GEOLOGICAL & GEOCHEMICAL SURVEY REPORT

ON THE

"GUS" CLAIM GROUP

GOZ CREEK AREA

YUKON TERRITORY

64°26' North Latitude
132°20' West Longitude

MAP 106-C-8

MACKENZIE MINING DISTRICT

2494.10

BY

PETER F. TEGART
GEOLOGIST

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of
$ 2494.10

D. R. Craig
Resident Geologist or
~~Resident Mining Engineer~~

Considered as representation work under Section 53 (4) Yukon Quartz Mining Act.

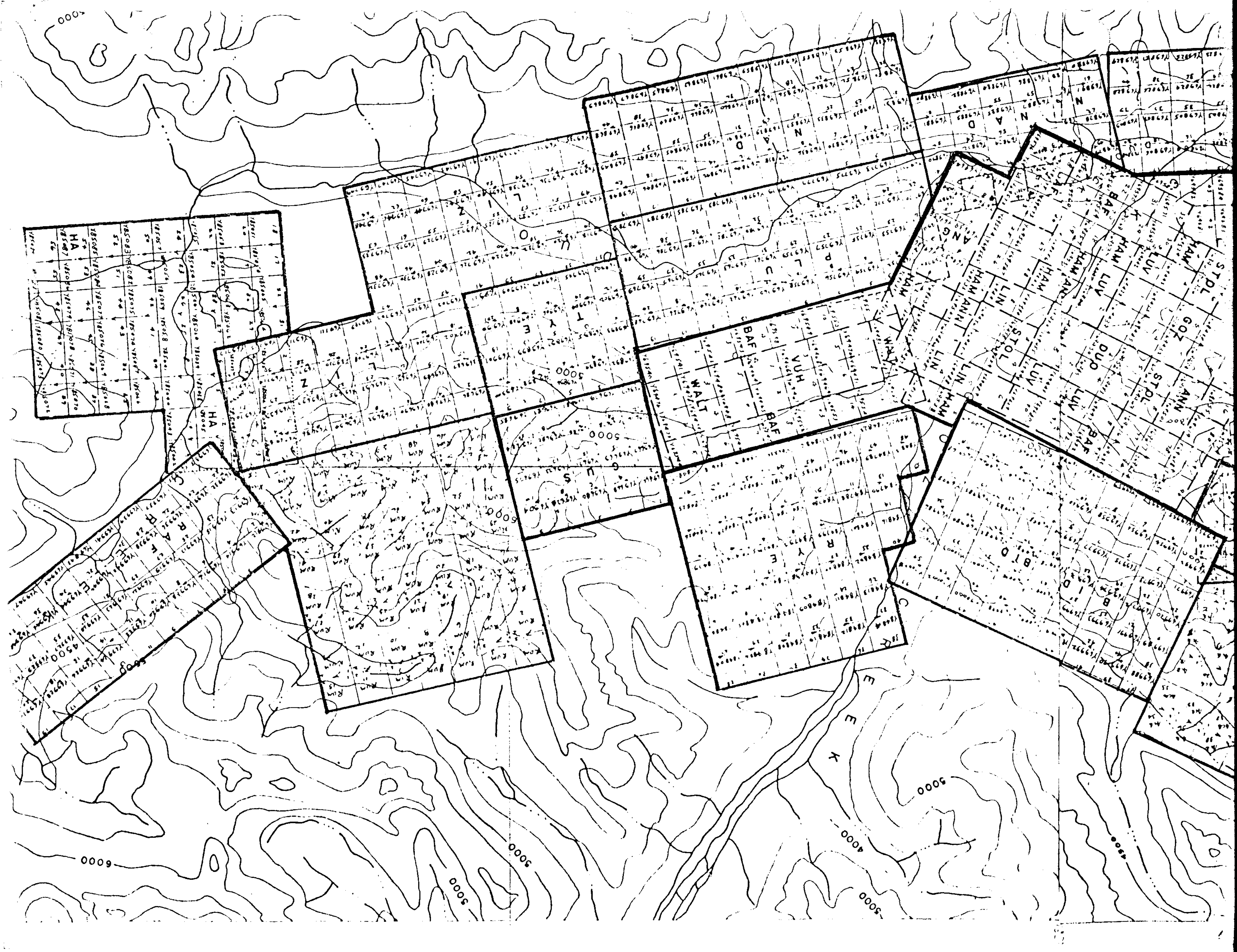
Commissioner of Yukon Territory

CLAIMS HELD BY

SEREM LTD.

505-850 West Hastings St.
Vancouver 1, B.C.

AUGUST 20, 1974


HA
BAF
VUH
WALT
HAM
LUV
LIN
STOL
DUP
ANN
GOZ
ST PL
BID
4500
4000
5000
6000

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INTRODUCTION

The Gus group consists of 20 mineral claims located 6 miles northeasterly from the confluence of Goz Creek and Duo Creeks on N.T.S. map 106-C-8. Assessment work will be applied to 20 claims which make up the Gus group. The register of these claims is as follows:

NAME	GRANT NO.	DATE OF STAKING	DATE CLAIM RECORDED
GUS No. 1-20	Y69666-Y69685	25 July 1973	21 August 1973

Access to the claim group is by float plane to Goz Lake from Mayo, Yukon Territories 150 miles to the west and thence from Goz Lake to the property by helicopter, a distance of 15 miles.

The staked area is in a narrow valley cut by a creek coming from a high range of mountains situated between Goz and Duo Creeks. The relief varies from 4400' in elevation in the creek bottom to over 6500' in elevation on flanks of the valley. Scree slides cover the sides of the valley from the 5200' level to the creek level. Sparse soil development with moss and scrub bush can be found on the lower reaches of the valley bottom. The upper elevations are dominated by rock outcrops and no soil development.

The terrain is generally accessible to survey with little or no cliffs or vegetation hindering travel by foot.

Exploration was undertaken to investigate the continuation of a favourable sedimentary horizon containing sphalerite and galena extending from the west on the Walt Claims.

A geologic survey was carried out on the outcrop areas to trace the host bed for mineralization and to determine the stratigraphic

position of the host bed with respect to the formation in which it lies. On the lower flanks of the valley where there is no visible rock exposure, a geochemical soil sampling survey was carried out to attempt to locate the development of possible geochemical anomalies.

SURVEY CONTROL

The boundary between the Gus and Walt-Baf claims was used as a north-south base-line with distances being chained by topofil and cairns put in every 500 feet to mark positions of cross-lines. East-west cross-lines were chained easterly from the base-line with stations put in every 100 feet over potentially interesting areas. Stations were established every 500 feet on the cross-lines over areas of less interest to provide a control for geologic mapping and soil sampling on lower elevations of the group. Stations were established using rock cairns and flagging tape to note the coordinates. The maximum length of the cross-lines was 7500 feet east from the base-line. The initial post of Gus No. 1 and Gus No. 2 was used as the point 0.00 North and 0.00 East.

GEOCHEMICAL SURVEY

METHOD:

Soil samples were collected at 100 foot intervals on lines 1500S, 2000S, 2250S, 2500S and 2750S within Gus No's 2,4,11 and 13. The remaining lines were sampled on an interval of 500 feet. Soil development was generally poor over the entire Gus group but the valley bottoms contained enough soil that it was decided to commence this program. The B soil horizon, butt to brown in colour, was sampled where possible. However, the "B" horizon was not always seen

and in this case a sample was taken just below the humus layer. As a result of this it is suspected that many samples were taken in the undeveloped 'C' horizon. Samples were not taken at sights where only talus or rock outcropped.

Soil samples were collected in wet strength paper envelopes 3½" x 9" in size. These samples were dried on racks in a tent heated by a wood stove. After drying they were forwarded to Vancouver Geochemical Laboratories Ltd and run for zinc and lead. Their procedure is explained in Appendix I.

RESULTS:

Contouring the results for zinc at 150 ppm and 350 ppm on the accompanying geochemical soil survey map reveals several anomalous areas which are not closed. Part of the reason for these anomalies not being closed is that no soil samples were taken south of the creek that disects the property from east to west. The area south of the creek is underlain dominantly by the Hadrynian Sheepbed formation and therefore not favourable to zinc-lead mineralization and subsequently not soil sampled.

The results from the soil survey were not treated statistically. The reason for this decision not to statistically analyse these results was because of the unhomogeneous nature of sampling the population. The samples were only taken in the valley bottoms and they were taken at different intervals - 100 feet and 500 feet respectively.

However the contours did reveal several geochemically high areas located in valley bottom which are possibly associated with the geological setting as will be discussed in the conclusions.

GEOLOGICAL SURVEY

The geological map of the Gus claims show the approximate distribution of outcrop. All of the outcrop within the claim group was mapped on a scale of 1 inch = 500 feet. Control for the geological mapping was made by tying in the outcrops to the established grid points. Outcrop areas outside of the grid were located by chain and Brunton survey.

The Gus Group straddles the contact between the Eocambrian dolomites and quartzites of the Backbone Range Formation and the overlying Hadrynian grit units. The general area of the Gus Group lies close to the facies change between continental shelf carbonates to the north and east and the deeper water grit units to the south and west. Sedimentary characteristics indicate that deposition took place from northeast to southwest with the source of the sediments coming from a hypothesized continent in the east.

The whole of the Eocambrian unit on the Gus group consists of a pale buff grey-weathering poorly bedded in part pisolitic dolomite with minor quartzite. Near the top of the assemblage, lenses of fine-grained to medium-grained white dolomite containing siliceous and dolomitic pisolites, vugs containing automorphic quartz calcite and dolomite-weathering light tan brown can be found. Lenses and beds of fine-grained to medium-grained unsorted white sandstone can also be found in the upper sections of this unit. The whole package would measure over 2000 feet in section. The predominantly dolomitic section in the Gus area would be equivalent in age to the infinitely more quartzitic sections of the Backbone Range Formation to the east.

The Hadrynian grit units consist of brown, grey, red and green slate, siltstone, feldspathic sandstone and conglomerate, thinly bedded with unknown stratigraphic thicknesses above the Eocambrian dolomites.

Mineralization on the Gus Group is located in two stratigraphic levels near the top of the Eocambrian dolomites. These two levels are approximately 20 feet thick and are separated from each other by a fine-grained lens of quartzite. The mineralization is dominantly a green and/or brown sphalerite found as euhedral crystals in vugs in the dolomite. Euhedral crystals of quartz (likely automorphons), dolomite and calcite are also found with the sphalerite. A second type of mineralization - galena in fractures and veinlets - also occurs within the two dolomitic horizons. An estimate of grade over the two horizons would put it in the 2% combined sulphides range.

The regional structure indicates that the Gus Group is situated on a southern limb of a homocline. The Eocambrian dolomites dip southerly under the overlying Hadrynian grit units.

The dolomites have a general strike of N70^{o}E and a general dip of 20 to 30 degrees to the southeast. The quartzitic-dolomitic succession near the top of the Eocambrian appears to be displaced from left to right when one attempts to trace these units northerly across the creek dividing the property. Some fault goudge can be found in the creek bottom and it can be assumed that some right lateral movement has occurred in the dolomites. Thus a fault is hypothesized to occur along the same strike as the creek which cuts the property from east to west.

CONCLUSIONS

The mineralized dolomites occurring in the upper Eocambrian containing sphalerite and galena was found to continue onto the Gus claims from the Walt claims to the west. However, the mineralization appears to terminate in the creek where the dolomites butt against the east-west trending fault. The geochemical values fall off in this vicinity, further substantiating this interpretation.

Several surface showings were found in the eastern part of the property on Gus No. 10 and Gus No. 19 where the favourable dolomites occur again. High soil geochemical values in the valley bottom indicate the presence of mineralization in these areas also. Thus, the host dolomites for zinc-lead mineralization appear to have been a continuous bed or beds in the Upper Eocambrian which have since deposition been moved right laterally to their present positions.

The best changes for further exploration appears to be on the easterly and westerly ends of the property where the favourable beds for mineralization can be found.

Peter Togart

STATEMENT OF QUALIFICATIONS

I, PETER TEGART, with business address in Vancouver, British Columbia and residential address 3450 Osler Street, Vancouver, British Columbia, HEREBY CERTIFY THAT:

(1) I am a Geologist;

(2) I am a graduate of the University of British Columbia (B.Sc. geol. 1971);

(3) From 1966 until 1973 I have been engaged in mineral exploration in Yukon Territory and British Columbia;

(4) I personally participated in the field work and have assessed and interpreted all the data resulting from this work.

Respectfully submitted,

Peter Tegart

Peter Tegart

STATEMENT OF QUALIFICATIONS

I, PIERRE F. SONNENDRUCKER, with business address in VANCOUVER, B.C., hereby certify that:

1. I am a registered Professional Engineer in the Province of British Columbia;

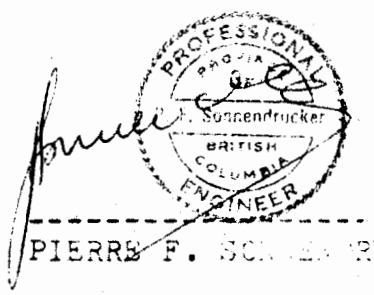
2. I am a graduate of the University of NANCY, FRANCE, with the diploma of Geological Engineer of the "Ecole Nationale Superieure de Geologie Appliquee et de Prospection Miniere" (Ingenieur-Geologue ENSG, Promotion 1954);

3. I have practised as a Geologist since 1957 in West Africa (Ivory Coast, Guinea), France and Canada (British Columbia);

4. I am employed by SEREM Ltd, 770-2100 Drummond Street, MONTREAL 107, Quebec, as a Senior Geologist. My residential address is 5981 Holland Street, VANCOUVER B.C.

5. I have personally participated in the field work and supervised all the completed work included in this report. I have interpreted the data resulting from this work.

Respectfully submitted,



PIERRE F. SONNENDRUCKER, P.Eng.

Gus 1
Gus 2
Gus 3
Gus 4
Gus 5
Gus 6
Gus 7
Gus 8
Gus 9
Gus 10
Gus 11
Gus 12
Gus 13
Gus 14
Gus 15
Gus 16
Gus 17
Gus 18
Gus 19
Gus 20

H_s
ϵ_c'
ϵ_c^2
45

132° 30'
64° 26'

SEREM LTD.

GUS GROUP
GEOLOGY

ϵ_c' ϵ_c^2 pale buff grey weathering poorly bedded in part pisolitic dolomite minor quartzite. ϵ_c' fine grained to medium grained white dolomite containing siliceous and dolomitic pisolites, vugs containing automorphic quartz calcite and dolomite, and sphalerite galena and siderite, weathers light tan brown. ϵ_c^2 fined grained to medium grained, unsorted white sandstone.

H_s "Grit Unit" brown grey red and green slate, siltstone feldspathic sandstone and conglomerate.

outcrop area

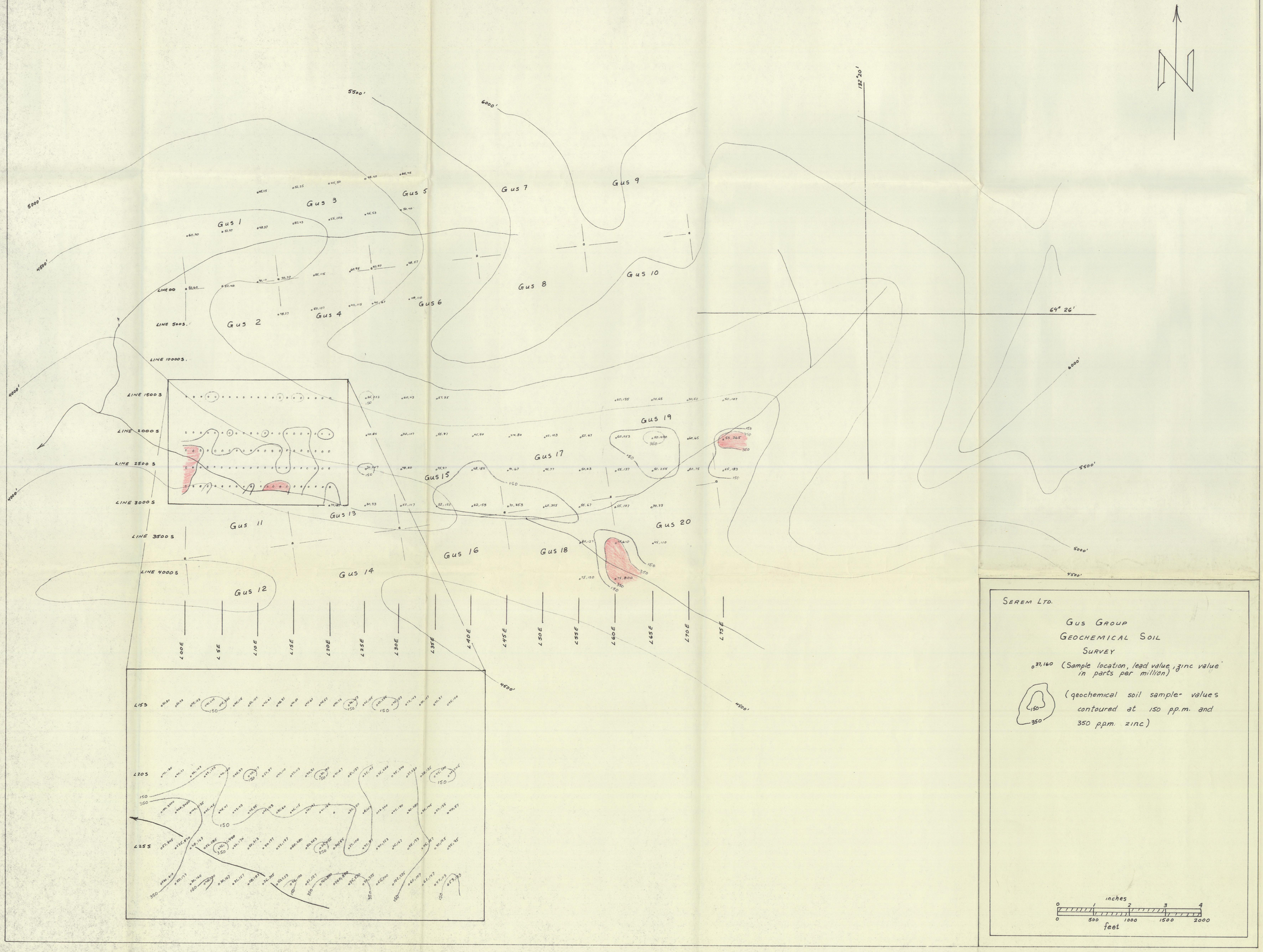
contact uncertain

fault

$/_{20}$ strike and dip of unit

inches 0 1 2 3 4

0 500 1000 1500 2000 feet



SEREM LTD.

GUS GROUP

GEOCHEMICAL SOIL

SURVEY

37,160 (Sample location, lead value, zinc value in parts per million)

(geochemical soil sample values contoured at 150 p.p.m. and 350 p.p.m. zinc)

inches 0 1 2 3 4

feet 0 500 1000 1500 2000

APPENDIX I

Vancouver Geochemical Laboratories Ltd.
1521 PEMBERTON AVENUE NORTH VANCOUVER, B.C., CANADA TELEPHONE: 604-988-2171

J. R. WOODCOCK
CONWAY CHUN

TO: Serem Ltd.
#914 - 850 West Hastings Street
Vancouver , B. C.

FROM: **Mr. Laurie Nicol, Supervisor Chemist**
Vancouver Geochemical Laboratories Ltd.
1521 Pemberton Avenue
North Vancouver, B.C.

SUBJECT: **Analytical procedure used to process acid soluble copper & zinc in geochemical samples received from Serem Ltd.**

1. Sample Preparation

(a) Geochemical soil, silt and rock samples were received in the laboratory in wet-strength 3½ x 6½ Kraft paper bags.

(b) The wet samples were dried in a ventilated oven.

(c) The dried soil and silt samples were sifted, using an 80-mesh stainless steel sieve. The plus 80-mesh fraction was rejected and the minus 80-mesh fraction was transferred into a new bag for analysis later.

(d) The dried rock samples were crushed and pulverized to minus 80-mesh. The pulverized sample was then put in a new bag for later analysis.

2. Methods of Digestion

(a) 1.00 gram or 0.50 gram of the minus 80-mesh samples was used. Samples were weighed out by using a top-loading balance.

(b) Samples were heated in a sand bath with nitric and perchloric acids (15% to 85% by volume of the concentrated acids respectively).

Continued . . . . .

2. Methods of Digestion (Continued)

(c) The digested samples were diluted with demineralized water to a fixed volume and shaken.

3. Method of Analysis

Cu & Zn analyses were determined by using a Techtron Atomic Absorption Spectrophotometer Model AA4 or Model AA5 with their respective hollow cathode lamp. The digested samples were aspirated directly into an air and acetylene flame. The results, in parts per million, were calculated by comparing a set of standards to calibrate the atomic absorption unit.

4. The analyses were supervised or determined by Mr. Conway Chun, or Mr. Laurie Nicol and their laboratory staff.

L.J. Nicol

VANCOUVER GEOCHEMICAL LABORATORIES LTD.

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