. James, collected 80 B-horizon soil samples from road side locations and Noranda Exploration Company, Limited personnel collected 255 B-horizon soil samples. The Haslinger samples were sent for a 30 element I.C.P. analysis and the Noranda samples were analyzed for Cu, Zn, Pb, Ag, As and Au. No significant anomalies were located.

## INTRODUCTION:

The H&H 4 to 6 claims were staked by R. Haslinger of Fort St. James, B.C., to tie up valuable ground immediately adjacent the Tas claims. The claims were subsequently optioned to Noranda Exploration Company, Limited, which performed detailed geologic mapping and soil geochem. A total of 80 B-horizon soil samples were collected by the vendor and sent for a 30 element I.C.P. analysis, including Au geochem. During late June of 1987, Noranda personnel established 9.2 km of grid on the H&H 4 claim and collected 155 B-horizon soil samples which were analyzed for Cu, Zn, Pb, Ag, As and Au.

## LOCATION & ACCESS:

The H&H claims are situated approximately 56 kilometers north of the town of Fort St. James and 150 kilometers northeast of Prince George. The claims are bounded to the northwest by Tezzeron Creek and to the southwest by Kleedlee Creek. The claims can be directly accessed via a series of logging roads off the Inzana Lake access road.

## CLAIM STATISTICS:

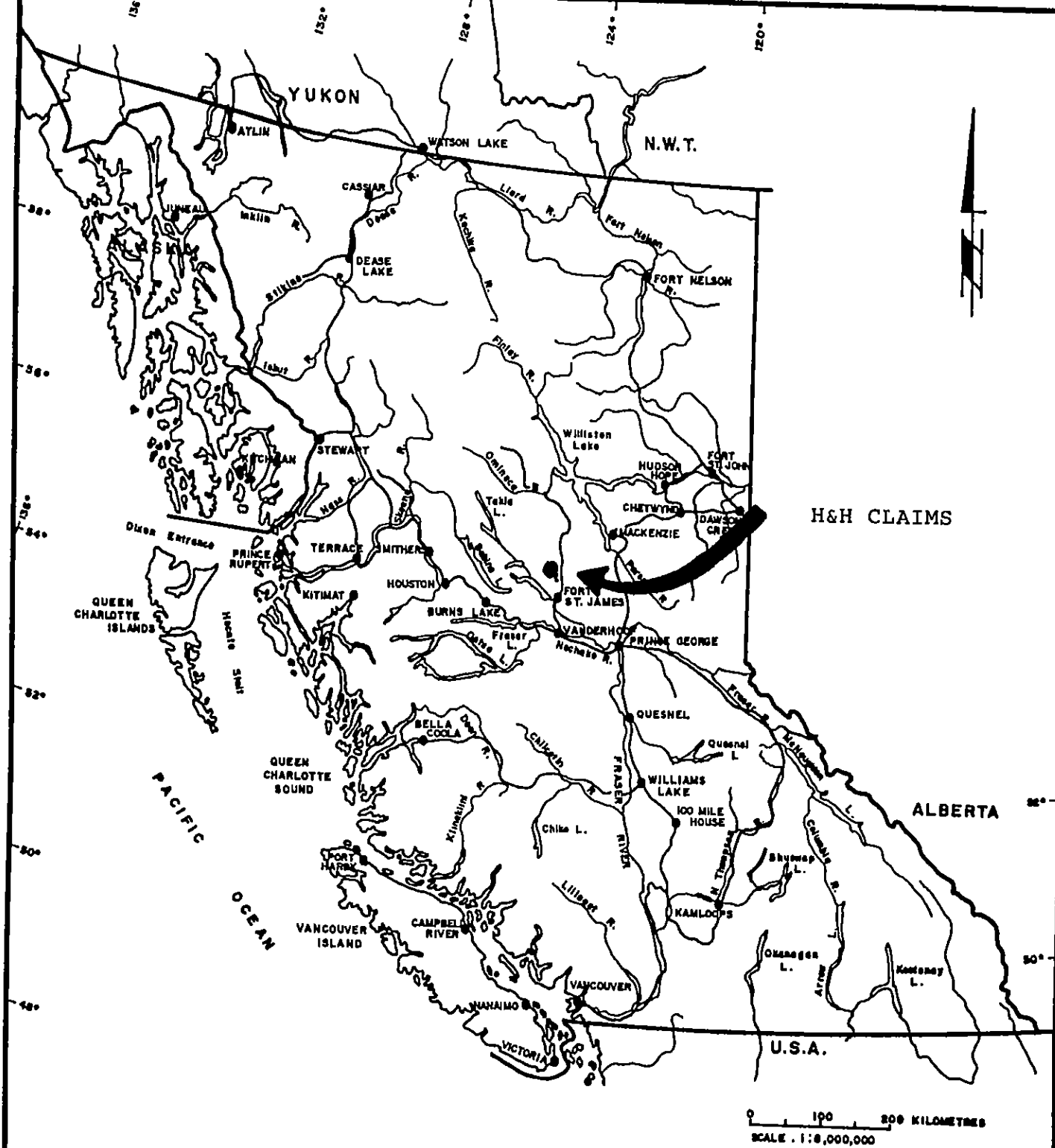
The property consists of three modified grid claims totaling 56 units. The claims are located in the Omineca Mining Division and found on NTS map 93 K/16E.

<u>Name</u>	<u># Units</u>	<u>Record #</u>	<u>Record Date</u>	<u>Owner</u>
H&H 4	20	7674	July 6, 1986	R. Haslinger
H&H 5	20	7675	July 6, 1986	R. Haslinger
H&H 6	16	7676	July 6, 1986	R. Haslinger

## TOPOGRAPHY & VEGETATION:

The area is characterized mainly by low rolling topography, which includes pine flats, lower swampy areas and gently rolling hills. The flat areas include layered glacial debris, sandy plains and small eskers. Swampy areas are generally found around Tezzeron and Kleedlee Creeks. The gently rolling hills include either eskers or resistant rock outcrop area.

Vegetation consists of mature stands of spruce, pine and balsam, which is presently being logged off in some areas. Undergrowth is mainly alder and willow, with some devil's club.



REVISED	H&H CLAIMS	
	LOCATION MAP	
	<i>GM</i>	
PROJ. No. 271	SURVEY BY: GM	DATE: Sept 87
N.T.S. 93K16	DRAWN BY: S.K.B.	SCALE: 1:8,000,000
DWG. No. 1	<b>NORANDA EXPLORATION</b>	
	OFFICE: PRINCE GEORGE, B.C.	

VANCAL 1187

AREA COVERED BY ORDER IN COUNCIL

H+H #8  
7679

H+H #7 #276/87

7678 SEE ATTACHED

4  
0

H+H #9  
8191

TAS 10  
7704

H+H #6  
7676

WET  
7962

TAS 9  
7703

H+H #5  
7675

ANA  
#5  
8247

MOP  
7903

TAS 8  
7702

H+H #4  
7674

I  
7946

BBR 2  
7937

TAS 7  
7701

TAS 6  
7700

SEP 1  
7972

7973

7450

SH #1  
134

TAS 3  
7447

TAS  
AS  
8540

REVISED

H&H CLAIMS

CLAIM MAP

PROJ. No. 271

SURVEY BY: GM

DATE: Sept 87

N.T.S. 93K16

DRAWN BY: GM

SCALE: 1:50,000

DWG. No.

2

**NORANDA EXPLORATION**

OFFICE: Prince George BC

## REGIONAL GEOLOGY:

The H&H group of claims lie in a broad northwest trending package of rocks known as the Guesnel Trough. These include Upper Triassic to Lower Jurassic volcanics and sediments which have been intruded by a series of felsic to mafic intrusives ranging in age from Triassic to Cretaceous.

## LOCAL GEOLOGY:

The property is underlain almost exclusively by a hornblende, augite porphyry which varies from fine to medium grain. The porphyry contains 10-40%, 1-10 mm hornblende, augite and feldspar euhedral to anhedral phenocrysts with <1% disseminated pyrite and pyrrhotite. This unit is strongly hornfelsed and weakly to moderately fractured.

## GEOCHEMISTRY:

### Method:

A total of 80 B-horizon soil samples were collected from road side sites by the owner of the property. These samples were sent to ACME Analytical Laboratories in Vancouver for a 30 element geochemical I.C.P. analysis, including an Au geochem.

In addition, 255 B-horizon soil samples were collected from a detail grid on the H&H 4 claim. These samples were taken using a grub hoe from holes varying in depth from 25 to 40 cm. The samples were placed in Kraft wet-strength bags, dried, then shipped to Noranda Labs in Vancouver for analysis. These samples were analyzed for Cu, Zn, Pb, Ag, As and Au (for analytical procedure, see Appendix III).

### Observations:

Arsenic - Arsenic values range from 1 to 13 ppm, no samples are considered anomalous.

Silver - Silver values range from the detection limit of 0.2 ppm to a high of 3.8 ppm. Several isolated single station anomalies occur at L1200E/2625N, L1900E/2425N and L2000E/3000N.

Lead - Lead values range from 1 to 16 ppm with several scattered weak anomalies located at L1600E/2400N, L1400E/2350N and several more on roadside locations.

Zinc - Zinc values range from 36 to 380 ppm. Weak anomalies occur in an area centered around L1600E/2200N and in several single stations located at L1200E/2400N, L1600E/2400N and L2200E/2725N.

Copper - Copper values range from 12 to 370 ppm. Several moderate strength anomalies are found to occur as single station anomalies. These are located at L1200E/2625N, L1200E/2725N L1600E/2025N, L1800E/2600N and L1900E/2800N.

Gold - Almost all the gold values fall in the range of 1 to 20 ppb, with the exception of one roadside sample which recorded a value of 165 ppb. No other samples are considered anomalous.

#### CONCLUSIONS:

The detail grid failed to produce a significant area of anomalous gold geochem. Although results have been poor to date, only a small portion of the property has been evaluated. Potential still remains on the H&H 5 and 6 claims.

#### RECOMMENDATIONS:

Further evaluation of the H&H 5 and 6 claims should include a large recon soil grid, detail geologic mapping and a mag survey to outline possible sulphide zones.

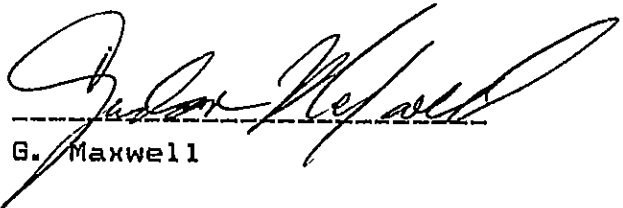


APPENDIX I

STATEMENT OF QUALIFICATIONS

I, Gordon Maxwell of Prince George, Province of British Columbia, do hereby certify that:

1. I am a Geologist residing at 5905 Rideau Street, Prince George, British Columbia.
2. I am a graduate of the University of Manitoba with an Hons. B. Sc. (geology).
3. I am a member in good standing of the Canadian Institute of Mining and the Prospector's and Developer's Association.
4. I presently hold the position of Project Geologist with Noranda Exploration Company, Limited and have been in their employ since 1980.

  
G. Maxwell

APPENDIX II

NORANDA EXPLORATION COMPANY, LIMITED

STATEMENT OF COSTS

DATE: October, 1987

PROJECT - H&H Group of Claims  
TYPE OF REPORT - Geochemical, Geological

a) Wages:

Soil Geochemistry - 4 mandays @ \$100/day	\$ 400
Line Cutting - 4 mandays @ \$100/day	\$ 400
Geology - 2 mandays @ \$200/day	\$ 400

b) Food & Accommodations & Transportation

10 mandays @ \$50/day	\$ 500
-----------------------	--------

c) Analysis

80 samples I.C.P. & Au geochem @ \$11.00/sample	\$ 800
255 samples @ \$15.50 per sample	\$3,952.50

d) Cost of Report Preparation

Author	\$ 300
Drafting	\$ 100
Typing	\$ 50

Total	\$6,982.50
-------	------------

COST BREAKDOWN

Geochemistry:	a) wages	\$ 400
	b) food & accommodation	\$ 200
	c) analysis	\$4,832.50
	d) cost of report preparation	\$ 350
	Total	\$5,782.50

Linecutting:	a) wages	\$ 400
	b) food & accommodation	\$ 200
	Total	\$ 600

Geology:	a) wages	\$ 400
	b) food & accommodation	\$ 100
	c) cost of report preparation	\$ 100
	Total	\$ 600

## APPENDIX III

### ANALYTICAL PROCEDURES

The methods listed are presently applied to analyse geological materials by the Noranda Geochemical Laboratory at Vancouver. (March, 1984).

#### PREPARATION OF SAMPLES

Sediments and soils are dried at approximately 80°C and sieved with a 80 mesh nylon screen. The -80 mesh (0.18 mm) fraction is used for analysis.

Rock specimens are pulverized to -120 mesh (0.13 mm). Heavy mineral fractions (panned samples) are analysed in its entirety, when it is to be determined for gold without further sample preparation.

#### ANALYSIS OF SAMPLES

Decomposition of a 0.200 g sample is done with concentrated perchloric and nitric acid (3:1), digested for 5 hours at reflux temperature. Pulps of rock or core are weighted out at 0.2 g or less depending on the matrix of the rock, and twice as much acid is used for decomposition that that is used for silt or soil.

The concentrations of Ag, Cd, Co, Cu, Fe, Mn, Mo, Ni, Pb, V and Zn (all the group A elements of the fee schedule) can be determined directly from the digest (dissolution) with an atomic absorption spectrometer (AA). A Varian-Techtron Model AA-5 or Model AA-475 is used to measure elemental concentrations.

#### ELEMENTS REQUIRING SPECIFIC DECOMPOSITION METHOD

**Antimony - Sb:** 0.2 g sample is attached with 3.3 ml of 6% tartaric acid, 1.5 ml conc. hydrochloric acid and 0.5 ml of conc. nitric acid, then heated in a water bath for 3 hours at 95°C. Sb is determined directly from the acid solution with an AA-475, equipped with electrodeless discharge lamp (EDL).

**Arsenic - As:** 0.2 - 0.4 g sample is digested with 1.5 ml of 70% perchloric acid and 0.5 ml of conc. nitric acid. A Varian AA-475 equipped with an As-EDL measures the arsenic concentration of the digest.

**Barium - Ba:** 0.1 g sample is decomposed with conc. perchloric, nitric and hydrofluoric acid. Atomic absorption using a nitrous oxide-acetylene flame determines Ba from the aqueous solution.

Bismuth - Bi: 0.2 g - 0.3 g is digested with 2.0 ml of perchloric 70% and 1.0 ml of conc. nitric acid. Bismuth is determined directly from the digest into the flame of the AA instrument c/w EDL.

Gold - Au: 10.0 g sample sample (Pan-concentrates see below) is digested with aqua regia (1 part nitric and 3 parts hydrochloric acid). Gold is extracted with Methyl iso-Butyl ketone (MIBK) from the aqueous solution. Gold is determined from the MIBK solution with flame AA.

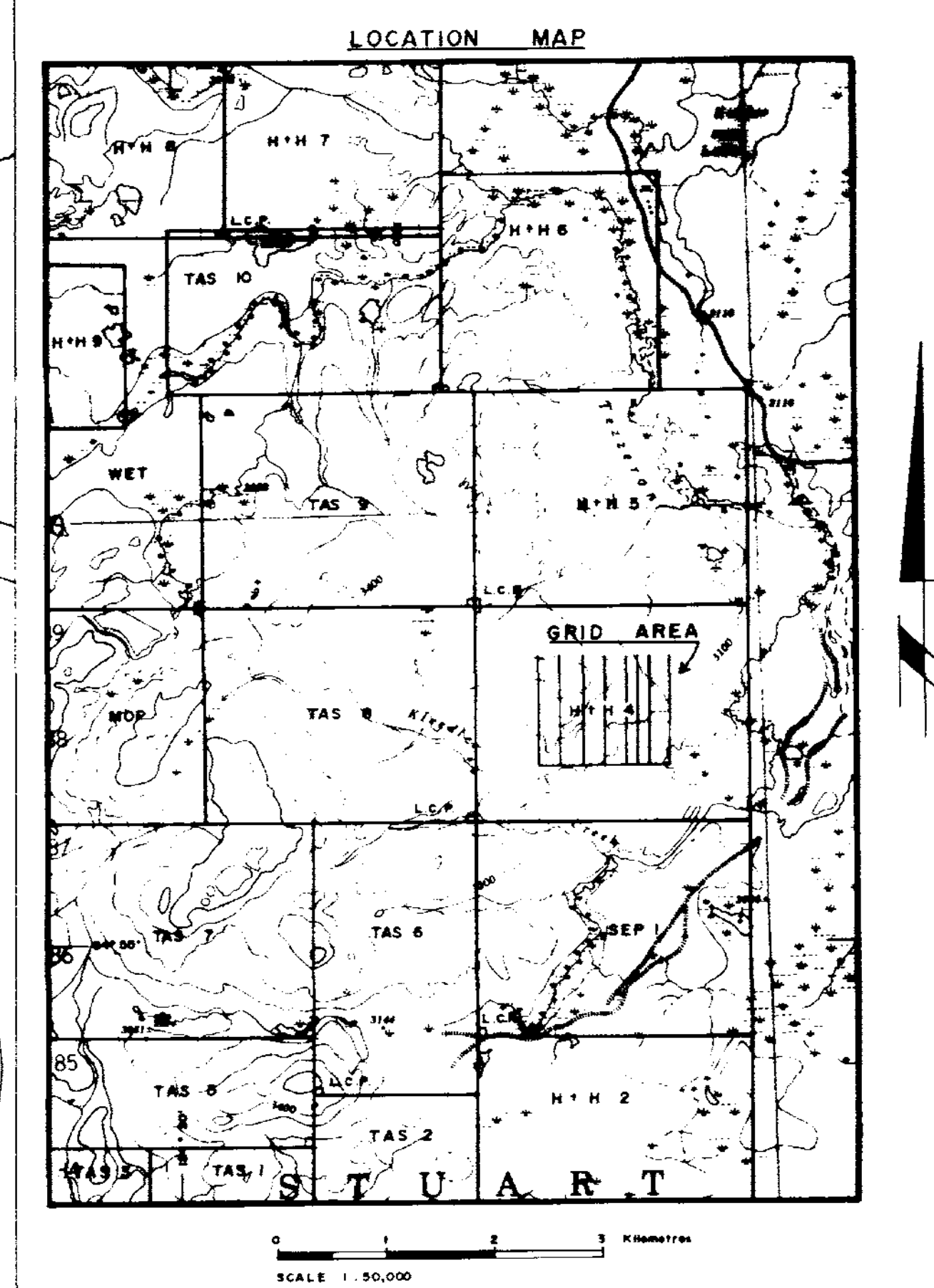
Magnesium - Mg: 0.05 - 0.10 g sample is digested with 4 ml perchloric/nitric acid (3:1). An aliquot is taken to reduce the concentration to within the range of atomic absorption. The AA-475 with a nitrous oxide flame determines Mg from the aqueous solution.

Tungsten - W: 1.0 g sample sintered with a carbonate flux and thereafter leached with water. The leachate is treated with potassium thiocyanate. The yellow tungsten thiocyanate is extracted into tri-n-butyl phosphate. This permits colourimetric comparison with standards to measure tungsten concentration.

Uranium - U: An aliquot, taken from a perchloric-nitric (3:1) decomposition, usually from the multi-element digestion, is diluted with water and a phosphate buffer. This solution is exposed to laser light, and the luminescence of the uranyl ion is quantitatively measured on the UA-3 (Scintrex).

LOWEST VALUES REPORTED IN PPM

Ag - 0.2	Mn - 20	Zn - 1	Au - 0.01 (10 ppb)
Cd - 0.2	Mo - 1	Sb - 1	W - 2
Co - 1	Ni - 1	As - 1	U - 0.1
Cu - 1	Pb - 1	Ba - 10	
Fe - 100	V - 10	Bi - 1	



**LEGEND**

**ROCK TYPES**  
 [ ] HORNBLENDE - AUGITE PORPHYRY : 10-40% , 1-10 mm subhedral to anhedral hornblende and Augite phenocryst.

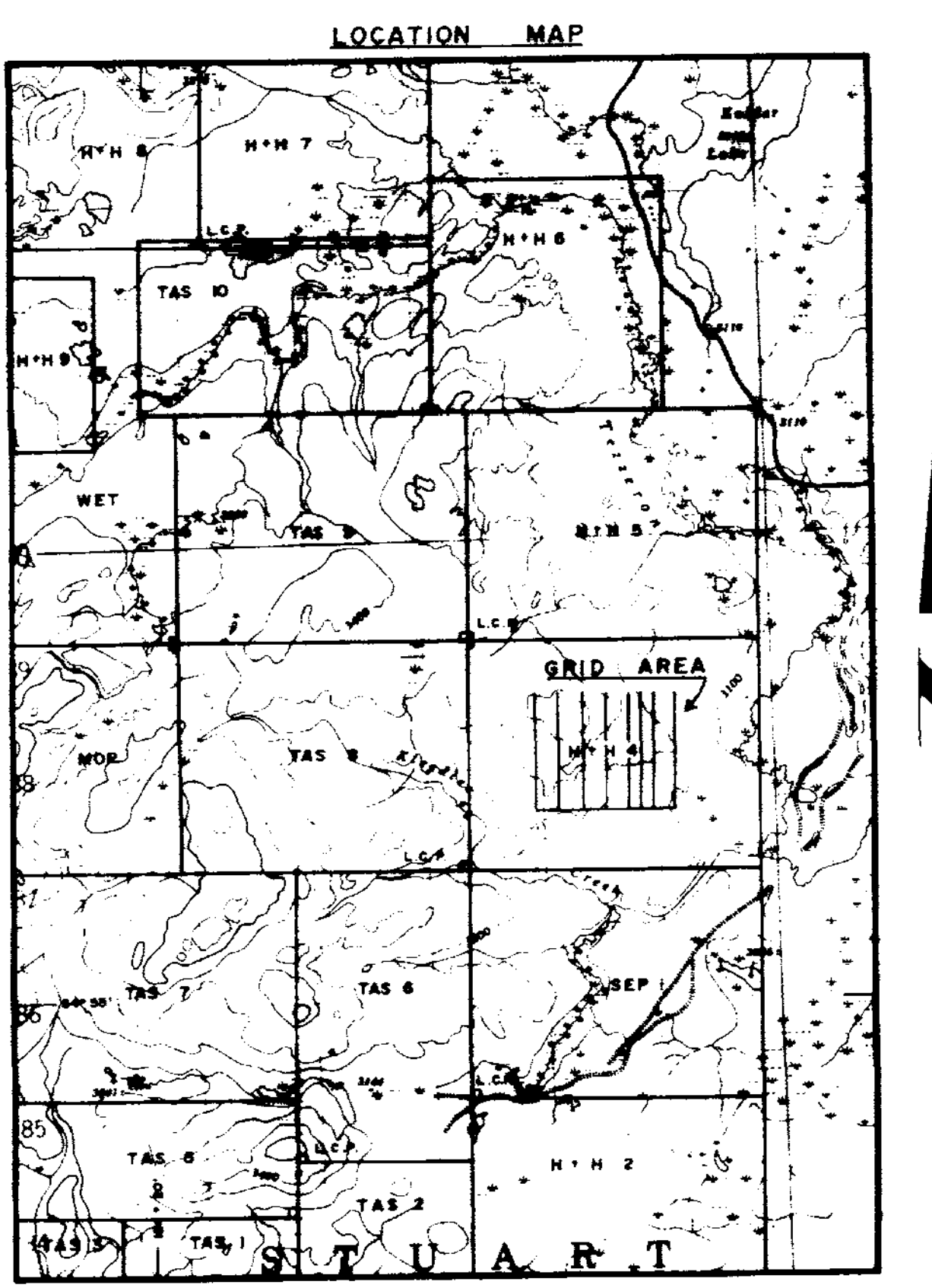
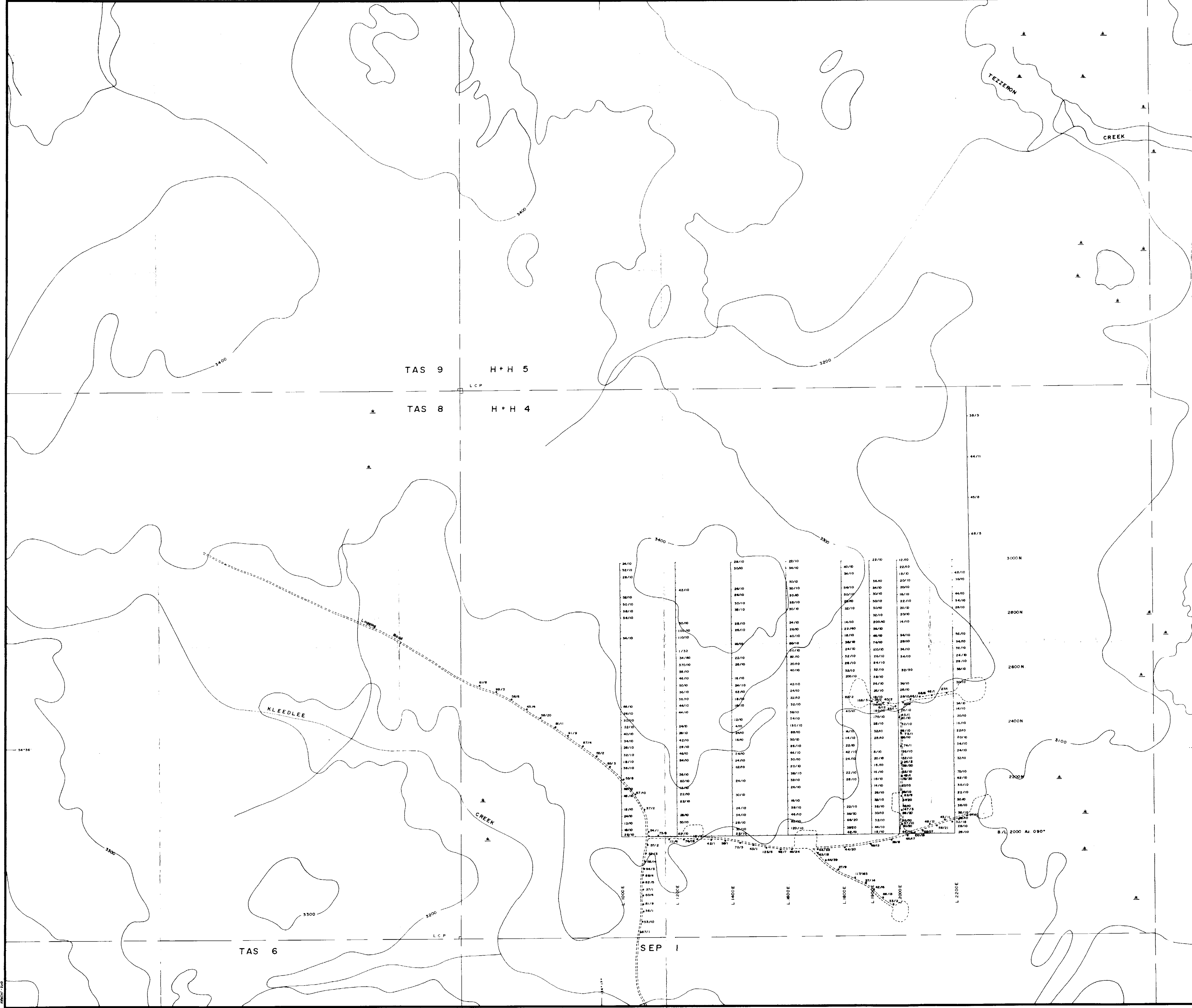
**SYMBOLS**  
 x Outcrop large, small  
 --- Logging road  
 L.C.P. and claim boundary

**GEOLOGICAL BRANCH  
 ASSESSMENT REPORT**

**16,266**



REVISED	TAS PROJECT	
	H+H 4 CLAIM	
	GEOLOGY MAP	
PROJ. No. 271	SURVEY BY: G.M.	DATE: JUNE 1987
NTS. 93K/18	DRAWN BY: S.K.B.	SCALE: 1:5000
DWG. No.	<b>NORANDA EXPLORATION</b>	
MAP 1	OFFICE: PRINCE GEORGE, B.C.	



SCALE 1:50,000

**LEGEND**

54/10 Soil Geochem Survey Cu(ppm) / Au(ppb)

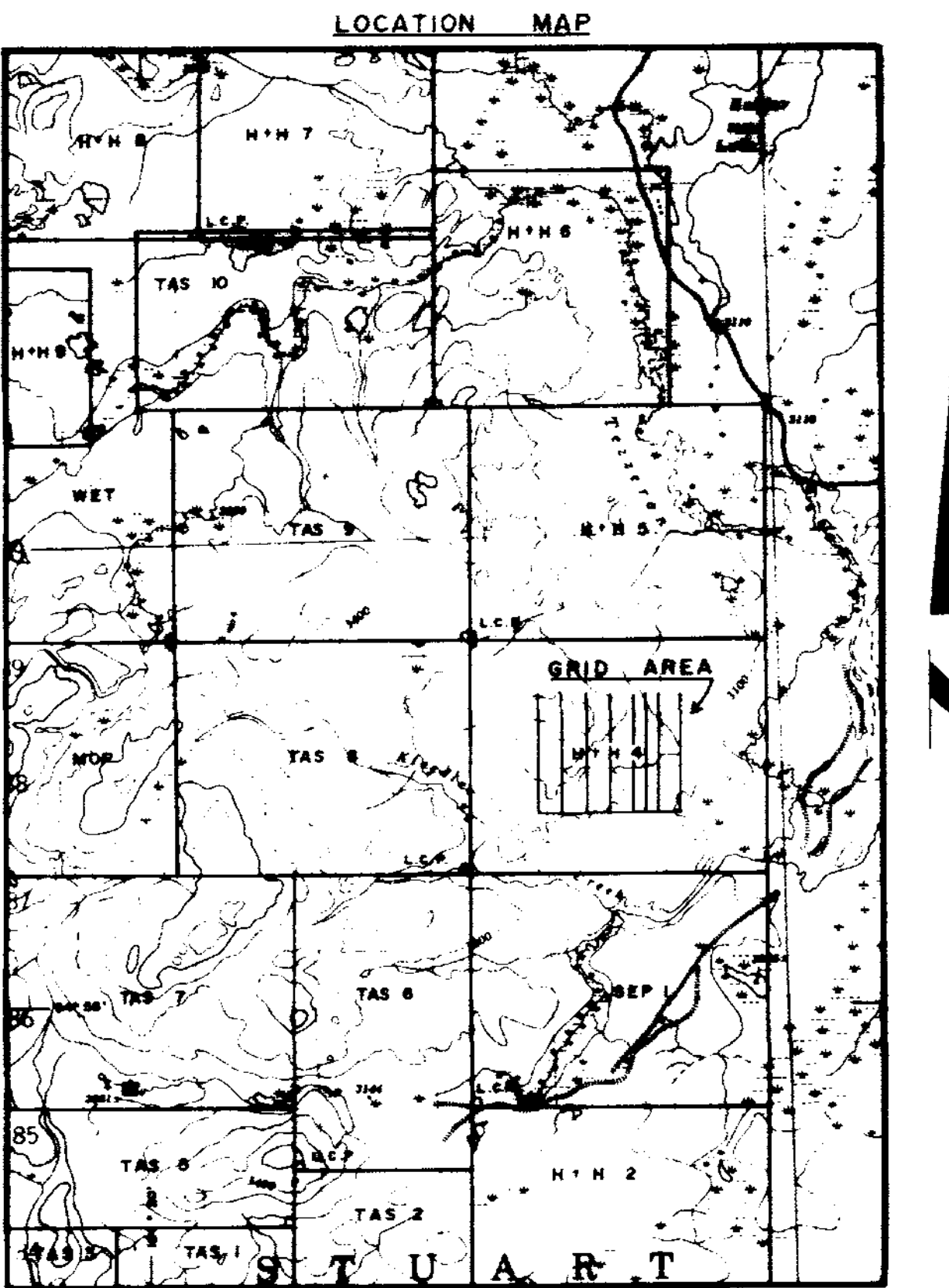
**GEOLOGICAL BRANCH ASSESSMENT REPORT**

**16,266**

SCALE 1:5,000

REVISED	TAS PROJECT
	H+H 4 CLAIM
	SOIL GEOCHEM SURVEY
	Cu(ppm) / Au(ppb)
PROJ. No. 271	SURVEY BY: L.W. B.C. DATE: JUNE 1987
N.T.S. 93K/16	DRAWN BY: S.K.B. SCALE: 1:5000
DWG. No.	<b>NORANDA EXPLORATION</b>
MAP 2	OFFICE: PRINCE GEORGE, B.C.





0 1 2 3 Kilometers  
SCALE 1:50,000

**LEGEND**

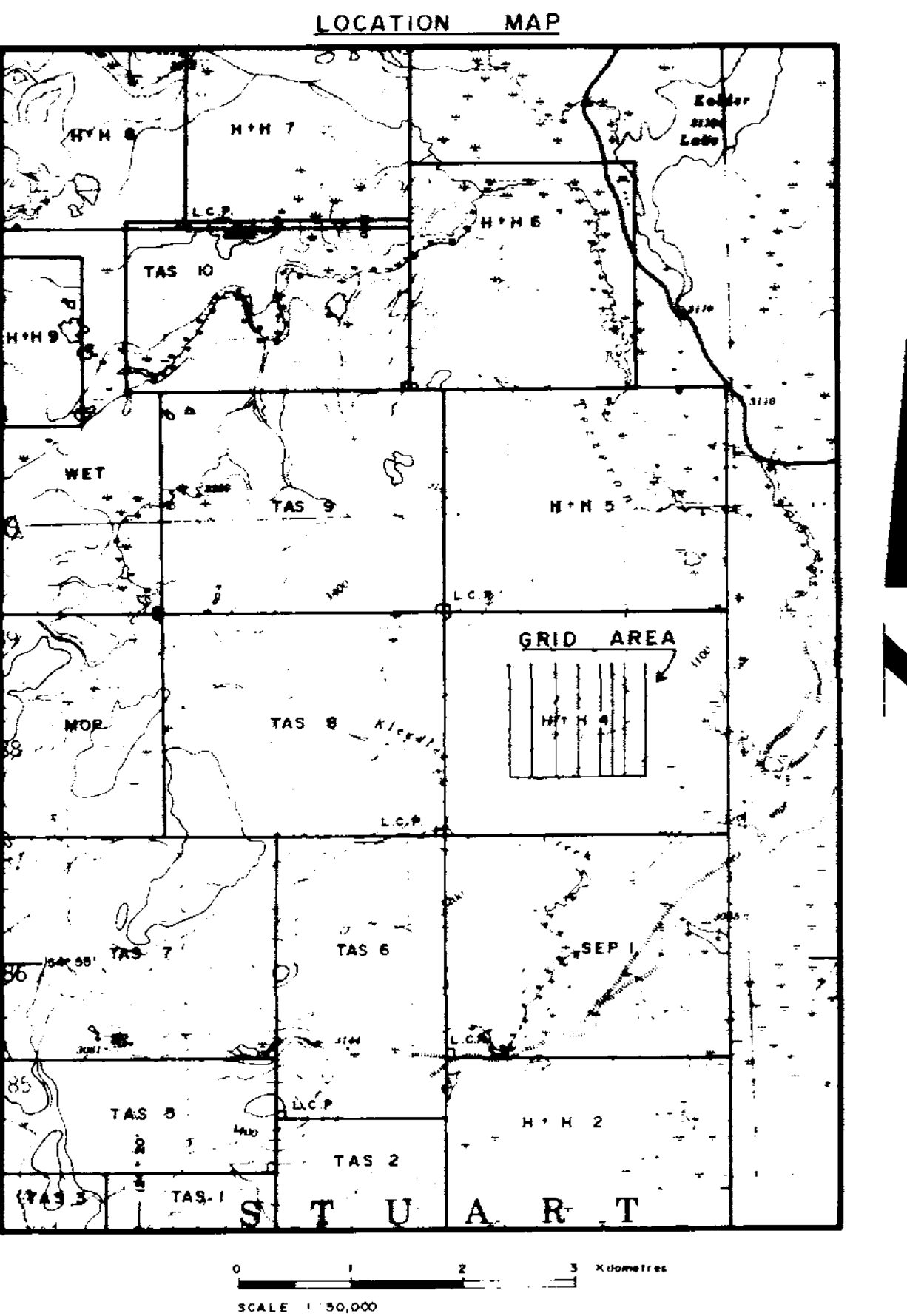
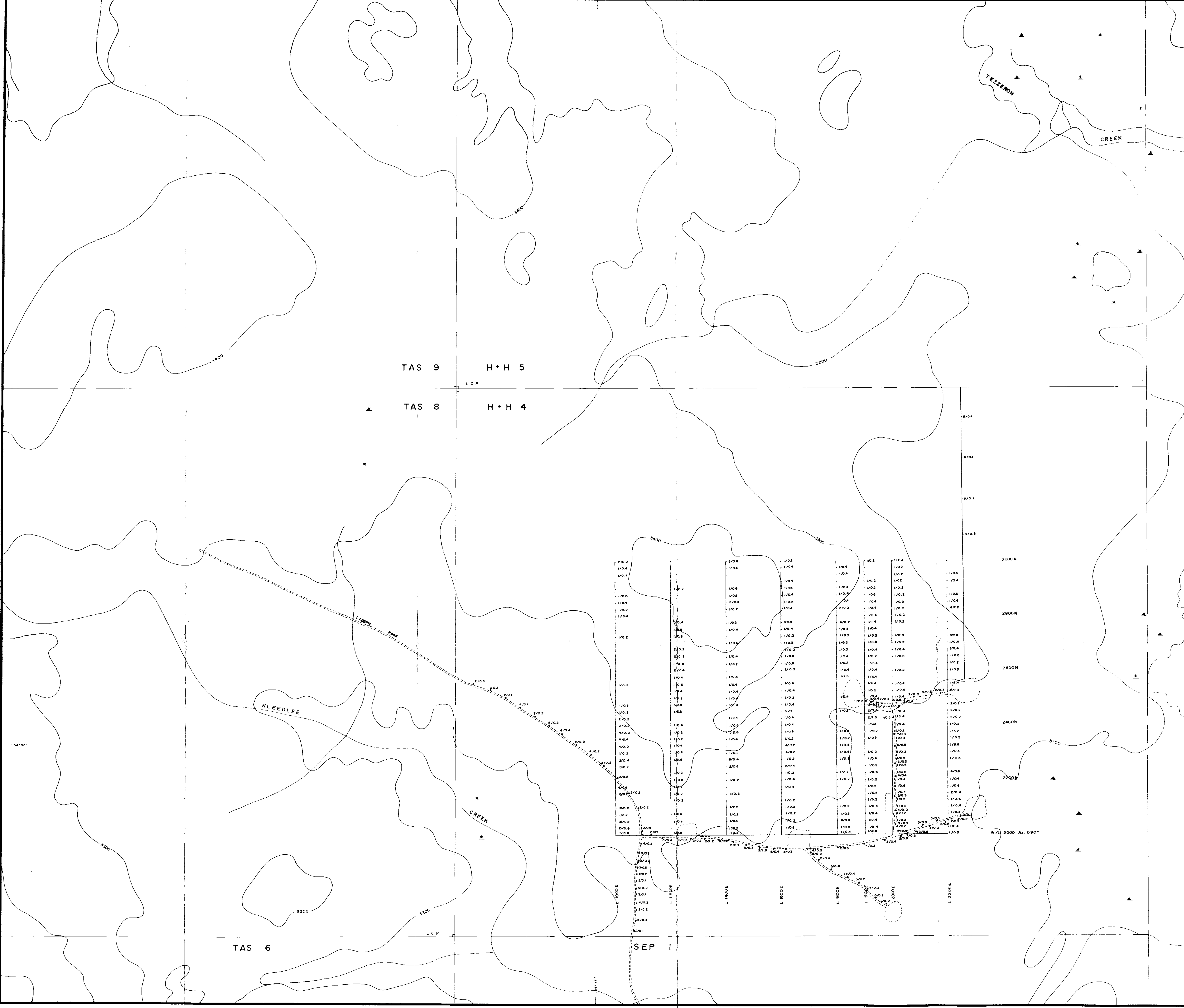
1/40 Soil Geochem Survey Pb(ppm) / Zn(ppm)

**GEOLOGICAL BRANCH ASSESSMENT REPORT**

**16,266**

0 100 200 300 400 500 m  
SCALE 1:5,000

REVISED	TAS PROJECT	
	H+H 4 CLAIM	
	SOIL GEOCHEM SURVEY	
	Pb(ppm) / Zn(ppm)	
PROJ. No. 271	SURVEY BY: L.W. B.C.	DATE: JUNE 1987
N.T.S. 93K/16	DRAWN BY: S.K.B.	SCALE: 1:5000
DWG. No.	<b>NORANDA EXPLORATION</b>	
MAP 3	OFFICE: PRINCE GEORGE, B.C.	



**LEGEND**

1/0.2 Soil Geochem Survey (As(ppm) / Ag(ppm))

**GEOLOGICAL BRANCH ASSESSMENT REPORT**

**16,266**

0 100 200 300 400 500 m  
SCALE 1:5,000

REVISED	TAS PROJECT	
	H+H 4 CLAIM	
	SOIL GEOCHEM SURVEY	
	As(ppm) / Ag(ppm)	
PROJ. No. 271	SURVEY BY: L. W. B.C.	DATE: JUNE, 1987
N.T.S. 93K/16	DRAWN BY: S.K.B.	SCALE: 1:5,000
DWG. No.	<b>NORANDA EXPLORATION</b>	
MAP 4	OFFICE: PRINCE GEORGE, B.C.	