

2622

KING & BOZ claims

TANZILLA EXPLORATIONS LTD.. (N.P.L.)

KAY, ~~EM~~, KIM, ~~KAYEX~~ GROUPS

104-I-5, Liard M.D., B. C.

Lat. 58° 17' N., Long. 129° 56' W.

REPORT ON GEOLOGICAL AND GEOCHEMICAL WORK

JULY - AUGUST, 1970

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 2622 MAP.....

By

D. Scott

PETER H. SEVENSMA CONSULTANTS LTD.

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TANZILLA EXPLORATIONS LTD. (N.P.L.)

KAY, KAM, KIM & KAYEX GROUPS

104-I-5, Liard M.D., B. C.

REPORT ON GEOLOGICAL AND GEOCHEMICAL WORK

JULY - AUGUST, 1970.

1. INTRODUCTION

Reconnaissance geological mapping and silt sampling was carried out on the above noted groups to delineate areas of maximum interest for the next phase of exploratory work. Mapping and correlation of data was carried out by P.H. Sevensma Consultants Ltd., and personnel of Tanzilla Explorations were responsible for road building, camp construction, and silt sampling.

The following sections are excerpted, with minor updating, from a previous report by P.H. Sevensma Consultants Ltd. dated Nov. 29, 1969: "Report on Geological, Geochemical and Geophysical Work, August - October, 1969."

The sections excerpted are: (a) Property, Location, Access.  
(b) History.  
(c) References.  
(d) Geology.  
(e) Results of Previous Work.

2. PROPERTY, LOCATION, ACCESS

The property consists of the following claims, their locations are shown on Fig. 2:-

<u>Claim</u>	<u>No. M.C.</u>	<u>Record No.</u>	<u>Tag. No.</u>	<u>Date of Record</u>	<u>Expiry Date</u>
King 1-10	10	34574 - 83	561921 - 30	Dec. 20/68	Dec. 20/70
King 21-30	10	34584 - 93	561931 - 40	Dec. 20/68	Dec. 20/70
King 61-86	26	26510 - 35	608867 - 92	Mar. 3/67	Mar. 3/71
Box 1-10	10	29512 - 21	692018 - 27	Feb. 15/68	Feb. 15/71
Kay 1-28	28	35920 - 47	70201M - 28	Aug. 25/69	Aug. 25/70
Kay 29-44	16	35948 - 63	70229M -44M	Aug. 25/69	Aug. 25/70
Kay 45-74	30	39939- 68	70245M -74M	Sept.19/69	Sept. 19/70
Kim 1-14	14	41296- 309	70781M -94M	Nov. 18/69	Nov. 18/70

Good evidence of staking was seen and recorded, the main posts inspected in detail being as follows:

Posts 1 - King 1 & 2

Posts 1 - Kay 1 & 2

Posts 2 - King 9 & 10

Posts 1 - Kay 17 & 18

The attached Fig. 2 shows the post locations approximately. Some adjustment to the claim posts is expected upon surveying.

The group is centered approximately on Lat.  $58^{\circ} 17' N.$  and Long.  $129^{\circ} 56' W.$  Elevations range from about 4,000' to 5,300'. This location is about 3 miles West of the Cassiar - Stewart road near Gnat Lakes, on map sheet 104-I-5 - West half, about 12 air miles SSE of Dease Lake, a planned railhead of the P.G.E.

Timber is light over most of the property, but increases in size on the lower-lying Northern part. Local creeks supply adequate water for drilling purposes. There is an abundant water supply in nearby Gnat Creek and Tanzilla River.

The road distance to Cassiar, B.C. is about 95 miles. After completion of the Cassiar - Stewart road, the road mileage to Stewart will be of the order of 230 miles.

### 3. HISTORY

One old prospect, the Clerihue showing, had been known in the area of the Gnat Lakes for many years. The area became active after completion of the road South as far as Kinaskan Lake in about 1963, when the June claims were staked by E. Krysko and development began of these claims by Lytton Minerals who now report a body in excess of 15 million tons in the 0.4% - 0.5% Cu. range with a favorable stripping ratio down to a tested depth of 500'. Drilling on this body has been reported as follows:

Before 1967	- 24 holes	- 13,489 feet
1967	- 41 holes	- 22,040 feet
1968	- 37 holes	- 21,726 feet

Total - 102 holes - 57,255 feet

Average hole depth: 561'.

This property is held by Dease Lake Mines, in turn held 44% by Lytton Minerals and 44% by Mitsui Mining & Smelting Company.

The King Group of Tanzilla Explorations Ltd. adjoins the DeaseLake Mines holding to the NW, in an area where staking has taken place off and on in the last few years.

### 4. REFERENCES

- (i) G.S.C.: Map 29-1962, Cry Lake, 104-I, by H. Gabrielse.
- (ii) Ace R. Parker & Associates: Geophysical report on the King claim group, March 3, 1968.
- (iii) P.H. Sevensma, Appraisal of the King Group, May 16, 1968.
- (iv) P.H. Sevensma, Geological, Geochemical and Geophysical Work, August - October, 1969.
- (v) Lode Metals in B.C., 1966, Page 19.

## 5. GEOLOGY

The claims cover an area near and over the buried contact of offshoots of the Cake Hill granodiorite to hornblends quartz monzonite batholith with the surrounding Triassic volcanics.

The batholith is about 24 miles long in a NW - SE direction and 16 miles in a NE - SW direction. Its age is Jurassic or Cretaceous.

This is the characteristic environment of the significant copper occurrences in Northern B. C. The Cake Hill batholith shows two areas with showings of this type, one near its SE tip, and one near the NW tip in the Gnat Lakes area, where the Dease Lake Mines claims and the King Group are located.

Characteristic of the area are small bodies of Tertiary basaltic lavas known to the West of the batholith. This is considered a favourable factor.

The property covers part of an offshoot of the intrusive and the adjacent volcanics (Fig. 2).

Where observed in outcrop, the volcanics consist of greenish red breccias, green massive volcanics with some magnetite and pyrrhotite and porphyritic andesites. Where observed near the intrusive contact, there is no noticeable metamorphism in the volcanics but the intrusive is decidedly richer in mafics than normal.

## 6. RESULTS OF PREVIOUS WORK

The 15 million tons plus of about 0.45% Cu. developed by Dease Lake Mines Ltd. in 102 drill holes totalling 57,255' will become more attractive as access to the area improves and rates as a very significant body.

This discovery has been made by following the magnetic highs associated with exposed copper mineralization. This feature is different from the typical porphyry-type mineralization, where in general the best mineralization is associated with magnetic lows.

This is at present considered the most significant result of work carried out to date in the area, and led to the choice of ground-magnetics and geochemical reconnaissance on lines 800' apart for initial exploration of the King Group.

## 7. MINERALIZATION

On the Kay 49 claim a remnant of meta volcanics - meta sediments forms a prominent rusted outcrop on a north-west trending topographic spur. As exposed the remnant is 90 feet in width and consists of a number of highly altered volcanic -sedimentary units of vertical dip. A number of these units are bleached and several have been converted to mylonite. Epidote stringers are not uncommon, particularly near the contact and the whole is variably mineralized with pyrrhotite, minor pyrite and occasional specks chalcopyrite. Maximum mineralization is approximately 5-7% sulphides over 8 - 10 feet. Ninety feet to the south-east intrusive outcrop is abundantly exposed in numerous outcrops and

mineralization and volcanics are absent. To the north-west the mineralized zone is covered by glacial debris.

A selected sample taken from the most intensely mineralized zone reported as follows: (Whitehorse Assay Office, report 6278-1, August 17, 1970).

<u>Number</u>	<u>Au.-oz/ton</u>	<u>Ag.-oz/ton</u>	<u>Cu.-%</u>
70-426	Tr.	0.04	0.04

Elsewhere on the property mapping is hampered by extensive deposits of moraine and other glacial debris. Lightly mineralized angular float was located on Line 0-00 at 1,200' west, however its original location is unknown. The float carried identifiable chalcopryrite in what has been field classified as andesite porphyry by Dease Lake Mines Ltd.

#### 8. SILT SAMPLING

A total of 109 silt samples was taken by personnel of Tanzilla Explorations Ltd. under the supervision of P.H. Sevensma Consultants Ltd. The samples were analysed by Vancouver Geochemical Laboratories Ltd. - report No. 70-83-001, August 10, 1970.

Assay procedure was as follows:

1. Weight of sample used, 0.5 gr.
2. Extraction by  $HClO_4$  and  $HNO_3$ .
3. Techtron AA4 and AA5 atomic absorption spectrophotometers were used to detect copper.
4. Assaying was done on the -80 mesh fraction.

Location of the samples is shown on Fig. 3.

Values ranged from 25 ppm. to 145 ppm. Cu. with six samples in the range 90 ppm. to 145 ppm.



No marked correlation with previous soil sampling is discernible from sampling done to date but a comparable pattern value distribution is evident. This may be due to the presence of glacial oriented strands of mineralized float in the abundant morainic material that substantially covers the property.

A plot of stream silts with reference to previous soil sampling is shown in Fig. 3 and a general configuration of ground magnetic surveys is shown in Fig. 4.

#### 9. SUMMARY AND CONCLUSIONS

The greater part of the 144 claim group covers the favourable volcanics - Cake Hill batholith contact. To the south - east the contact hosts commercial mineralization and Dease Lake Mines is reputed to have outlined a deposit in the 50 - 100 million ton range of greater than 0.4% copper content. The full extent of the ore bodies is not known, nor have the locations of possible extensions been disclosed.

Ground magnetic surveys and geological mapping has extended the contact zone for a minimum 20,000 feet on the property and soil sampling has indicated the presence of copper mineralization in the detritus covered zone of interest.

Soil sampling and the present program of silt sampling is characterized by the erratic distribution of anomalous copper values, the significance of which is not clearly understood at the present time.

It is believed that geophysics and concurrent soil sampling will assist in guiding future exploration along the geologically favourable contact.

Road construction carried out in July and August, 1970, gives access to a reasonable portion of the property and can be considered suitable for 4-wheel drive vehicles during the dry season. The development of cat trails has further relieved the problem of entry.

#### 10. RECOMMENDATIONS

It is recommended that future work involve the Induced Polarization method and that the I.P. be first concentrated in those areas showing coincident magnetic and soil sampling anomalies.

Initially five line miles of I.P. is required on the cut lines described below and an additional five line miles on those areas showing most interest. A continuing programme of I.P. survey is anticipated.


<u>Initial I.P.</u>		<u>5 Line Miles</u>
North grid	-	32 N.
North grid	-	104 N.
North grid	-	112 N.
South grid	-	22 S.
South grid	-	38 S.
South grid	-	42 S.
South grid	-	48 S.

11. COST ESTIMATE

Road and trail construction, 4 miles @ \$750.00	\$ 3,000.00
Brushing out cut lines, 10 miles @ \$50.00	500.00
I.P. Survey, Geophysist and equipment	3,000.00
I.P. Survey support, 40 man days @ \$30.00	1,200.00
Allowance for soil samples, 100 @ \$6.00	600.00
Camp operation, 72 man days @ \$11.00	800.00
Mobilization, demobilization	<u>1,500.00</u>
	\$10,600.00
Engineering and Supervision, 10%	1,060.00
Administration, overhead, 10%	1,280.00
Contingencies, 10% overall	<u>1,290.00</u>
Allowance for Current Phase =	<u>\$14,230.00</u>

Success of the I.P. Survey would lead to a programme of percussion drilling to determine the nature of the anomalies and a subsequent extension of the geophysical and drilling programme.

Respectfully submitted,



D. Scott, P.Eng.,  
PETER H. SEVENSMA CONSULTANTS LTD.

August 24, 1970.

CERTIFICATE

I, DAVID M. SCOTT of WEST VANCOUVER, B. C. do hereby certify:

1. That I am a Mining Engineer, residing at 1765 Duchess Avenue, West Vancouver, B. C.;
2. That I am a graduate of the University of Toronto and the Camborne School of Mines, Cornwall England;
3. That I have practised my profession for fifteen years;
4. That I am a member in good standing with the Association of Professional Engineers of British Columbia;
5. That I have no interest in the property nor in any securities pertaining thereto and that I do not expect to receive any such interest;
6. That the information contained in this report is based upon a personal examination of the property and a review of reports pertaining to the property.



---

D. M. Scott, P. Eng.

Vancouver, B. C.,  
August 24, 1970.

APPENDIX "A"

DOMINION OF CANADA:                    )  
   )  
 Province of British Columbia) IN THE MATTER OF geological mapping, and  
   ) geochemical work on  
 To With:                                ) behalf of Tanzilla  
   ) Explorations Ltd.

I, P.H. Sevensma, Ph.D., P.Eng.,  
 Peter H. Sevensma Consultants Ltd.

of 715-850 West Hastings St., Vancouver, in the Province of British  
 Columbia,

do solemnly declare that a geological and geochemical survey has  
 been completed on the Tanzilla claims in the Dease Lake area, B.C.  
 The following personnel were employed by Peter H. Sevensma Consultants  
 Ltd. of 715 - 850 West Hastings, Vancouver 1, B. C., and charged as  
 follows:

P.H. Sevensma, Ph.D., P.Eng.	1 day @ \$180.00	\$ 180.00	
Geologist, D. Scott	12½ days @ \$100.00	1,225.00	
Senior Technician, H.S. Aikins	5/8 days @ \$ 80.00	50.00	
A. Cliveric, Craftswoman	3 days @ \$ 50.00	150.00	
		<hr/>	\$ 1,605.00
Assays, Whitehorse Assay Lab		\$ 8.00	
Air photography		200.00	
Transportation, aircraft		105.00	
truck		99.30	
Board		94.32	
Misc. supplies, phone, printing, etc.		12.98	
		<hr/>	519.60
			<hr/>
			\$ 2,124.60
			<hr/> <hr/>

Costs incurred by Tanzilla Exploration in respect of  
 bulldozer rental, camp establishment and maintenance, road building,  
 camp and sampling labour are as follows:

Cat. rental and transportation	\$ 4,610.50
Groceries,	358.11
Lumber and transportation	745.42
Labour *	5,000.00
Geochem. analysis	130.80
	<hr/>
	\$10,844.83
	<hr/> <hr/>

APPENDIX "A" (Cont'd)

Of this sum \$3,000.00 is recoverable under the B. C. Government "Tote Road Assistance Plan", leaving a balance applicable to the property of: \$ 7,844.83

\* A breakdown of labour distribution and charges is not yet available, however this will be submitted as soon as rendered.

Total sum applicable to program - \$ 9,969.43
July - August, 1970

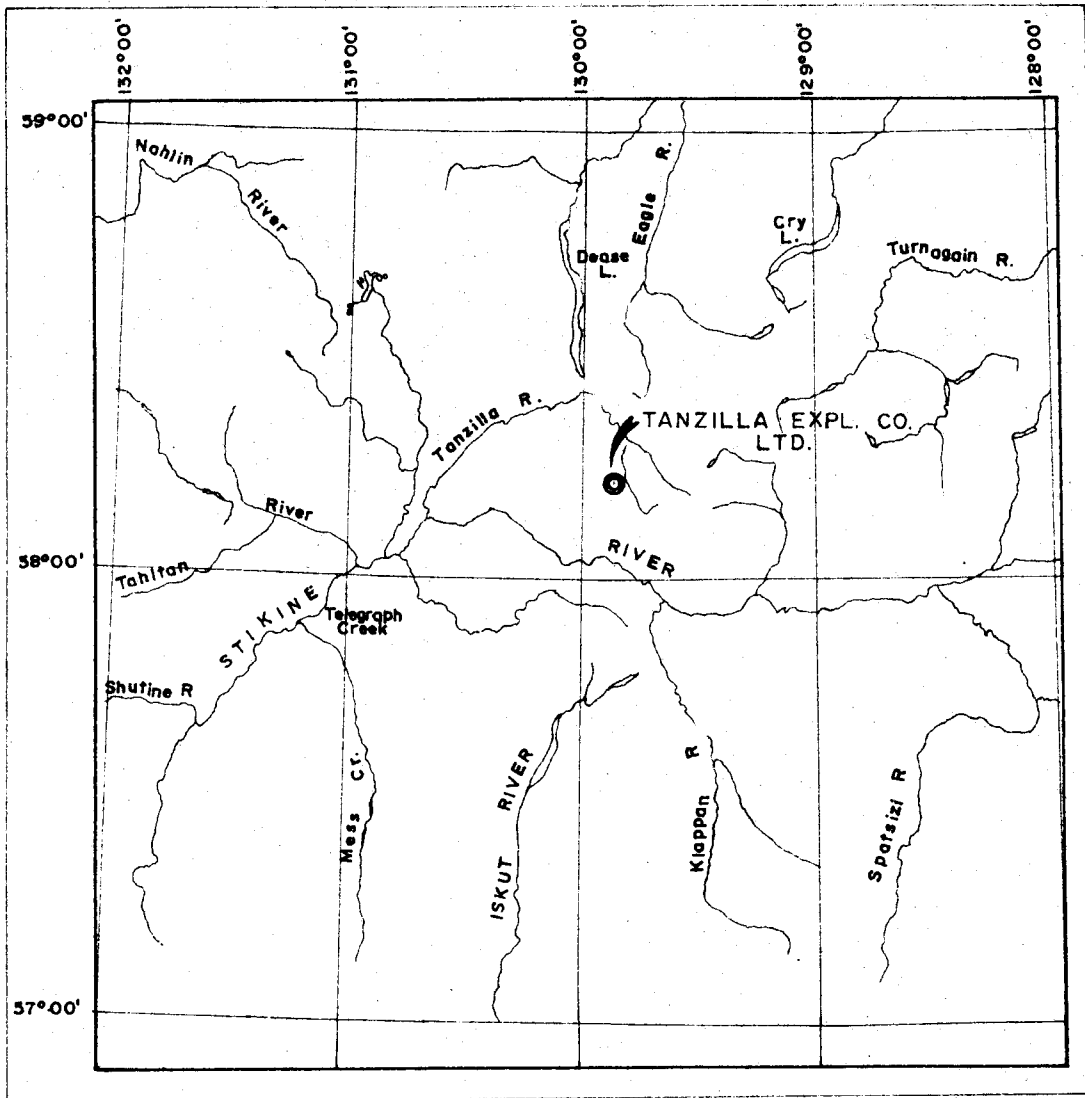
Distribution for: "Affidavit on Application for Certificate of Work" Form B. (Mineral Act-Section 51)

Road building (70% of \$7,844.83) \$ 5,491.38
Sampling, mapping etc. (30% of \$7,844.83) \$ 2,353.45
P.H. Sevensma charges 2,124.60
4,478.05
\$ 9,969.43

Declared before me at the City of Vancouver, in the Province of British Columbia, this 25 day of August 1970, A.D.

[Handwritten signature]

Joan Turner
A Commissioner for taking Affidavits within British Columbia or Sub-Mining Recorder
A Notary Public in and for the Province of British Columbia

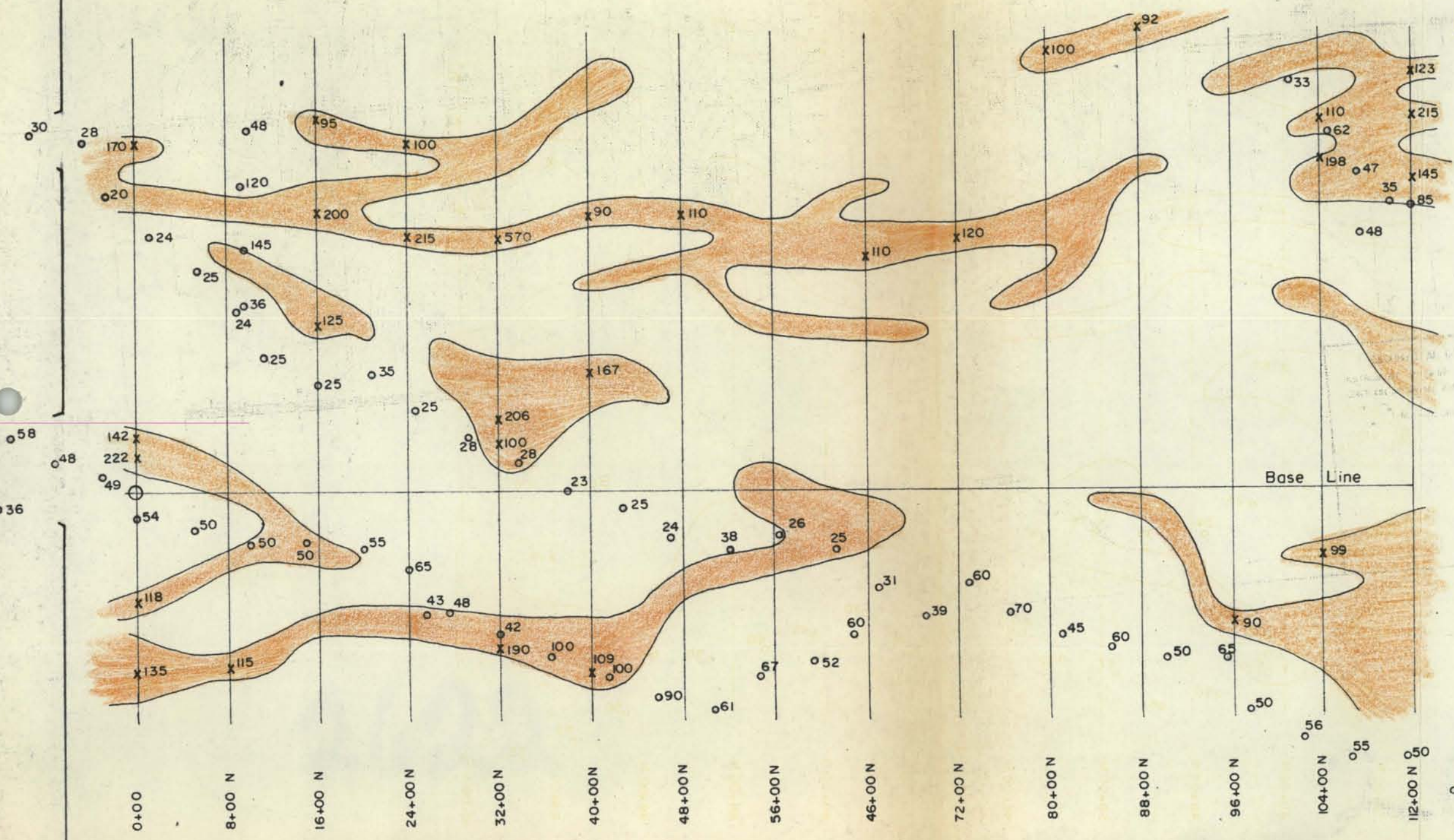


Department of  
 Mines and Petroleum Resources  
**ASSESSMENT REPORT**  
 NO. 2622 MAP #1

*P. H. Sevensma*

<b>TANZILLA EXPLORATIONS LTD</b>	
LOCATION	MAP
Liard M.D.—B.C.	104—1—5
P. H. Sevensma Consultants Ltd. Vancouver, B.C.	

Dwg. No.                      Fig: |                      Aug. 1970                      Scale: 0 30 miles



**LEGEND**

Contour  $\geq 60$  p.p.m. Cu.  
 x  $> 90$  p.p.m. Cu.

Silt samples

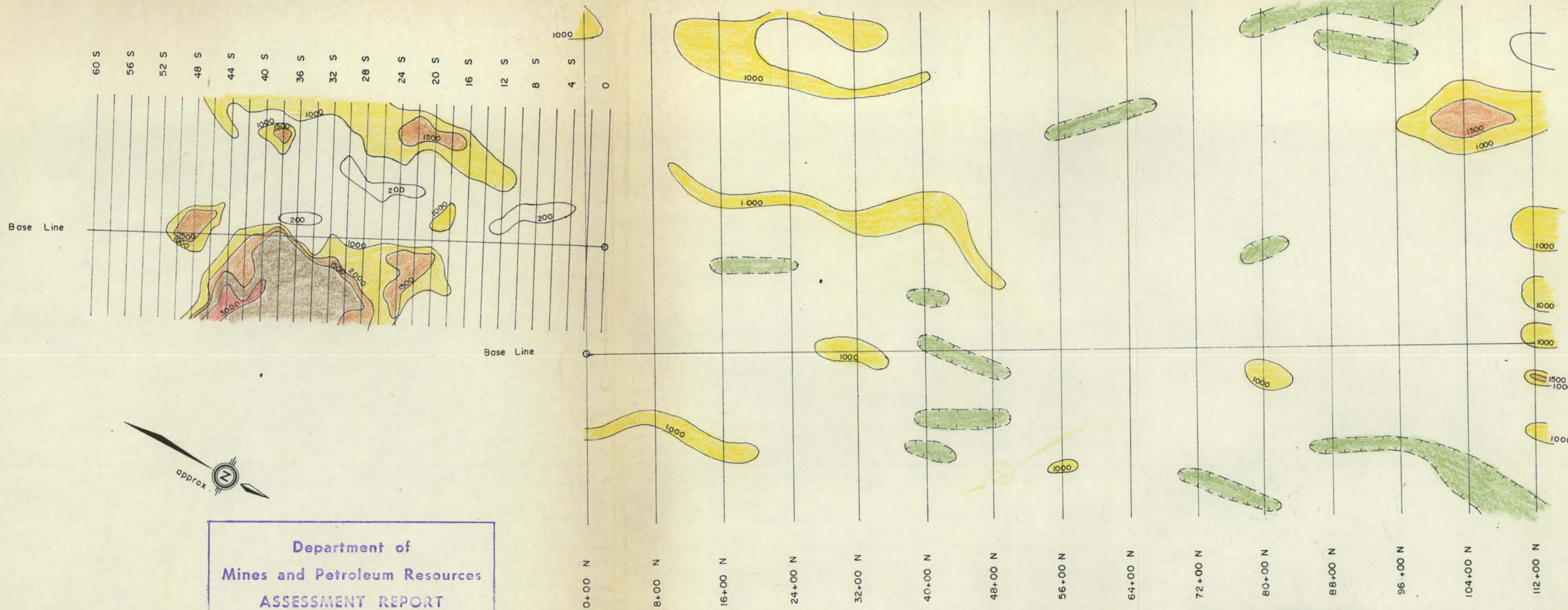
Location      p.p.m. Cu.

*P. H. Sevensma*

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TANZILLA EXPLORATIONS LTD.	
GEOCHEMICAL PLOT - SOILS and SILT	
Liard M.D. - B.C.	104-1-5
P. H. Sevensma Consultants Ltd. Vancouver, B.C.	
Dwg. No.:	Scale: $\frac{0}{1000'}$





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LEGEND

- 1000 γ
- 1500 γ
- 2000 γ
- 3000 γ

Area	Instrument	Survey	Date
North Grid	Sharpe MF-1 Magnetometer	P.H. Sevensma Consultants Ltd.	Sept. 1969
South Grid	_____ " _____	A.R. Parker & Associates Ltd.	March 1968

LEGEND

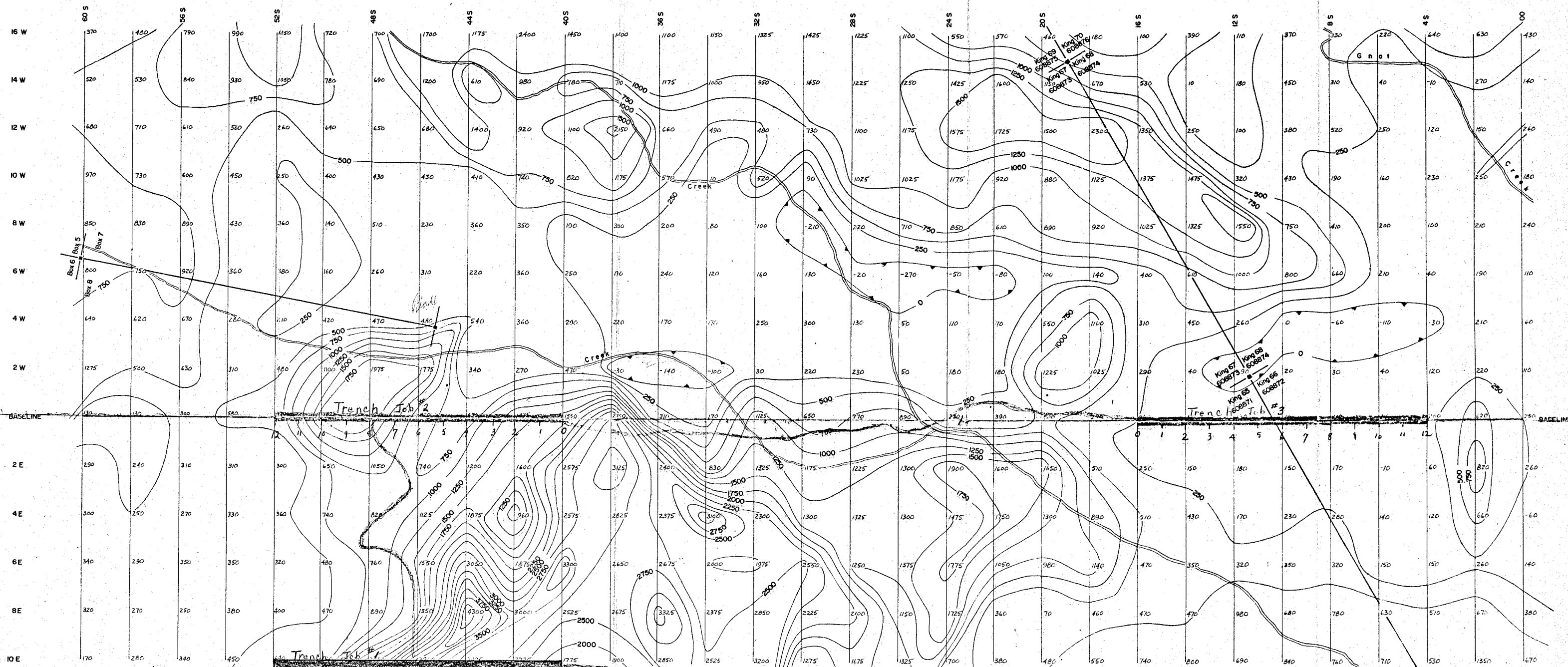
- 3000 γ
- 2000 γ
- 1500 γ
- 1000 γ
- < 200 γ

2622

P.H. Sevensma

TANZILLA EXPLORATION LTD	
GROUND MAGNETIC SURVEY	
Liard M.D— B.C.	104-1-5
P. H. Sevensma Consultants Ltd. — Vanc. B.C.	
August 1970,	Scale: 0  1000'

FIG. 4



DATE: Nov. 10, 1968  
 Trenching done with a 20B International Bulldozer  
 Trench #1: 1200' long x 15' wide x 2'-6" deep. Soil Samples Taken every 100' for 1200'.  
 Trench #2: 1200' long x 15' wide x 2'-6" deep. Soil Samples Taken every 100' for 1200'.  
 Trench #3: 1200' long x 15' wide x 2'-6" deep. Soil Samples Taken every 100' for 1200'.  
 Project Manager:

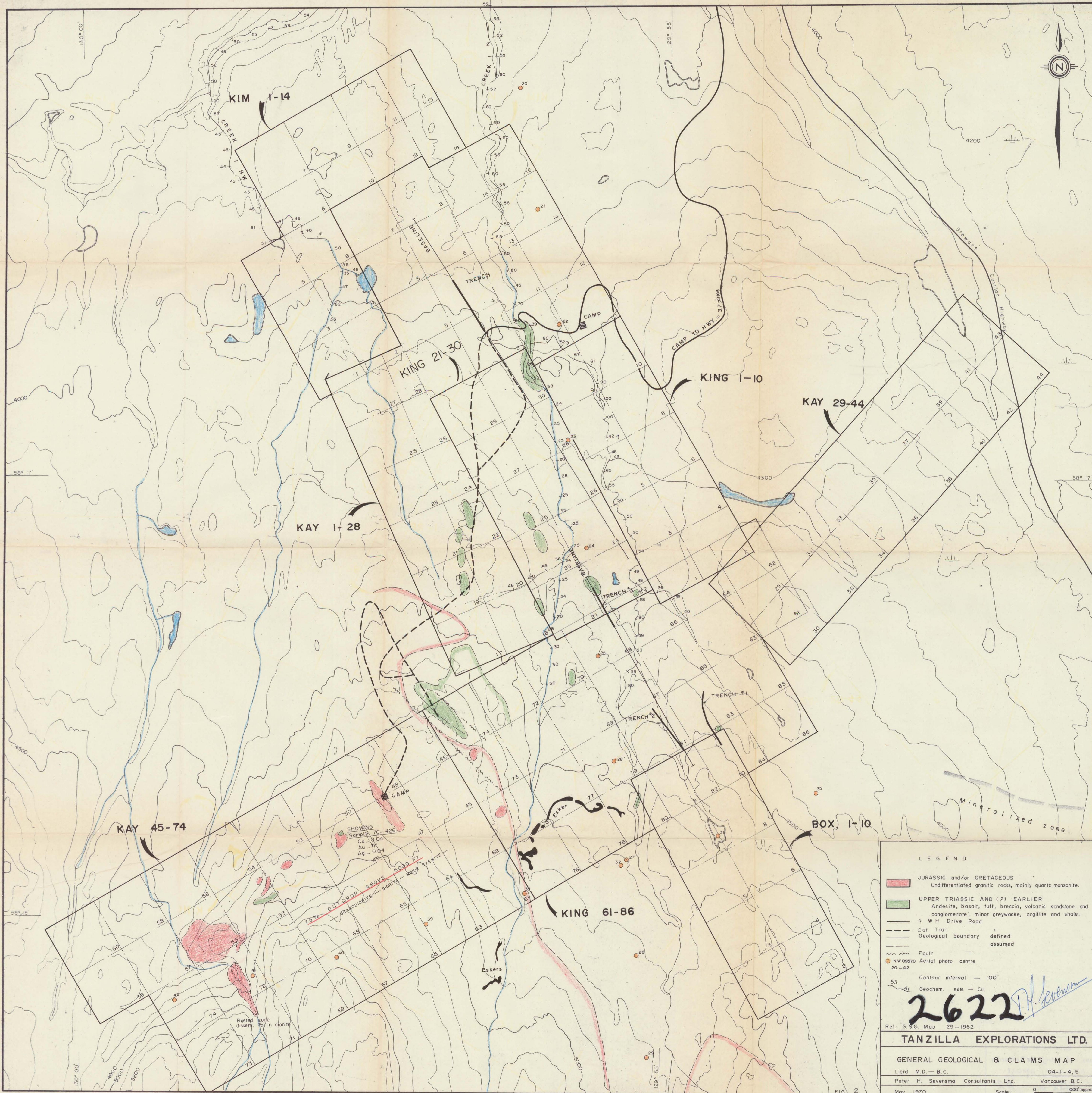
Department of  
 Mines and Petroleum Resources  
 ASSESSMENT REPORT  
 NO. **2622** MAP #5

$\frac{2}{15} \text{ ind} = 0.133$   
 $\frac{15}{100} \times 0.133 = 0.266$   
 L-111

**2622**

GEOPHYSICAL COMMENTS  
 INSTRUMENT: Sharpe MF-1 Magnetometer  
 CONTOUR INTERVAL: 250 Gammas  
 Magnetic Depression

RECONNAISSANCE MAGNETIC SURVEY	
of the KING CLAIM GROUP Liard Mining Division—Dease Lake Area—British Columbia	
ACE R. PARKER & ASSOCIATES MINERAL INDUSTRY CONSULTANTS & CONTRACTORS	
SCALE: 1" = 200'	SEAL
DATE: March 13, 1968	
DRAWN BY: Fox	
GEOPHYSICS BY: M. FOX	
DWG. NO.	



**LEGEND**

- JURASSIC and/or CRETACEOUS  
Undifferentiated granitic rocks, mainly quartz monzonite.
- UPPER TRIASSIC AND (?) EARLIER  
Andesite, basalt, tuff, breccia, volcanic sandstone and conglomerate; minor greywacke, argillite and shale.
- 4 W H Drive Road
- Cat Trail
- Geological boundary defined
- assumed
- Fault
- NW 09570 Aerial photo centre
- 20-42
- Contour interval - 100'
- 53
- 21 Geochem. silt - Cu.

2622

Ref: G.S.G. Map 29-1962

**TANZILLA EXPLORATIONS LTD.**

GENERAL GEOLOGICAL & CLAIMS MAP

Liard M.D. - B.C. 104-1-4, 5  
Peter H. Sevensma Consultants Ltd. Vancouver B.C.  
May 1970, Scale: 0 1000' (approx.)

FIG. 2