CORRIE COPPER LTD. (N.P.L.)

CORRIE GROUP

105-H-8, Watson Lake M.D.

128° 15' W - 61° 21' N

by

P.H. Sevensma, Ph.D., P.Eng.
PETER H. SEVENSMA CONSULTANTS LTD.

June 28, 1971.

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CORRIE COPPER LTD. (N.P.L.)

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105-H-8, Watson Lake M.D.

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1. INTRODUCTION

Copper-bearing pyrrhotite float has been discovered in the early 1960's during the construction of the Cantung road, in the area of Mile Posts 57 and 58, in the Hyland River Valley.

Over the years, some work has been carried out in this area, the most extensive program consisting of a magnetic survey by the Norquest Joint Venture in 1966 and some drilling by Mount Logan Mines Ltd. in 1968.

Recently, Corrie Copper Ltd. have acquired claims covering this area of interest, and the writer has examined the occurrences on behalf of the Company on June 7, 1971.

During this examination, 7 samples averaging about 6 lbs. were taken over a length of 5,000', and all posts located near the road were inspected by the writer and found to have been placed in accordance with the Yukon Quartz Mining Act.

2. PROPERTY, LOCATION, ACCESS

The property consists of the following 104 claims:

No. Claims	Claim No.	Grant Nos.	Date Located	Date Recorded
40	Corrie 1 - 40	Y55011 - 50	March 30/71	March 30/71
48	Corrie 41 - 88	Y55233 - 280	April 14/71	April 14/71
16	Corrie 89 -104	Y55313 - 328	April 14/71	April 14/71
104	Corrie 1 - 104			

The Group is located along the Cantung Road, between Mile Posts 56 and 61, on claim sheet 105-H-8, the showings being near Long. 128° 15' W and Lat. 61° 21' N, at an elevation of about 2,800', just South of the tote-road leading in a Westerly direction to the main Norquest Zn - Pb - Cu showings. These are located some four airmiles West at much higher elevations in a rugged mountain range.

Access to the Corrie Group is by truck from Watson Lake, a total distance of about 126 road-miles. There is a good campsite and water and timber with butts of to 16" are abundant, although the showing area lies within an old burn. The road services the Cantung Mine and is kept open all year round. Local snowfall is relatively light and totals some two feet of packed snow in late winter, to a maximum of three feet.

The property is adequately covered by the following airphotographs: North - South line A 12270, photos 160 - 166.

3. AREAL and LOCAL GEOLOGY

The area is underlain by a structural high of Hadrynian slates, quartzites, conglomerates and minor limestones. The West flank of this structural high shows metamorphism to schists and gneissic formations and is regionally intruded by Mesozoic monzonites-granodiorites.

Regionally, the structural high separates Cambrian formations on the East from a Silurian-Devonian basin on the West, where volcanic and ultrabasic formations are present.

Locally, the area is marked by strong, curving lineaments forming a major regional horsetail structure. This type of structure is characteristic of a number of major mining districts.

Many zinc-lead-copper showings have been discovered during the last 10 years within some 20 miles of the Corrie Group in the area to the West of it. The unusual number of showings indicates clearly the presence of a potential mining district.

Little prospecting has so far been carried out immediately East of the Hyland River, but several outstanding occurrences are known some 25 - 40 miles North, East and South East of the Corrie area near the height of land between the Yukon and the N.W.T. These areas however are in rugged terrain and still relatively inaccessible for economic mining operations.

The Corrie showings, lying in favorable environment near the intersection of some of the major lineaments, are of such easy access they can be explored in detail at much lower cost than even those only a few miles to the West in the rugged mountains.

4. HISTORY

Observed while road construction was in progress in the early 1960's, the only significant programs were carried out by Norquest Joint Venture in 1966, when the claims were known as the Pat Group and by Mount Logan Mines Ltd. in 1968.

A ground magnetic survey was carried out in early 1966 on lines 3,000' long spaced at 400' intervals over a length of 5,600'. Station spacing was 25' and all profiles of this survey are available to the writer.

These data have recently been plotted on a contour map by F. Syberg, with some modifications by the writer (see fig. 2).

Subsequent to the survey, 2 core-holes were drilled for a total of 717' in June 1968, on a magnetic anomaly, as follows:

Hole ML-1, -30° to N 87° W at 5,200 N + 525' W, length 401', Hc 355'

Hole ML-2, -30° to N 87° W at 5,200 N + 825' W, length 316', Hc 280'

Geology and assay-logs are available to the writer, but they are of poor quality. Assays are reported across 50' intervals, and sludges across different intervals.

Reported assay values are as follows:

ML #1	Core:	From 0 - 35'	Overburden
		From 35' - 130'	0.10% Cu
		From 130' - 180'	0.25% Cu
		From 180' - 280'	tr. Cu
	Sludges	From 90' - 120'	0.25% Cu
ML #2		From 0' - 58.5'	Overburden
		From 60' - 368'	Traces of Cu

5. SHOWINGS

In the area of Mile Posts 57 and 58, there are many clusters of angular blocks from 6" to 6' across of massive and disseminated sulphides carrying variable amounts of chalcopyrite.

These blocks have been uncovered when road construction proceeded to bulldoze out a shallow wide trench in the general silty clay cover of the area. Occasional large lenses of sandy gravel were encountered, which were used to build a road-bed within this wide shallow trench.

From time to time, the road-trench would skim bedrock, in which case both large angular boulders and small fragments of hornfelsic schist and of limestone would be dug up, and spread over some of the clay.

The sulphide boulders are in a position similar to these rock boulders and appear to have originated in a similar manner in the underlying bedrock.

In several places, the clay can be observed to overlie directly the bedrock, and gravel lenses are found under the clay in some of the cross-valleys.

Glaciers are believed to have moved through the Hyland River Valley in a Southerly direction, but no extensive and thick glacial deposits are present in this valley, and although unstratified, the clay is likely rather of lacustrine than glacial origin, especially so as undisturbed coarse, sandy river gravels are in places found under clay cover.

There are drumlin to esker-like ridges, but in observable cases these are underlain by elongated rock-ridges spared by erosion, and not by glacial debris.

On balance, it is highly probable that the angular sulphide boulders, which vary in diameter from 6" to 6', originate in the local bedrock underlying the road.

They lie right on the NW - SE line of strike of significant zinc-lead-copper showings extending for a length of some sixteen mile in the nearby mountains to the NW, and in addition, disseminated pyrrhotite with minor chalcopyrite occurs in place about 1 mile West of Mile Post 53.

A magnetic survey conducted in 1966 along lines at right angles to the road shows an anomalous belt to come in from the North West and to strike away to the South West in the direction of this recorded showing.

The sulphide boulders occur over a length of 1 mile along the road and have been sampled by the writer in seven locations over this distance (see figure 2).

They consist both of very fine grained, dark bronze, dull, massive pyrrhotite with scattered quartz eyes and irregularly distributed small patches of fine-grained chalcopyrite, and of laminated hornfels with both pyrrhotite laminations and remobilized veinlets and pockets of medium grained pyrrhotite, again with patches of chalcopyrite.

The best chalcopyrite occurs in quartzose patches in both the massive pyrrhotite and the banded hornfels. The most massive pyrrhotite shows the least chalcopyrite.

Sample locations are plotted on the magnetic map; figure 2 and the following assay-results were obtained by Crest Laboratories, report no. 2635 of June 16th, 1971.

Sample No.	Weight lbs.	Weight oz.	Cu %	Au oz/t.	Ag. oz/t.	Composite % Fe	Composite % Zn	Composite % Ni
165	4	4	.16	tr.	tr.)			
166	4	10	.25	tr.	tr.)			
167	6	3	.32	tr.	tr.)			
168	2	13	.31	tr.	tr.)	21.98	1.06	tr.
169	6	7	.30	tr.	tr.)			
170	8	6	.42	tr.	tr.)			
171	8	5	.36	tr.	tr.)			
Total	41	-	21.2	tr.	tr.			
Arithmetic Average			0.30	tr.	tr.			

Note: 100% Pyrrhotite = 60.4% Fe.
At 21.98% Fe, about ⅓ of these samples consist of pyrrhotite.

Location of these samples is as follows:

Sample No.	Mileage	Side of Road	Remarks
165	MP 57 + 400'	East	20 + 00 N at base line
166	MP 58 + 200'	West	
167	MP 57 + 4,800'	East & West	
168	MP 57 + 4,000'	East	
169	MP 57 + 2,600'	East & West	
170	MP 57 + 2,200'	East	Large block in deep hole
171	MP 57 + 1,200'	East	Two large blocks (photo)

All blocks had been shattered by light dynamite blasts prior to sampling. Samples consisted of golfball to tennisball size fragments broken by the writer from the shattered blocks.

The blocks consist partly of massive pyrrhotite often about barren, and more disseminated and quartzose parts, estimated to assay up to 1% Cu. Some measure about 6' across; they all show marked magnetisme.

6. RESULTS of WORK to DATE

a. Magnetics

Although all blocks are significantly magnetic, only about 1/3 of the area underlain by the blocks shows significant positive anomalous trends.

The available drill-data do not offer a rational explanation of the magnatic anomalies overlying the cored areas.

There are some fifteen zones showing peak values of from 300 - 500 gammas; some of these form together elongated zones several thousand feet long, whereas others are more isolated.

As magnetic readings were taken on stations 25' apart along lines 400' apart, narrow zones of pyrrhotite could have been missed, but any of significant size must have been detected.

The largest blocks (sample no. 171) occur near a flat-topped magnetic anomaly, suggesting a causative body of a width measuring in the tens of feet, say at least 30 - 40', but topping some 100'-150' below the surface.

The magnetic survey does not corroborate our impression that all blocks are derived from a source immediately underlying the road; however, they may in part have been derived from narrow zones, satellites to a more substantial zone with marked magnetisme.

In the drilling pyrite, pyrrhotite and chalcopyrite are reported in hole ML 1 between 35' and 89' with a core loss of 7.5' from 41.5' - 49', and between 89' and 195' with a core loss of 9.5' between 110' and 135'. Best mineralized sections were:

Sludges	90' - 120'	0.25% Cu.
Core	80' - 130'	0.10% Cu.
Core	130' - 180'	0.25% Cu.
Sludges	120' - 180'	0.01% Cu.

Other than to indicate significant amounts of copper between 90' and 180', the above type of assaying is practically useless, as 30' of 0.25% Cu could represent barren formations containing say 3' of 2.5% Cu or 10' of 0.75% Cu.

The positive features are that copper-bearing pyrrhotite blocks averaging 0.30% Cu occur over a length of about 1 mile, and that 0.25% Cu has been intersected in a drill-hole 600' West of this long line of blocks.

The mineralized material is both highly conductive and significantly magnetic, and in the writer's opinion, the claim area covers a typical area where a combined airborne magnetic and electromagnetic survey is both required and warranted to detect copper-bearing sulphide zones in place.

In view of the clay prevailing in the area, little reliance can be placed on extensive soil-sampling, but silt sampling and some reconnaissance soil-sampling may be found highly useful to pinpoint those coincident magnetic and electromagnetic anomalies that are reflected by higher copper in the overlying overburden.

As sericite schists and chlorite schists are reported to be extensive in the two drill logs, conductivity of the wallrock formations may be expected to be significant, and this must be taken into account in any electrical prospecting methods used, as a high background noise should be associated with these schists.

In view of the highly favorable geological setting of the area, and the strong suggestion that the occurrences udner consideration lie at

the nose of a 30 mile long belt of significant base-metal showings, a careful but agressive program of exploration is warranted, as there is a good probability that material of several times the grade of the exposed blocks is present in significant tonnages on some part of the claim group.

In this context, it may be noted that in pyrrhotite-copper-zinc bodies, the better copper-grades tend to be segregated in structurally deformed areas, whereas the more uniform zones tend to be of a lower and often uneconomical grade.

7. CONCLUSIONS

The Corrie Group of claims covers occurrences of copper-zinc bearing pyrrhotite blocks which are likely to have been derived from the nearby underlying bedrock. The claim group lies at the nose of a regional anticline with an ENE striking axis associated with regional "horse-tail" type lineaments, in a highly mineralized belt.

A program of geological mapping along cut lines, of some reconnaissance geochemical silt and soil-sampling and of airborne magnetic and electromagnetic surveying is justified to delineate those targets that have the highest probability of reflecting the presence of significant bodies of possible commercial grade sulphides in this easily accessible area.

8. RECOMMENDED PROGRAM

The following program is recommended for the Corrie Group:

1.	Photo-topo map 1" = 1,000', 20 square miles @ $100.	$2,000.00
2.	Photogeological studies	600.00
3.	Camp construction and equipment, 3 tents @ $800.	2,400.00
4.	Linecutting, 40 line miles @ $100.	4,000.00
5.	Soil and silt sampling, 300 samples @ $600.	1,800.00
6.	Geological mapping, 2 men, 1 month	4,000.00
7.	Airborne Mag. & E.M., 2 miles by 4 miles at ⅛ mile spacing = 64 line-miles @ $100.	6,400.00
8.	Follow-up ground geophysics, Mag. & E.M., estimated at 20 line-miles @ $150.	3,000.00
9.	Camp operation, 200 men days @ $10.	2,000.00
10.	Truck and truck operation	5,000.00
11.	1,500' of drilling @ $20.00 overall	30,000.00
12.	Assaying, 150 assays @ $10.	1,500.00
		62,700.00
	Engineering and Supervision, 10%	6,300.00
	Contingencies, 10%	6,800.00
	Total field budget	$75,800.00

Comments are as follows:

4. Linecutting

An initial 20 line-miles is planned in preparation for an airborne survey by the Turair method, consisting of a rectangle 1½ x 3 miles plus crosslines every 1,600', for a total of 20 line-miles. A similar amount is allotted for subsequent ground-geophysical follow-up.

5. Soil sampling

About 100 samples in initial reconnaissance, and 200 samples for follow-up, after ground-geophysics.

11. Drilling is predicated upon 4 holes from 300' - 400' long to test the two best initial targets and the cost includes all mobilization and camp support.

9. SUMMARY and RECOMMENDATIONS

The Corrie Group of claims covers the nose of a broad regional anticlinal structure, the flanks of which carry significant zinc-lead-copper showings for a total length of some 30 miles.

On the claim group, blocks of both massive and disseminated copper-zinc bearing pyrrhotite along the Cantung road have been observed and sampled by the writer for a length of at least one mile. The average grade of seven representative samples taken over this length showed:

0.30% Cu, 1.06% Zn, 21.98% Fe, tr. Au, tr. Ag.

The probability of finding significant tonnages of higher grade material is considered very good, and the better grades are expected to be related to structurally deformed areas.

As this mineralized material is highly responsive to both magnetic and electromagnetic prospecting methods, a helicopter-borne Mag. - E.M. survey of this area is recommended, in conjunction with geological and ground-geophysical surveys, to be followed by some drilling, at an estimated field cost of $75,800.00.

Respectfully submitted,

P.H. Sevensma, Ph.D., P.Eng.
PETER H. SEVENSMA CONSULTANTS LTD.

Vancouver, B.C.
June 28, 1971.

CERTIFICATE

I, PIETER H. SEVENSMA, of 908, 1280 Haro Street, in the City of Vancouver, in the Province of British Columbia, DO HEREBY CERTIFY:

1. THAT I am a Consulting Geologist, with a business address at 715 - 850 West Hastings Street, in the City of Vancouver, in the Province of British Columbia.

2. THAT I am a graduate of the University of Geneva, Switzerland (Physics and Chemistry, 1937; Geology and Mineralogy, 1937) where I obtained my Ph.D., in Geological and Mineralogical Sciences in 1941.

3. THAT I am a Registered Professional Engineer in the Geological Section of the Association of Professional Engineers of the Province of British Columbia and of the Association of Professional Engineers of Yukon Territory.

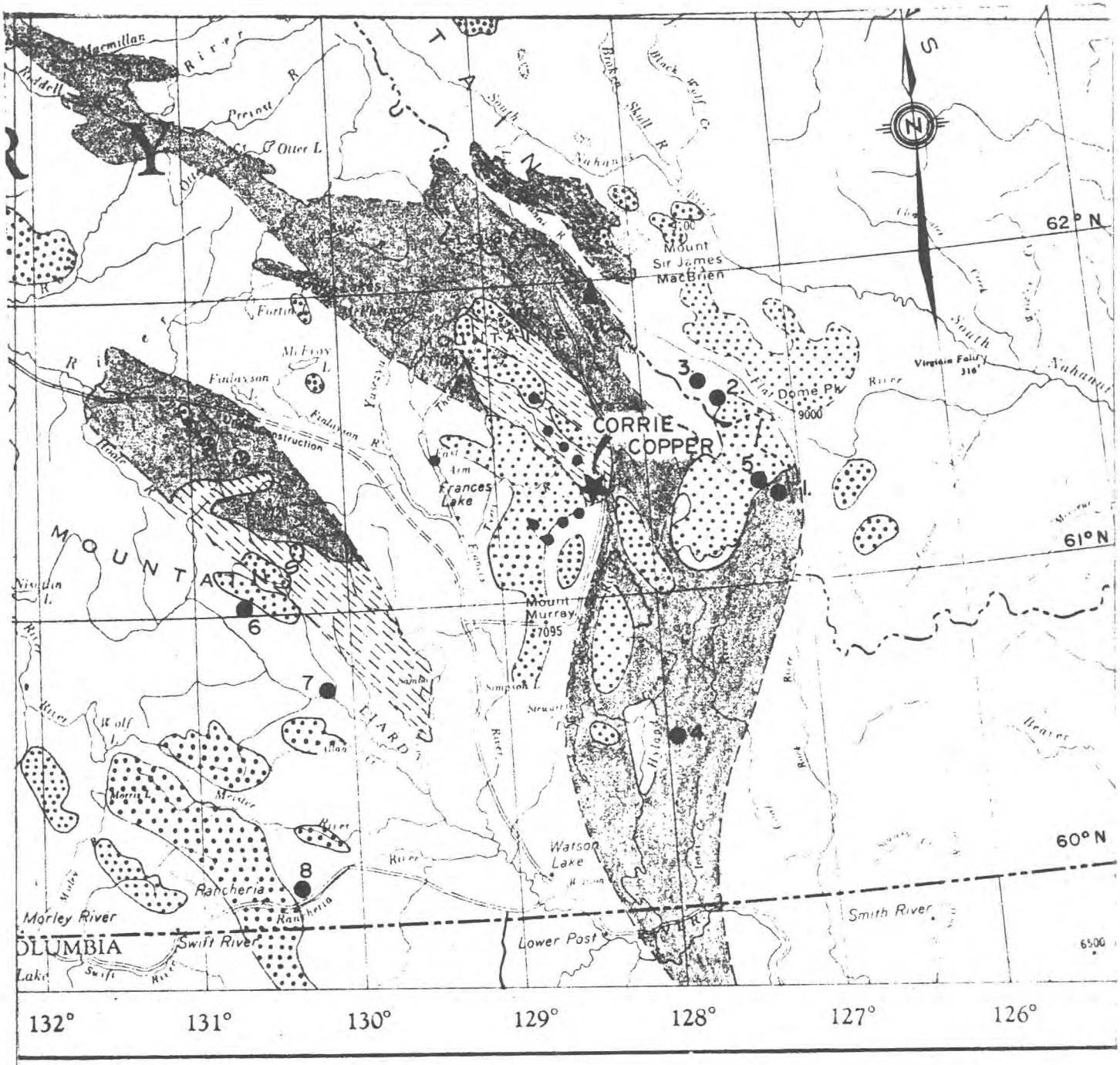
4. THAT I have practiced my profession as a Geologist for the past 32 years.

5. THAT I have personally examined the Corrie Group occurrences on June 7, 1971, and that I am acquainted by personal examination in with some of the Norquest showings lying to the North West.

6. THAT I have no interest, either directly or indirectly in any of the securities or properties of Corrie Copper Ltd. (N.P.L.) and do not expect to acquire or receive any.

P.H. Sevensma, Ph.D., P.Eng.

Vancouver, B.C.
June 28, 1971.



LEGEND

- Producer — (Cantung)
- Significant Showings — (Regional)
- Significant Showings — (Upper Tyers Riv.)
- Palaeozoics
- Granitic Intrusives
- Hn — Hadrynian Gneisses
- Hs — Hadrynian Clastics, minor Limestone.

1. Sunset — Cu
2. Lucky Lake — Ag, Pb, Zn
3. Roy Group — Ag, Pb, Zn, WO_3
4. Dorothy — Ag, Pb, Zn
5. Blue — WO_3
6. Val Rebo — Cu
7. Ruth — Cu
8. Rancheria Area — Ag, Pb, Zn, WO_3

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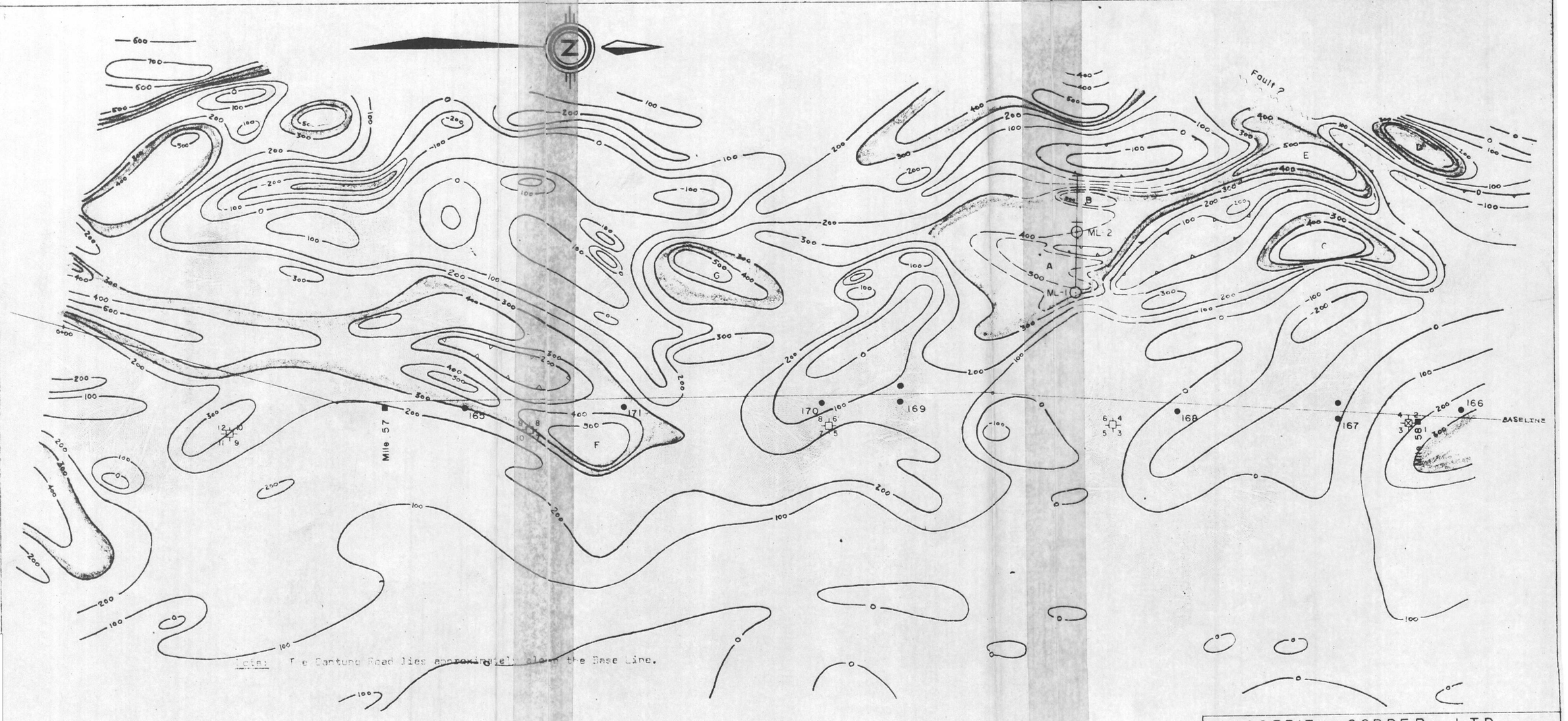
Location and Geology

Peter H. Sevensma Consultants Ltd., Vancouver, B.C.

June 1971. Scale: 0 30 Mi Fig: 1



Note: The Cantung Road lies approximately along the Base Line.

Ground magnetic survey – vertical component.
scale 1": 400' Contour interval: 100 gammas
survey by: Norquest Joint Ventures, June, 1966
drawn by: F. Syberg. Revised: Peter H. Sevensma Consultants Ltd., June 1971. (Values above 500 gamma not contoured)

CLAIM POST, TIED IN
CLAIM POST, NOT SURVEYED

MAGNETICS 1966
DRILLING 1968
SAMPLING by P.H.S. 1971

CORRIE COPPER LTD.
CORRIE GROUP
Watson Lake M.D., Y.T. 105 - H - 8
Peter H. Sevensma Consultants Ltd., Vancouver, B.C.
Figure: 2 | June 1971. | Scale: 0 400'

inches
0 1
0 1 2
centimetres
This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.
YUKON GEOLOGICAL SURVEY