

1772

A GEOCHEMICAL SURVEY REPORT

ON ZEN, MAC CLAIM GROUP,

NEAR CALLING LAKE, HIGHLAND VALLEY,

KAMLOOPS MINING DIVISION, B.C.

FOR

ZENITH MINING CORPORATION LTD (N.P.L.)

21 February, 1969.

M.P. Stadnyk, B.Sc.

TABLE OF CONTENTS

Introduction	2
Location and Access	2
Physiography	3
History	3
Mineral Claims	3
Line Cutting	4
Soil Sampling	4
Geochemical Analysis	4
Geochemical Survey Interpretation	5
Personnel	6
Equipment	6
Conclusions and Recommendations	6
Declaration of Expenditures	7
Certification	8

Maps:-

- 1 Mineral Claim Map - Scale 1 inch to 1000 feet
- 2 Property Map and Grid Survey - 1 inch to 1000 feet
- 3 Geochemical Map - Copper dispersion pattern
- 1 inch to 400 feet

Geochemical Analysis Records

INTRODUCTION

Zenith Mining Corporation Ltd (N.P.L.) carried out the following work between October 28 and November 8, 1968 on its Highland Valley property situated near Calling Lake, B.C. - road construction, trenching, line cutting, geochemical and geophysical surveys.

This work was part of a continuing program initiated in 1967. Details of earlier work can be found in a report filed with the Chief Gold Commissioner on November 29, 1967.

This report is restricted to the geochemical survey carried out on the ZEN #1 to 6 inclusive and MAC #4 mineral claims. (See enclosed claim map)

Line cutting commenced on October 29th, and soil sampling was completed on November 4th, 1968. Geochemical anomalies detected in this survey have not been checked by trenching or drilling.

LOCATION AND ACCESS

Zenith Mining Corporation Ltd property is situated approximately two miles north west of Pimainus Lake, (or two miles south west of Calling Lake) and ten miles east of Spences Bridge, B.C. Co-ordinates are $121^{\circ} 05'$ west longitude and $50^{\circ} 21'$ north latitude.

The ZEN mineral claim can be reached by road from a number of directions, but the most practical is southwards from Ashcroft to Alwin Mining Company's camp, and then past Calling Lake. The last two miles of road are fairly steep and rough.

PHYSIOGRAPHY

The ZEN claim group is situated in an area of moderate relief, between 5200 and 5500 feet above sea level.

Swamp areas, some 300 to 400 feet wide drain northwards, while higher ground is covered by thick stands of second growth pines. Commercial stands of timber are non-existent.

Overburden is shallow, usually under ten feet in depth, but outcrops of rock cover 5 to 10% of the report area.

HISTORY

A rough road, suitable only for four wheel drive vehicles, was constructed along the southern edge of the claim group in 1966.

In 1967 a geochemical survey was carried out to the south of the group, and a number of north trending anomalies were found. (This report was filed with the Gold Commissioner on November 29, 1967, by M.P. Stadnyk.) These anomalies were later checked by caterpillar trenching. Mineralization uncovered consisted of north striking bornite veins, low grade disseminated chalcopyrite and pyrite.

MINERAL CLAIMS

This report is confined to the following mineral claims in the Kamloops Mining Division.

ZEN #1 to 6 inclusive, Record Nos. 53559 to 53564 inclusive

MAC #4, Record No. 65651

LINE CUTTING

Amex Mining Services of Kamloops, B.C. cut and chained 7.4 miles of line between October 29th and November 2nd, 1968.

The base line used for the 1967 geochemical survey was extended 1000 feet due north. Cross lines, 500 feet apart, were cut 1600 feet west and 7000 feet east of the base line. North bearing tie lines were cut at 16 west, 36 east and 70 east. (See enclosed map) All lines were marked and flagged at 200 foot intervals.

SOIL SAMPLING

Soil samples were taken at 200 foot intervals along the grid lines. Additional samples were taken in swamps, bogs and other possible drainage features.

Sampling was carried out when the ground was covered by 3 to 6 inches of snow. Samples were taken approximately 4 inches below the humus layer, at depths of 8 to 10 inches. Slope and unusual soil features were noted at each sample point.

GEOCHEMICAL ANALYSIS

Geochemical testing was carried out by Chemex Labs Ltd, North Vancouver, B.C. All samples were tested for copper using the Perchloric-nitrate digestion method and analysed by atomic absorption.

Certificates of analysis are included with this report. Copper values of 70 parts per million or greater have been plotted on the enclosed geochemical map. Background for the area was statistically estimated at 40 to 50 ppm. copper.

GEOCHEMICAL SURVEY INTERPRETATION

Copper value plots (ppm) reveal two strong north westerly trending anomalies on the ZEN-MAC claim group. These anomalies correspond closely with two swamp-bog areas.

The anomaly west of the base line can be traced southward throughout the property as revealed by the 1967 survey. This anomaly could indicate a linear mineralized structure such as found in a shear zone. A geophysical survey, possibly followed by drilling, would be necessary to check this feature.

The eastern anomaly, on ZEN #2 and 3 mineral claims, appears to be the southern extension of a similar anomaly detected by Cominco Ltd on the TOM claims in 1966. Check sampling should be carried out to see if this anomaly extends southwards to join that found on T.C. Exploration's northern claim block.

Neither anomaly has been trenched but road construction has uncovered some copper mineralization at line 70 north, 6 to 8 west, and line 75 north, 12 west.

PERSONNEL

Supervision of all work on the ZEN, MAC and LORNA mineral claims was carried out by M.P. Stadnyk (Geologist) on a contract with Zenith Mining Corporation Ltd (N.P.L.).

Line cutting was performed by Amex Mining Services, and soil sampling by R. MacBean on short contracts.

EQUIPMENT

A four wheel drive truck was rented from Tilden Ltd, Kamloops for one week. A camper was used as living quarters. This was situated at Calling Lake and supplied by M.P. Stadnyk.

CONCLUSIONS AND RECOMMENDATIONS

The geochemical survey on the ZEN, MAC mineral claims has revealed two strong copper anomalies. Both are in swamp areas and no outcrops have been found. No copper is visible on the surface.

Experience in this area of Highland Valley has proven that trenching of swamp-bog areas is unpractical. Therefore, the above anomalies should be checked by detailed soil sampling, followed by magnetometer and induced polarization surveys.

If these surveys confirm the presence of mineralized zones, then diamond or percussion drilling is recommended to test for the presence of copper ore bodies.

Report Respectfully Submitted,



M.P. Stadnyk

DECLARATION OF EXPENDITURES

Line Cutting

Amex Mining Exploration Services October 29 - November 2, 1968 (See attached letter)	\$731.60
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Soil Sampling

November 2 - 4, 1968 - 1 man Contract sampling @ \$1.00 per sample (x 181)	181.00
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Soil Analysis

Chemex Labs Ltd - November 18, 1968	195.48
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Truck Rental

Tilden-Rent-a-Car, Kamloops November 1 - 5, 1968 5 days @ \$15.00 per day	75.00
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Camp Costs

November 1 - 4, 1968 - 2 men 4 days @ \$10.00 per man day	80.00
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Geochemical Report

Report preparation and maps February 6 - 7, 1969 - 1½ days	65.00
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TOTAL	\$1,328.08
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Declared before me at the

of

, in the

Province of British Columbia, this

, A.D.

Notary Public for the Province of British Columbia or
Notary Public for the Province of British Columbia.

Declared before me at the *City*
of *Vancouver*, in the
Province of British Columbia, this *28*
day of *February, 1969*, A.D.

And Stadnyk

S. Jeannotte
Notary Public for the Province of British Columbia or
Assistant Notary Public for the Province of British Columbia.

Notary Public **Recorder**

CERTIFICATION

I, MIKE PETER STADNYK, of North Vancouver, B.C.
do hereby certify that:

1. I am a Mining Exploration Geologist residing
at Suite 15, 2697 Whitley Court, North Vancouver, B.C.
2. I am a graduate of the University of New Zealand
and have practised my profession in Canada for the past
eight years.
3. The information contained in this report was
based upon work carried out by me, or at my direction,
between the period of October 28th and November 7th, 1968.



M.P. STADNYK, B.Sc.
Geologist

24th February, 1969
North Vancouver, B.C.


AMEX
MINING
EXPLORATION
SERVICES

A. A. (AB) ABLETT
 PHONE 376-7490
 BOX 286, KAMLOOPS, B. C.

November 15, 1968

Mr. M.P. Stadnyk,
 Zenith Mining Co. Ltd.,
 404-602 West Hastings St.,
 Vancouver 2, B.C.

Dear Sir:

The following is the breakdown of personnel engaged for linecutting, to be applied as part of assessment work in preparation for geophysical work. This work was recently completed on your "ZEN" and "MAC" claim groups, Highland Valley, B.C.

<u>PERSONNEL</u>	<u>TIME EXPENDED</u>	<u>WAGES</u>	
G. Miller	4 days	\$ 140.40	
M. Giesbrecht	4 days	140.40	
C. Baird	4 days	140.40	
F. Froste	4 days	140.40	
A. Ablett	1 day	50.00	
		\$ 611.60	\$ 611.60
4 Wheel-drive rental	4 days	80.00	
Accommodation	4 days	40.00	
		\$ 120.00	<u>120.00</u>
Total cost of 7.4 miles of linecutting			\$ <u>731.60</u>

AAA/eag

Respectfully,


 A.A. Ablett

CONFIDENTIAL WORK

MAPPING
 SURVEYING
 LINE CUTTING
 CLAIM STAKING
 GEOCHEMICAL SURVEYS



CHEMEX LABS LTD.

1416 CROWN ST., NORTH VANCOUVER, B.C. TELEPHONE 988-8955

NO. 3108

CERTIFICATE OF ANALYSIS

TO. Zenith Mines Ltd.,
404 - 602 W. Hastings St.,
Vancouver, B.C.

ATTN:

INVOICE NO. 913

SAMPLE NO.	PPM Copper	
1340	57	90N 4W
1341	102	
1342	200	
1343	465	
1344	78	
1345	54	90N 16W
1346	82	85N 16W
1347	82	
1348	80	
1349	340	
1350	129	
1351	98	
1352	55	
1353	45	
1354	62	85N B.L.
1355	57	85N 2E
1356	42	
1357	69	
1358	42	
1359	62	
1360	62	
1361	48	
1362	96	
1363	145	
1364	72	
1365	46	
1366	72	
1367	138	
1368	96	
1369	114	
1370	70	
1371	59	
1372	115	85N 36E
1373	440	90N 38E
1374	745	
1375	133	
1376	545	
1377	380	44+50E
1378	46	
1379	42	90N 50E
Std.#14	380	

DATE RECEIVED Nov.13/68
DATE ANALYSED Nov.18/68

CERTIFIED BY



CHEMEX LABS LTD.

1416 CROWN ST., NORTH VANCOUVER, B.C. TELEPHONE 988-6955

NO. 3109

CERTIFICATE OF ANALYSIS

TO. Zenith Mines Ltd.,
404 - 602 W. Hastings St.,
Vancouver, B.C.

ATTN:

INVOICE NO. 913

SAMPLE NO.	PPM Copper	
1380	54	90N. 50E
1381	54	
1382	38	
1383	54	
1384	43	
1385	220	
1386	46	
1387	200	
1388	57	
1389	38	
1390	32	90N. 70E
1391	42	80N. 70E
1392	45	
1393	48	
1394	51	
1395	200	
1396	36	
1397	54	
1398	60	
1399	60	
1400	51	80N. 54E
1401	15	75N 68E
1402	33	
1403	42	
1404	30	
1405	16	
1406	28	
1407	950	
1408	55	
1409	403	
1410	147	
1411	54	
1412	40	
1413	78	
1414	54	
1415	260	
1416	46	
1417	74	
1418	70	
1419	93	75N 28E

DATE RECEIVED
DATE ANALYSED

Nov. 13/68
Nov. 18/68

CERTIFIED BY



CHEMEX LABS LTD.

1418 CROWN ST., NORTH VANCOUVER, B.C. TELEPHONE 988-8955

NO. 3110

CERTIFICATE OF ANALYSIS

TO. Zenith Mines Ltd.,
404 - 602 W. Hastings St.,
Vancouver, B. C.

ATTN:

INVOICE NO.

913

SAMPLE NO.	PPM Copper	
1420	52	75N 30E
1421	85	
1422	100	
1423	392	
1424	82	
1425	54	
1426	55	
1427	52	
1428	52	
1429	136	
1430	80	
1431	133	
1432	72	
1433	82	
1434	403	
1435	54	75N B.L.
1436	252	75N 2W
1437	143	
1438	605	
1439	370	
1440	213	
1441	91	
1442	54	
1443	74	75N 16W.
1444	72	80N 16W
1445	96	
1446	133	
1447	147	
1448	655	
1449	465	
1450	415	
1451	72	
1452	42	80N B.L.
1453	565	80N 2E
1454	480	
1455	55	
1456	57	
1457	38	
1458	426	80N 11+25E
1459	74	

DATE RECEIVED

Nov. 13/68

DATE ANALYSED

Nov. 18/68

CERTIFIED BY



CHEMEX LABS LTD.

1418 CROWN ST., NORTH VANCOUVER, B.C. TELEPHONE 988-8955

NO. 3107

CERTIFICATE OF ANALYSIS

TO. Zenith Mines Ltd.,
404 - 602 W. Hastings St.,
Vancouver, B. C.

ATTN:

INVOICE NO. 913

SAMPLE NO.	PPM Copper	
1300	200	LINE 85 N - 70 E
1301	115	
1302	340	
1303	38	
1304	38	
1305	33	
1306	72	
1307	36	
1308	65	
1309	43	
1310	35	
1311	38	
1312	323	
1313	87	
1314	26	
1315	129	
1316	98	
1317	87	85N - 36E
1318	69	LINE 90N - 36E
1319	143	
1320	78	
1321	50	
1322	115	
1323	96	
1324	87	
1325	65	
1326	64	
1327	1300	
1328	65	
1329	55	
1330	70	
1331	59	
1332	64	
1333	30	
1334	51	
1335	55	
1336	85	90N - BL.
1337	70	90N - 2 W.
1338	80	
1339	89	
Std. #14	380	

DATE RECEIVED Nov. 13/68
DATE ANALYSED Nov. 18/68

CERTIFIED BY 



CHEMEX LABS LTD.

1416 CROWN ST., NORTH VANCOUVER, B.C. TELEPHONE 988-8955

NO. 3111

CERTIFICATE OF ANALYSIS

TO. Zenith Mines Ltd.,
404 - 602 W. Hastings St.,
Vancouver, B. C.

ATTN:

INVOICE NO.

913

SAMPLE NO.	PPM Copper	
1460	78	80 N . 14 E
1461	59	
1462	51	
1463	52	
1464	69	
1465	98	
1466	78	
1467	64	
1468	57	
1469	89	
1470	26	
1471	140	
1472	46	
1473	59	
1474	465	
1475	98	
1476	131	
1477	565	
1478	50	
1479	840	80 N . 51 E
1480	52	80 N . 52 E

DATE RECEIVED
DATE ANALYSED

Nov. 13/68
Nov. 18/68

CERTIFIED BY

404-602 W. HASTINGS ST.,
VANCOUVER 2, B.C.

FEBRUARY 28, 1969.

MR. F. J. SELL
GOLD COMMISSIONER,
KAMLOOPS MINING DIVISION,
COURT HOUSE,
KAMLOOPS, B.C.

Dear Sir:-

Please find enclosed two Geochemical Reports on the Zenith*1-6 and Mac 4 mineral claims, submitted on behalf of Zenith Mining Corporation Ltd. (NPL).

These reports pertain to FORM B filed at Vancouver, B.C., on February 7th, 1969.

I trust that you will find these reports in order.

Yours truly,

M. P. Stasnyk.



NORTHLODE EXPLORATION LTD.

T.C. EXPLORATIONS LTD.

HIGHLAND CHIEFTAIN MINES LTD.

Area of Geochemical Survey in 1968

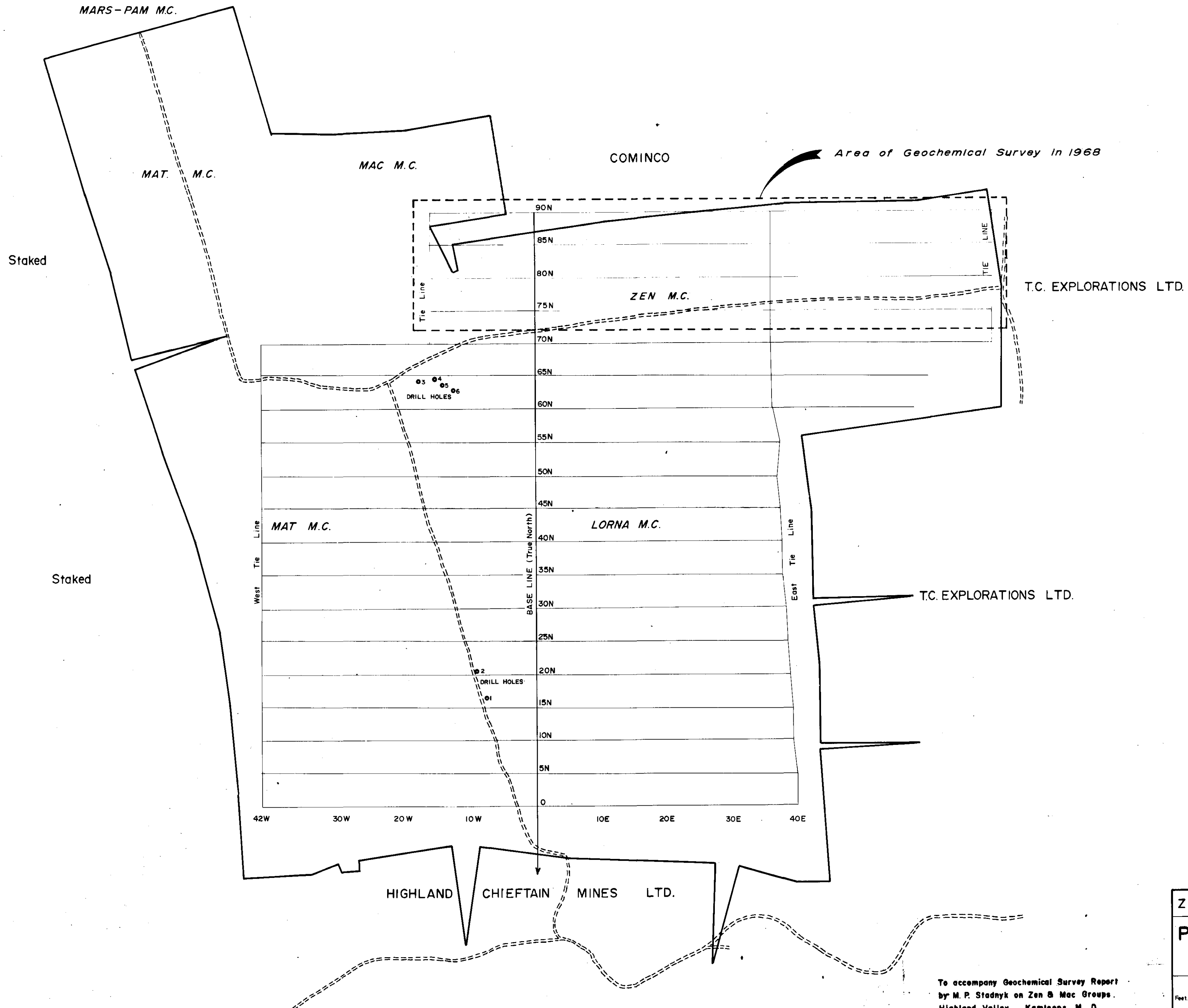
Staked

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
No. 1772 MAP 1

1772

To accompany Geochemical Survey Report
by M. P. Stadnyk on Zen & Mac Groups.
Highland Valley, Kamloops M.D.
February 21, 1969
M. P. Stadnyk, Feb 28, 1969

ZENITH MINING CORPORATION LTD. (N.P.L.)
MINERAL CLAIM MAP
LAKE PIMAINUS - HIGHLAND VALLEY, B.C.
SCALE: 1" = 1,000'
Feet 1000 500 0 1000 2000 3000 Feet
DRAWN: H.W.C. CHECKED: NOVEMBER, 1968



1772

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1772 MAP 2

ZENITH MINING CORPORATION LTD. (N.P.L.)
PROPERTY MAP & GRID SYSTEM
 LAKE PIMAINUS - HIGHLAND VALLEY, B.C. 2

SCALE: 1" = 1,000

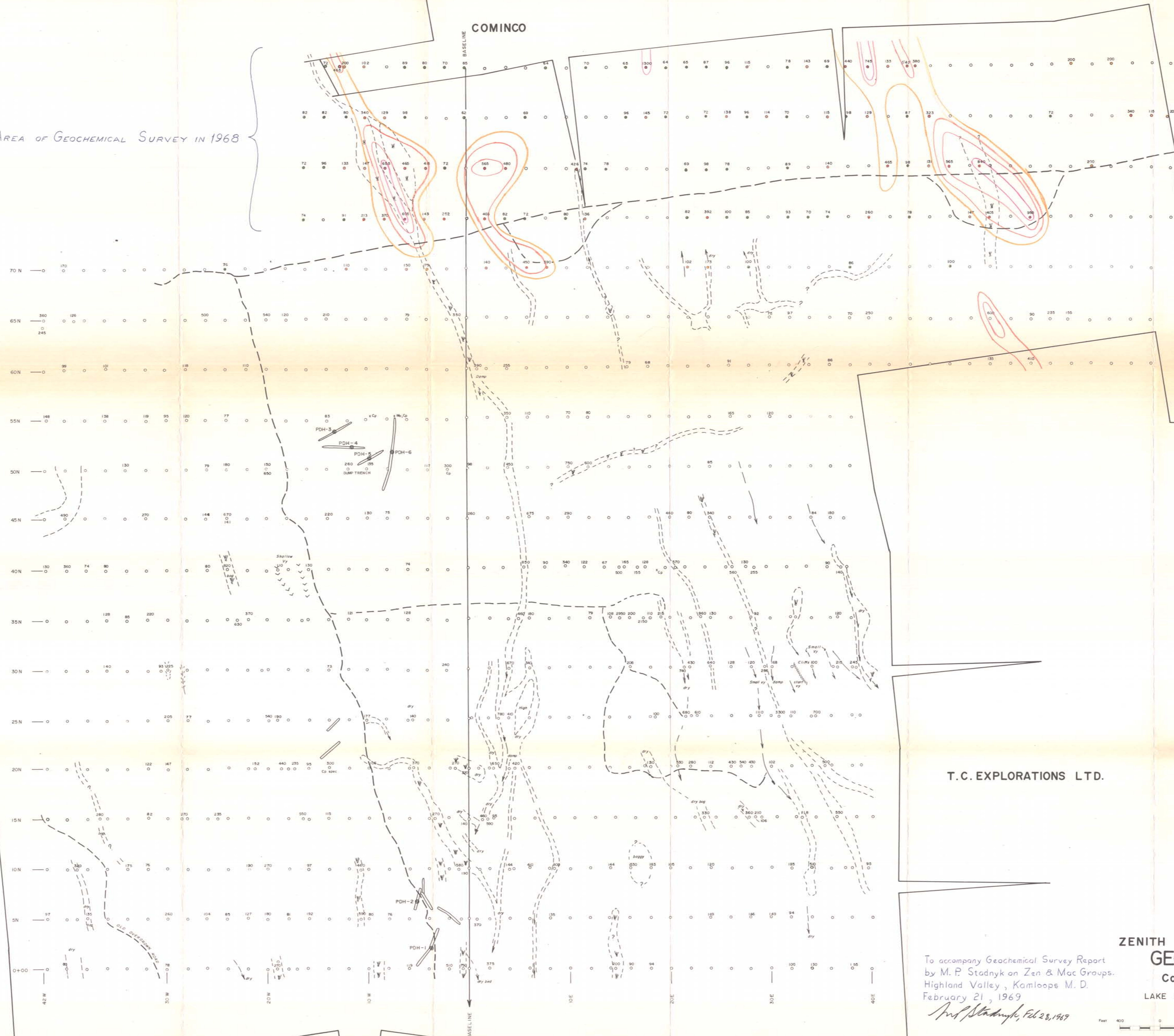
Feet: 1000 500 0 1000 2000 3000

DRAWN: H.W.C. CHECKED: NOVEMBER, 1968

To accompany Geochemical Survey Report
 by M. P. Stodnyk on Zen & Mac Groups.
 Highland Valley, Kamloops M. D.
 February 21, 1969
M. P. Stodnyk Feb. 28, 1969

AREA OF GEOCHEMICAL SURVEY IN 1968

COMINCO



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1772 MAP 3

LEGEND

- 700 Sample location (Cu values in ppm.)
- ⊥ Swamp
- Streams
- Roads
- Trenches

SOIL SAMPLE COLOUR LEGEND

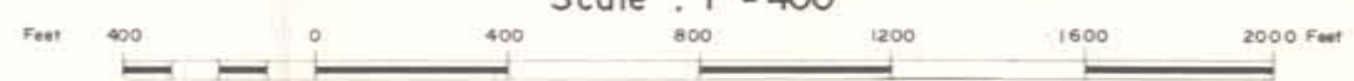
EAGLE VERITIN NO.	COPPER VALUES (PPM)
738 1/2	0 - 50
739 1/2	51 - 100
757	101 - 150
736	151 - 200
736 1/2	201 - 300
737	301 - 400
750	401 - 500
744	501 - 600
752	601 +

T.C. EXPLORATIONS LTD.

ZENITH MINING CORPORATION LTD.(N.P.L.)
GEOCHEMICAL MAP
Copper Dispersion Patterns
LAKE PIMAINUS — HIGHLAND VALLEY, B.C.

To accompany Geochemical Survey Report
by M. P. Stadnyk on Zen & Mac Groups.
Highland Valley, Kamloops M. D.
February 21, 1969
M. P. Stadnyk, Feb 28, 1969

Scale: 1" = 400'



1772

Drawn: H.W.C.
Checked:
NOVEMBER, 1968

HIGHLAND CHIEFTAIN MINES