

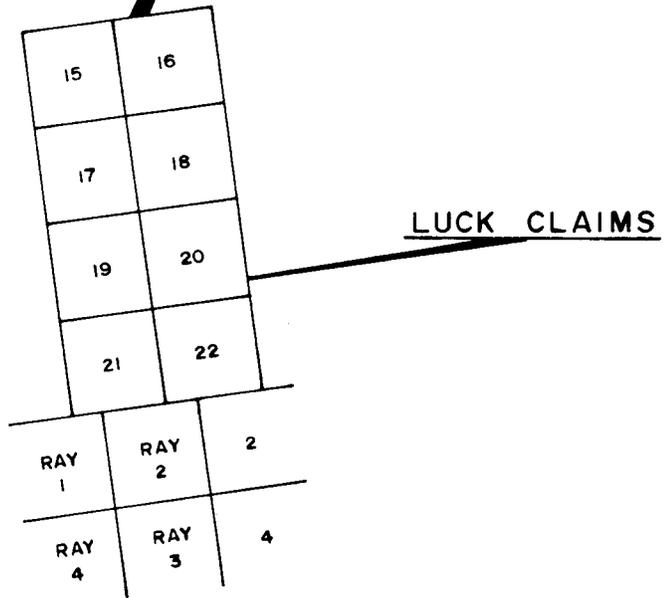
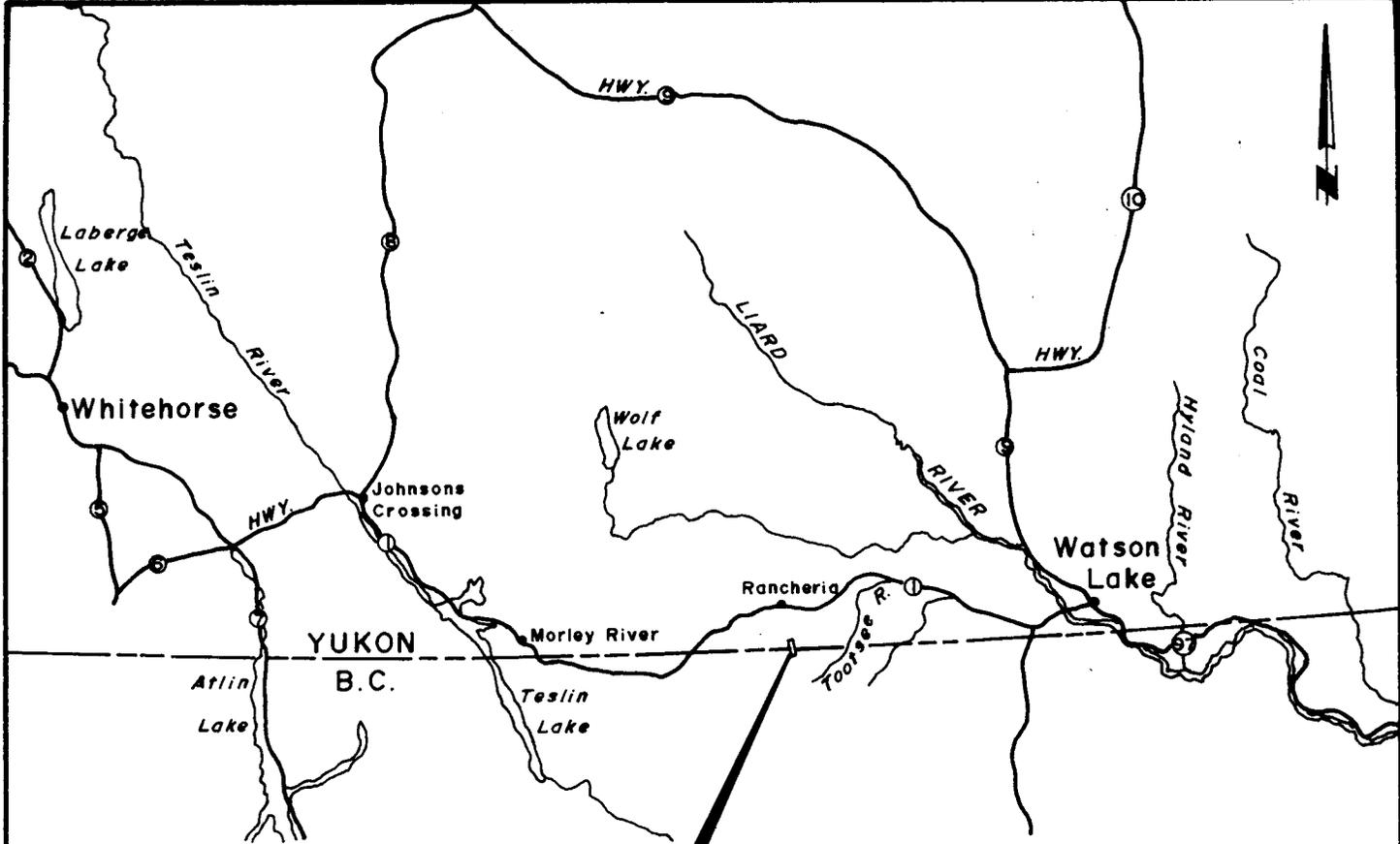
GEOCHEMICAL and GEOPHYSICAL
REPORT
CONE MOUNTAIN MINES LTD.

Luck mineral claims, Mile 706, Alaska
Highway, Watson Lake and Laird M.D.
Lat. 60°00'N Long. 130°29'W N.T.S. 104 O/16 -
105 B/1

AUTHORS: Glen E. White, B.Sc., Geophysicist
E. D. Cruz, P. Eng., Geological Engineer
DATE OF WORK: July 18 - August 6, 1973
DATE OF REPORT: September 16, 1973

06/147

Received Ottawa
March 19, 1974.
L. H. Laine



**CONE MOUNTAIN MINES LTD.
LUCK & RAY CLAIMS
LOCATION AND CLAIMS MAP**

SCALE : LOCATION MAP : 1" = 40 MILES APPROX.

CLAIMS MAP : 1/2" = 1500 APPROX.

*Allen & White
geophysical consulting
&
services ltd.*

OCT. 4, 1973
FIG. 1

C O N T E N T S

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INTRODUCTION

On July 18 - August 6, 1973, a program of geochemical and geophysical exploration was conducted by Glen E. White Geophysical Consulting and Services Ltd. on the Luck claims in the Watson Lake area on behalf of Cone Mountain Mines Ltd.

The purpose of the survey was to verify the geochemical anomaly, located by a reconnaissance geochemical survey in 1972, through closer spaced geochemical grid sampling and VLF electromagnetometer surveying.

PROPERTY

The area surveyed and discussed in this report is illustrated in Figure 1.

LOCATION AND ACCESS

The mineral property is situated on the headwaters of the easternmost tributary of Freer Creek on the Tootsie Ridge area at the following geographic position: Latitude - $60^{\circ}00'N$, Longitude $130^{\circ}29'W$.

Access to the claims is by the service road to the C.N.T. microwave tower which crosses the Rancheria River near Mile 706 on the Alaska Highway. A rough gravel road follows the east side of Freer Creek and leads to the northern limit of the Luck claims on the East Freer Creek Valley. From this point, a cat road leads to the area of interest.

PHYSIOGRAPHY

The claim group covers the headwater of East Freer Creek Valley and the adjoining ridges. Relief ranges from 4500 feet on the valley floor rising steeply on both sides to about 5500-6000 feet forming narrow ridges.

Vegetation is almost negligible in the survey area. The valley floor is filled with talus boulders and glacial outwash while the ridges and slopes are largely rock outcrops.

GEOLOGY AND MINERALIZATION

The mineral property is wholly underlain by the massive Cassiar batholith consisting mainly of quartz monzonite and granodiorite.

In place mineralization was observed on the ridge top west of the valley. It consists of argentiferous galena, sphalerite and chalcopyrite in quartz veins and as narrow massive sulphide lenses in NE to EW fractures.

On the east slope of the valley as well as on the valley floor, in the vicinity of line 12S and 14S, floats of massive galena were found. Prospecting on the ridge and rock cliffs in this vicinity did not show any mineralization.

PHYSICAL EXPLORATION

An attempt was made to trench on the lead - silver geochemical anomalies obscured by thick talus and glacial outwash in the vicinity of lines 12S and 14S on the east slope of East Freer Creek Valley.

On July 28-31, 1973, a bulldozer trenching program and access road repair and test stripping was made. Due to the thick overburden and the presence of permafrost at about 8 - 10 feet depth, bedrock was never reached. Several pieces of massive galena float were found in the trenches.

SURVEY SPECIFICATIONS

Survey Grid

The survey grid consisted of a N10°E baseline following the East Freer Creek Valley. Cross lines are turned off at intervals of 200 and 400 feet on both sides of the baseline up to the limit of the rock talus. The base and cross lines are flagged at 100 foot intervals.

Geochemical Survey

Geochemical soil samples of the B horizon were obtained by mattock at 100 foot intervals along the cross lines and placed in soil envelopes provided by Chemex Labs Ltd. of North Vancouver. The soil samples were then delivered to Chemex Labs Ltd. where -80 mesh sieving, digestion by perchloric acid and analysis by atomic absorption was carried out by the supervision of professional geochemists. Some 302 soil samples were obtained and analysed for lead and silver.

Electromagnetometer Survey

This survey was conducted using a Ronka EM-16 V.L.F. Electromagnetometer. This instrument acts as a receiver only. It utilizes the primary electromagnetic fields generated by VLF marine communication stations. These stations operate at a frequency between 15-25 KHZ, and have a vertical antenna-current resulting in a horizontal primary field. Thus, this VLF - EM measures the dip-angle of the secondary field induced in a conductor.

For maximum coupling, a transmitter station located in the same direction as the geological strike should be selected, since the direction of the horizontal electromagnetic field is perpendicular to the direction of the transmitting station.

Readings were taken at 50 foot intervals and the data filtered in the field by the operator as described by D. C. Fraser, Geophysics Vol. 34, No. 6 (December 1969). The advantage of this method is that it removes the DC and attenuates long spatial wave lengths to increase resolution of local anomalies, and phase shifts the dip-angle data by 90 degrees so that crossovers and inflections will be transformed into peaks to yield contourable quantities.

DATA PRESENTATION

The survey data accompanying this report is at a scale of 1" = 200' as follows:

- Figure 2 - Geochemical Map - Lead
- " 3 - " " - Silver
- " 4 - Electromagnetometer Map

DISCUSSION OF RESULTS

The geochemical values of both lead and silver are plotted on Maps (Figure 2 and 3) and contoured to show significant geochemical trend.

Figure 2 showed a strong northeast trending lead anomaly over a background of less than 100 p.p.m. The anomalous values range from 100 p.p.m. to more than 1000 p.p.m. over a strike length of about 1500 feet and variable widths of 100 feet to 250 feet.

South of the above anomaly and immediately east of the Creek between lines 10S and 14S, in the vicinity of the bulldozer trenches, another lead geochemical anomaly was delimited. The values range from 100 p.p.m. to 744 p.p.m. over a length of about 900 feet and 200 feet across. Further south at the southern limit of the grid, another small anomalous zone appears to develop towards the southwest. This zone is open towards the southwest where talus floats predominate over the valley slope.

The silver geochemistry anomalies, as shown on Figure 3, appear to coincide with the lead geochemical anomalies. The anomalous silver values range from 2 p.p.m. to 19 p.p.m. over a background of less than 2 p.p.m. The trend appears to be NE and EW which is in line with the vein system in the area.

The above geochemical anomalous trends are fairly strong and coincident with one another. This, plus the fact that the trends are in line with the vein system in the area, would indicate a high probability of being caused by sub-surface vein mineralization.

The electromagnetometer survey showed three pronounced east-west striking electromagnetic conductors. The strongest conductor located in the south of the survey area in claim Luck 2, is directly associated with high lead and silver geochemical values and would appear to be of definite interest since a limited amount of trenching in this area has exposed argentiferous galena float.

The center conductor, near the B.C. - Yukon border, (the boundary between claims Luck 2 and 22) is much weaker but definitely continuous. The third conductor located in claim Luck 22, shows a fairly strong response, particularly on line 6E. No geochemical soil samples were taken in this area.

CONCLUSIONS AND RECOMMENDATIONS

Geochemical and VLF electromagnetic surveys of the Luck claims owned by Cone Mountain Mines Ltd. delimited significant coincident anomalies believed to be caused by the presence of silver - lead mineralization. The anomalous zones are within the valley covered by thick talus and glacial outwash.

Based on the nature of occurrence of mineralization seen in the area, and the shape and magnitude of the geochemical and electromagnetic trends, the mineralization could be occurring as veins or lenses of high grade argentiferous galena.

In order to ascertain the above interpretation and possible magnitude of the potential mineralization, diamond drilling and or further bulldozer trenching should be done.

Respectfully submitted,
GLEN E. WHITE GEOPHYSICAL
CONSULTING & SERVICES LTD.


Glen E. White, B.Sc.
Geophysicist


E. D. Cruz, P. ENG
Geological Engineer

A P P E N D I X

Instrument Specifications

ELECTROMAGNETOMETER

A. Instrument

- (a) Type - Geonics VLF - EM
- (b) Make - Ronka Em 16

B. Specifications

- Measurement
- (i) Utilizes primary fields generated by VLF marine communication stations, measures the vertical field components in terms of horizontal field present.
 - (ii) Frequency range 15-25 KHZ
 - (iii) Range of measurement - in phase = 150%
or = 90°
- quadrature = 40%
 - (iv) Method of reading - null detection by earphone, real and quadrature from mechanical dials.
 - (v) Accuracy - = 1% resolution

C. Survey Procedures

- Method
- (a) Select closest VLF station perpendicular to traverse lines.
 - (b) In-phase dial measures degree of tilt from vertical position.
 - (c) Quadrature dial calibrated in percent - null.
 - (d) Station plot - plot values read at station surveyed.
 - (e) Manually filter dip-angle data.

STATEMENT OF QUALIFICATIONS

Name: WHITE, Glen E.

Profession: Geophysicist

Education: B.Sc. Geophysics - Geology
University of British Columbia

Professional Associations: Associate member of Society of Exploration Geophysicists.
Active member B.C. Society of Mining Geophysicists.

Experience: Pre-Graduate experience in Geology - Geochemistry - Geophysics with Anaconda American Brass.

Two years Mining Geophysicist with Sulmac Explorations Ltd. and Airborne Geophysics with Spartan Air Services Ltd.

One year Mining Geophysicist and Technical Sales Manager in the Pacific north-west for W. P. McGill and Associates.

Two years Mining Geophysicist and supervisor Airborne and Ground Geophysical Divisions, with Geo-X Surveys Ltd.

Two years Chief Geophysicist Tri-Con Exploration Surveys Ltd.

Two years Consulting Geophysicist.

Active experience in all Geologic provinces of Canada.

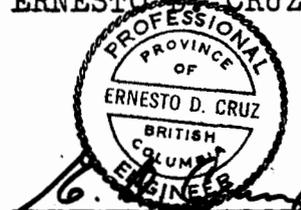
C E R T I F I C A T E

I, Ernesto D. Cruz, DO HEREBY CERTIFY AS FOLLOWS:

- (1) That I am a Consulting Mining Engineer and reside at 8596 Terrace Dr., Delta, B.C.
- (2) That I am a Graduate of Mapua Institute of Technology Phillipines (B.A.Sc.) and University of Washington (M.A.Sc.) in the Faculty of Mining Engineering.
- (3) That I am a registered P. ENG in the Association of Professional Engineers in the province of British Columbia.
- (4) That I have practised geological engineering for ten (10) years.
- (5) That this report consists of 8 typewritten pages and three maps.
- (6) That I have no interest directly or indirectly in the Luck mineral claims or the securities of Cone Mountain Mines Ltd. nor do I expect to acquire or receive any.

DATED at Vancouver, British Columbia, this 16th day of September, 1973.

ERNESTO D. CRUZ, P. ENG

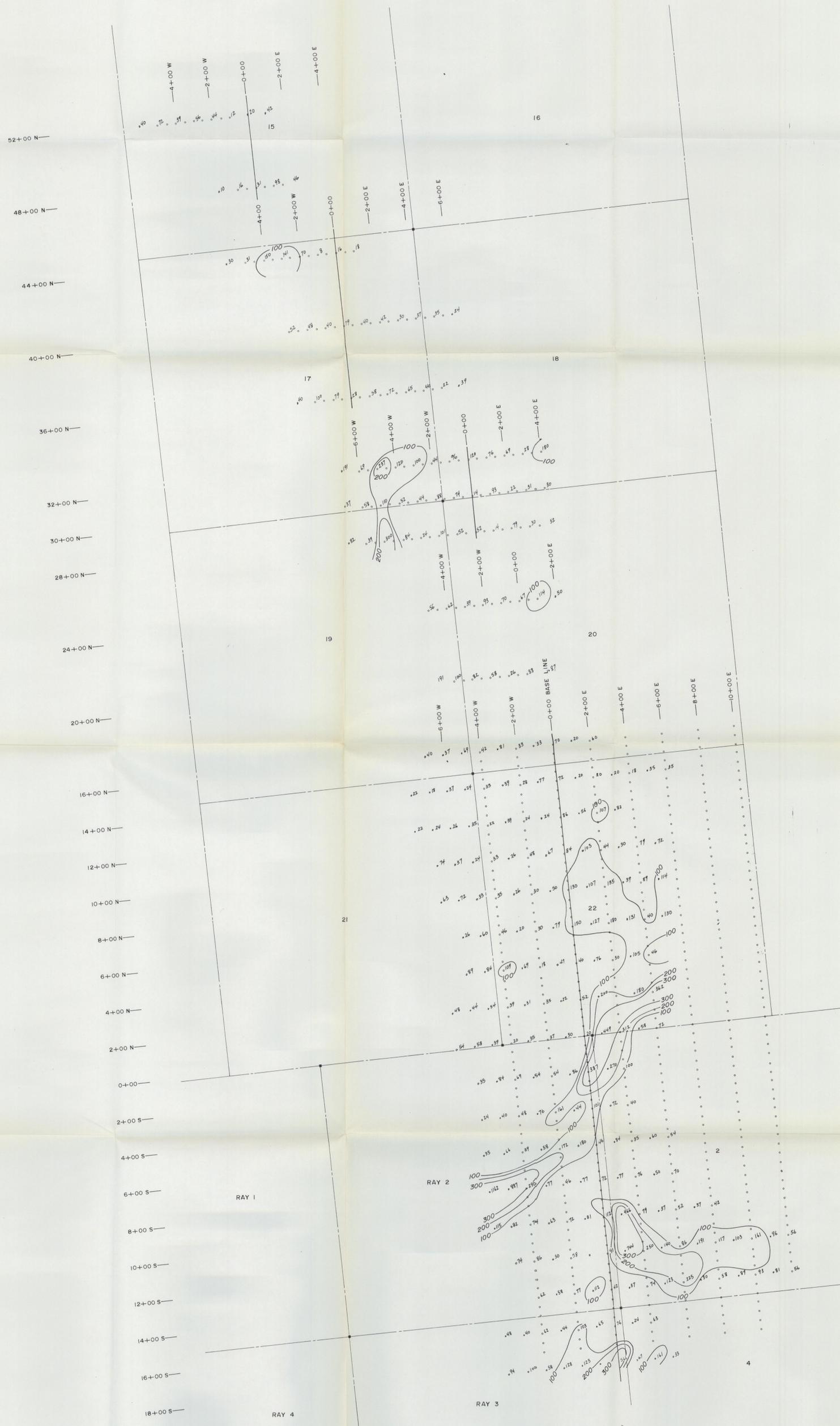


Ernesto D. Cruz, P. ENG

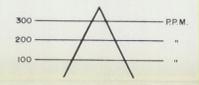


LEGEND

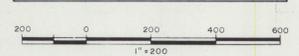
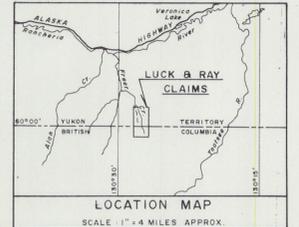
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- Stations
- - - Outline of Claims
- Claim Path
- Unpaved Roads



LEAD KEY



N.T.S. 105 A/3



CONE MOUNTAIN MINES LTD.
LUCK & RAY CLAIMS
 WATSON & LIARD MINING DIVISIONS
 YUKON TERRITORY & BRITISH COLUMBIA

GEOCHEMICAL MAP
LEAD P.P.M.

Interpreted by: G.E.W.
Drawn by: [Signature]
Checked by: [Signature]
Date: OCT. 4, 1973
FIG No.: 2

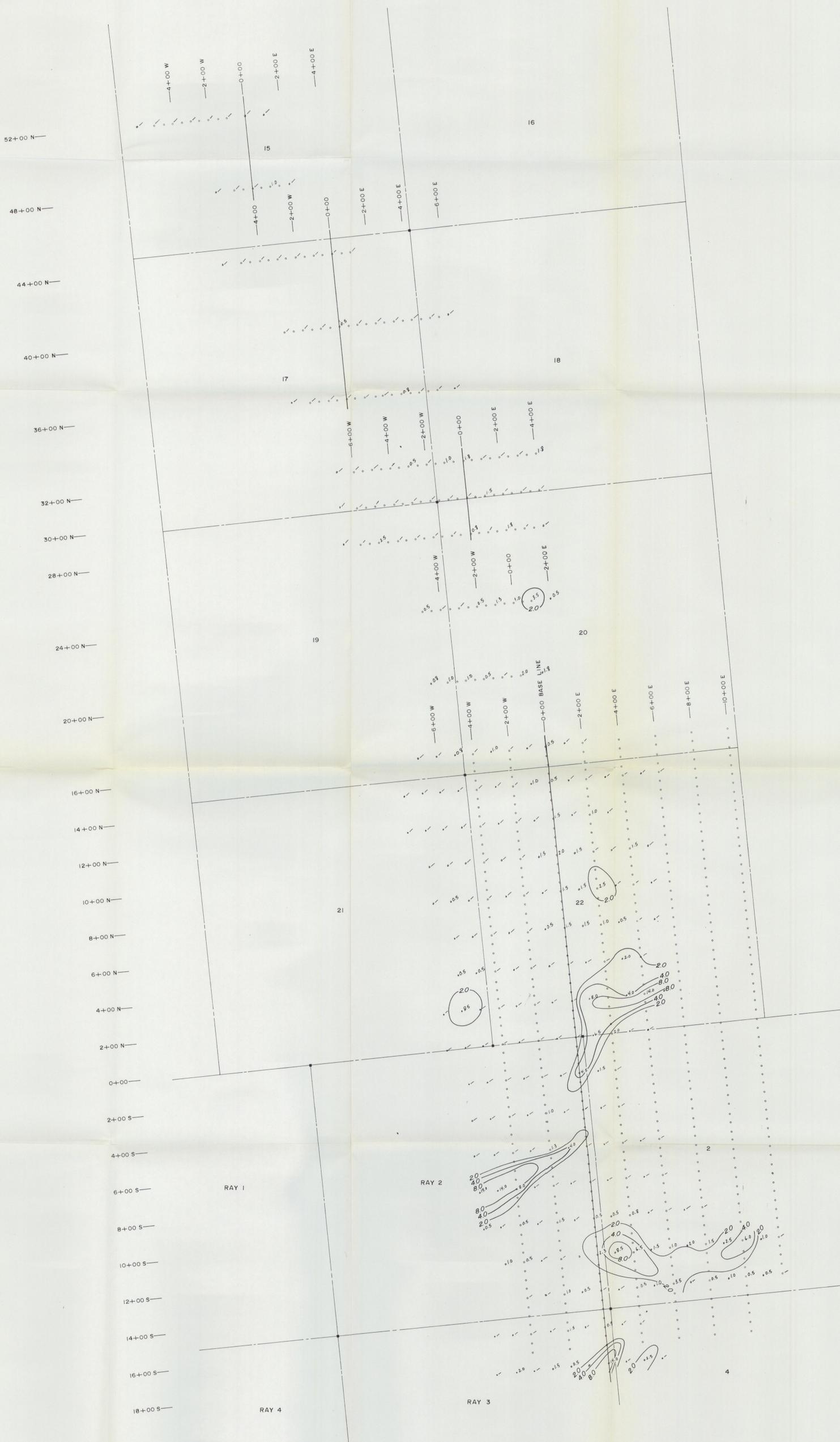
Glen E. White
 geophysical consulting services Ltd.

To Accompany Geochemical Report on
 THE LUCK & RAY CLAIMS
 Date: September 19, 1973
 By: GLEN E. WHITE - B.Sc. Geophysicist



LEGEND

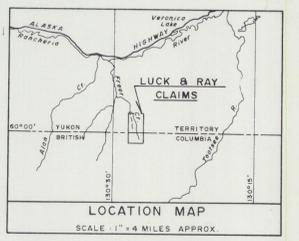
- Contour Line Contour Interval 20, 40, 80 PPM
- Stations
- - - Outline of Claims
- Claim Post
- Unpaved Road



SILVER KEY



N.T.S. 105 A/3



CONE MOUNTAIN MINES LTD.
LUCK & RAY CLAIMS
 WATSON & LARD MINING DIVISIONS
 YUKON TERRITORY & BRITISH COLUMBIA

GEOCHEMICAL MAP
SILVER PPM

Interpreted by: G.E.W.	Checked by: [Signature]
Drawn by: [Signature]	Date: OCT 4, 1975
FIG. No. 3	

To Accompany Geochemical Report on
 THE LUCK & RAY CLAIMS
 Done September 1975
 By GLEN E. WHITE & SONS
 GEOPHYSICIST

