# GEOCHEMICAL REPORT

ON SOUTHWESTERN SUN CLAIM GROUP

(62° 10' N, 133° 10'W)

AT BLIND CREEK, YUKON

FOR

ANVIL MINING CORP. LTD

Report By: R.S. Adamson, P. Eng
Chief of Exploration for
ANVIL MINING CORP LTD

June 1 to 16th and June 24 to 27
1966

GEOCHEMICAL SURVEY

SOUTHEASTERN SUN CLAIM GROUP

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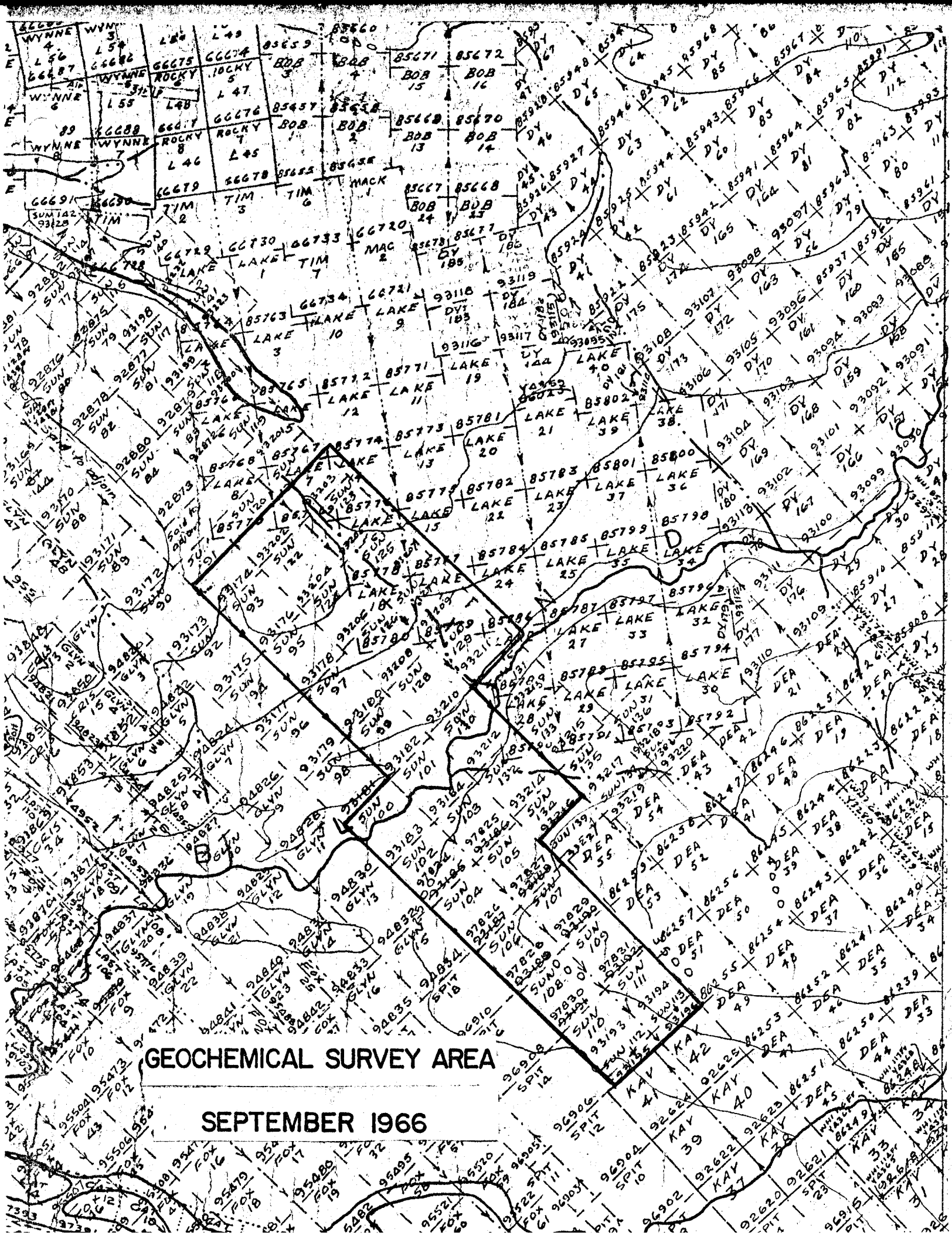

GEOCHEMICAL SURVEY AREA
SEPTEMBER 1966

## INTRODUCTION

A geochemical survey was carried out from June 1st to June 27th 1966, on the following SUN mineral claims : 90 to 113 inclusive, 120 - 130 inclusive, 132, and 134. These claims are owned by ANVIL MINING CORP. LTD. and the work was done by company personnel for this company.

The object of the survey was to establish relatively large and generally defined areas of possible valuable metal content (Cu, Pb, Zn) with a view to following up on geochemically anomalous areas with geophysical techniques. Any geophysical anomalies located within a larger general geochemical anomaly would provide the necessary finer definition for diamond drilling.

Further, the geochemical survey is a method to establish whether airborne magnetic and electromagnetic anomalies, which often in the Vangorda area are caused by basic flows and intrusives and graphitic sediments respectively, could be massive sulphides carrying copper, lead, or zinc.

## SOIL SAMPLING SURVEY TECHNIQUES

Control was established for the soil sampling survey by chain and compass, done by the samplers while in the process of sampling. No lines were cut. Survey flagging with the station names was left on a tree or bush at each station. The sampling was done on 400 foot centres.

Where possible the B horizon was sampled. However, no time was wasted obtaining the B horizon in the event permafrost prevailed or an organic soil was thicker than one foot. In the latter case the organic soil would be analyzed in the lab when possible. In that the target was a large near surface sulphide deposit it was felt that a generally defined as opposed to a well defined geochemical anomaly was sufficient.

## LABORATORY ANALYSIS

Test methods used involved a hot aqua regia extraction of heavy metal ions from the soil sample, followed by reaction with dithizone or biquinoline to give coloured products. The coloured reaction products were then matched with solutions of known metal content, which had been reacted with dithizone or biquinoline, to determine the metal content of the soil sample.

Separate and specific tests for each of the three metals, copper, lead and zinc were carried out on each soil sample.

## RESULTS AND INTERPRETATION

Of the three metals analysed for, only copper values above 60 parts per million might be considered anomalous. No significant lead and very minor anomalous zinc was revealed.

In general, the copper values are erratic to the extent that contouring of the results is not considered justified.

Anomalous copper values occur in erratic fashion on the western corner of the surveyed area and to a limited degree on the eastern side of the area (essentially on SUN 129 M.C.). However, the bulk of the erratic copper values which do occur on the surveyed area are confined to the northwest side of Blind Creek, in contrast to the relatively barren values on the southeast side of the creek.

Of 807 samples taken in the field only 663 were run in the lab, usually because of the exceptionally high organic content of the sample.

CONCLUSIONS and RECOMMENDATIONS

In view of the lack of Pb and Zn values and erratic nature of anomalous Cu values it is unlikely that an ore body that might subcrop exists on the surveyed area. If an ore body within the area is capped by hanging wall rock or a thick veneer of glacial till, geochemical response may be restricted or negative. However it might be expected that a near surface massive sulphide orebody would often have satellitic bodies or disseminated haloes which would create some geochemical reaction in overlying soils.

On this basis, this area with regard to further exploration should be put in a status of low priority.

R. S. Adamson

R.S. Adamson, B.A.Sc., P.Eng.
Chief of Exploration for
ANVIL MINING CORP. LTD.

# APPENDIX I (i)

STATEMENT OF COSTS — Geochemical Survey SUN Group

| | | | |
|---|---|---|---|
| (A) | Soil Sampling (807 samples) | | $2,188.00 |
| | Wages 56 man days @ $15 | $840.00 | |
| | Maintenance 56 man days @ $ 8 | 448.00 | |
| | Camp Erection | 300.00 | |
| | Transportation, helicopter | 600.00 | |
| | | 2,188.00 | |
| (B) | Laboratory Analysis (663 samples) | | 1,097.30 |
| | Supplies | 111.80 | |
| | Equipment | 78.50 | |
| | Lab construction | 101.00 | |
| | Wages | 806.00 | |
| | | 1,097.30 | |

Laboratory Cost per sample $\frac{1097.30}{663}$ = $1.66

| | | |
|---|---|---|
| (C) | Compilation of Report | 200.00 |
| (D) | Supervision | 150.00 |
| | TOTAL: | 3,635.30 |

## APPENDIX I (ii)

PERSONNEL

(A) Soil Sampling

| | | |
|---|---|---|
| F. Ashton | Sampler | Box 2470, Whitehorse, Yukon |
| R. Haaflaub | Sampler | Box 2470, Whitehorse, Yukon |
| D. Hansen | Sampler | Box 2470, Whitehorse |
| G. Sprogis | Sampler | Box 2470, Whitehorse |
| R. Beaumont | Sampler | Box 2470, Whitehorse |
| F. Foran | Field Exp-editor | Box 2470, Whitehorse |
| N. McCreesh | Labourer | Box 2470, Whitehorse |

(B) Laboratory Analysis

| | | |
|---|---|---|
| J. Kirkland | Geochemist, | Box 2470, Whitehorse |
| R. Pringle | Lab Asst. | Box 2470, Whitehorse |
| L. Olsen | Lab Asst. | Box 2470, Whitehorse |
| W. Rundle | Sample Prep. | Box 2470, Whitehorse |

(C) Compilation of Report

| | | |
|---|---|---|
| R.S. Adamson | Chief of Exploration, | Box 2470, Whitehorse |
| P. Byers | Draughts-man | Box 2470, Whitehorse |

(D) Supervision

| | | |
|---|---|---|
| R.S. Adamson | Chief of Exploration, | Box 2470, Whitehorse |
| D. Mayes | Geologist | Box 2470, Whitehorse |
| P. Byers | Lead Soil Sampler | Box 2470, Whitehorse |

APPENDIX I (iii)

# A F F I D A V I T

**Supporting Statement of Costs**
**Geochemical Survey**
**June 1 to 16th and June 24 to 27th, 1966**

I, ROBERT S. ADAMSON, Chief of Exploration for ANVIL MINING CORPORATION LIMITED, have compiled the statement of costs as presented in this report "Geochemical Survey of Southeast SUN mineral claims", DO MAKE OATH AND SAY AS FOLLOWS:

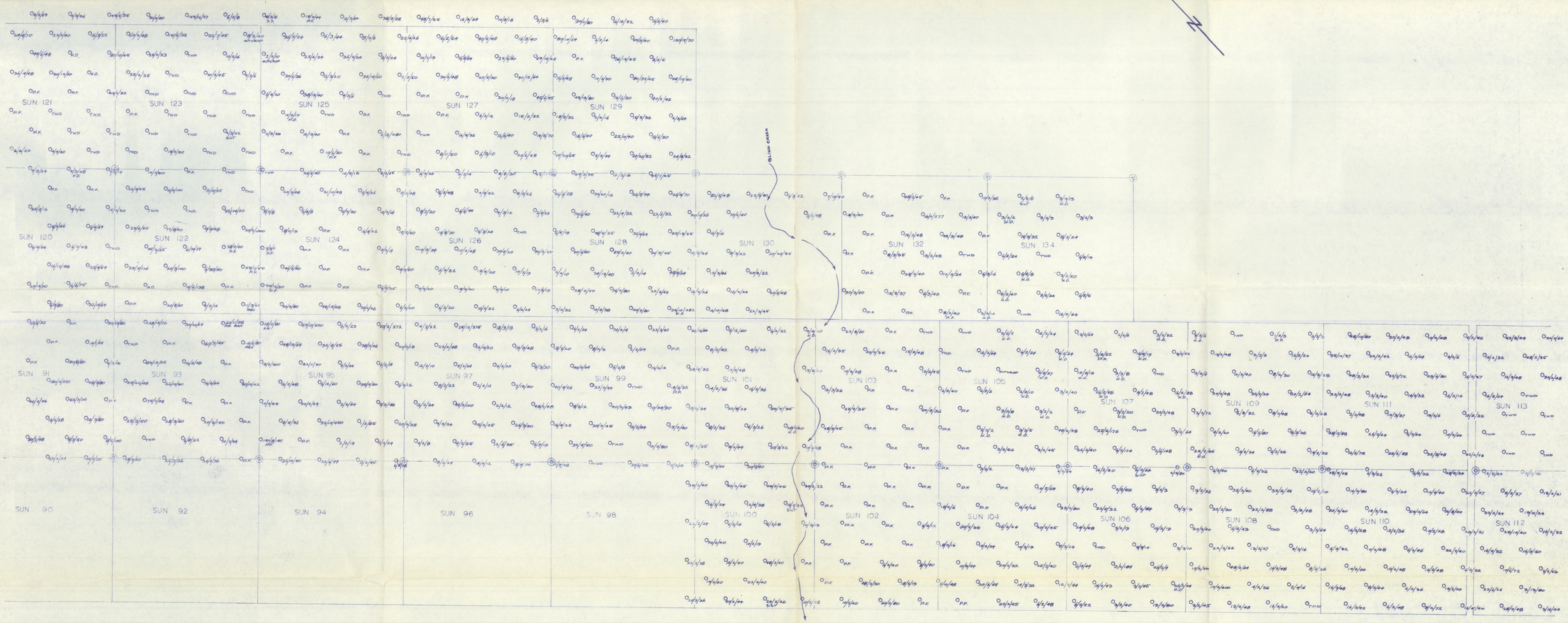
That to the best of my knowledge and belief, the statement of costs as presented, is true and an accurate representation of expenditures to be applied as representative work on the SUN 81 to 84 inclusive, 88 to 113 inclusive and 118 to 139 inclusive, mineral claims.

R. S. Adamson

Robert S. Adamson, B.A.SC.,P. Eng.
Chief of Exploration for
ANVIL MINING CORP LTD.

DATED this SEP 20 1966 day of .....1966, in the City of Whitehorse in the Yukon Territory.

R. M. Williams




LEGEND
O-SAMPLE LOCATION
(L) (D)-CLAIM POSTS
P.F.-PERMAFROST
H.O.-HIGH ORGANIC
ASH-VOLCANIC ASH
1/2/3-SAMPLE ANALYSIS Cu/Pb/Zn
T.N.D.-TAKEN BUT NOT ANALYSED

| ANVIL MINING CORP. |
|---|
| FARO |
| SUN GEOCHEMISTRY |
| SCALE: 1" = 400' |
| SAMPLES TAKEN: 807 |
| SAMPLES ANALYSED: 663 |
| DATE SAMPLED: JUNE 1-16, JUNE 24-27 |
| SAMPLED BY: ASHTON-HANSON-RAAFLAUB-SFROGIS |
| DRAWN BY: PLB |