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OLIVER RESOURCES LTD.

Geochemical Report

AJ, AJ2, AJ3 claims, Nanaimo M.D.

Lat.  $49^{\circ}07'N$  Long.  $124^{\circ}27'W$

N.T.S. 92 F/1W

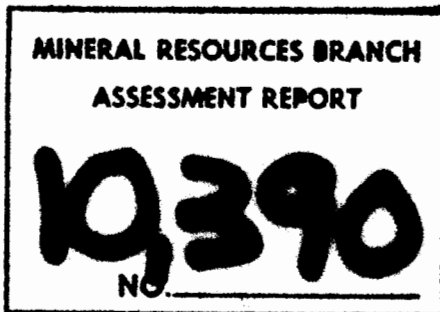
AUTHORS: E. Trent Pezzot, B.Sc.,  
Geophysicist

J.S. Vincent, B.Sc., M.Sc.,  
P.Eng., Consulting Geologist

DATE OF WORK: April 29-May 3,  
June 17-25, 1981

DATE OF REPORT: August 5, 1981

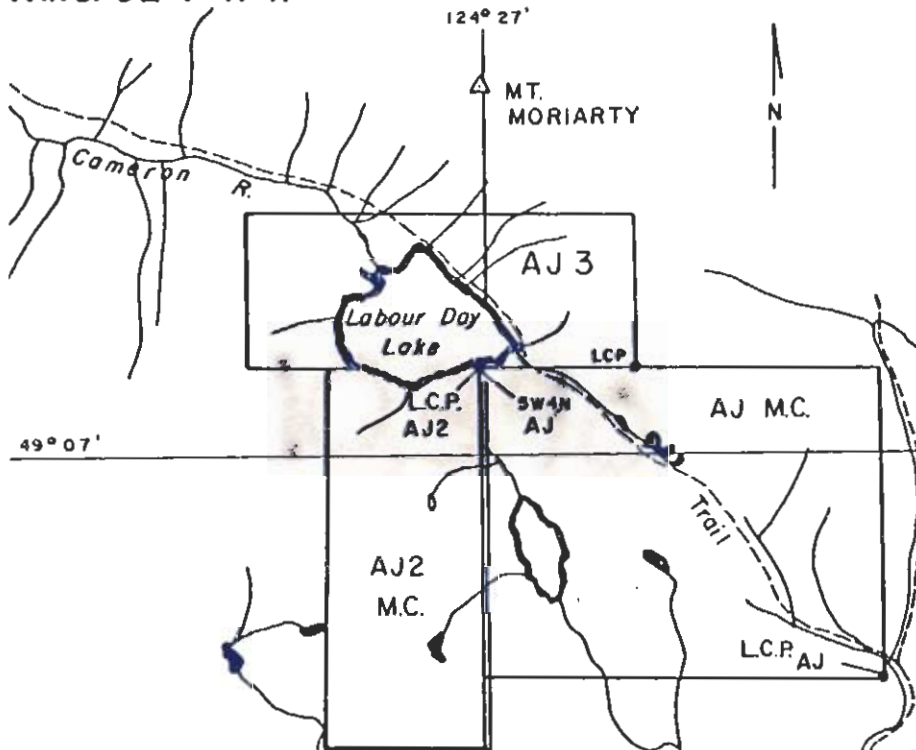
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OLIVER RESOURCES LTD.  
AJ CLAIMS  
LOCATION AND CLAIMS MAP

*Glen E. White*  
geophysical consulting  
services Ltd.

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## INTRODUCTION

During the summer of 1981 Glen E. White Geophysical Consulting & Services Limited conducted some 40 line kilometres of line cutting and geochemical soil sampling across the Oliver Resources Limited AJ, AJ2 and AJ3 mineral claims. The survey was undertaken to extend coverage to the northwest and southeast along a major copper, zinc, lead and silver geochemical trend.

## PROPERTY

The property consists of mineral claims AJ, AJ2 and AJ3, record numbers 321, 476 and 672 respectively, which comprise 40 contiguous units as shown on Figure 1.

## LOCATION AND ACCESS

The mineral claims are located 18 miles southeast of Port Alberni in the Nanaimo Mining Division and NTS 92 F1/W. Approximate geographical co-ordinates of the center of the claims area are latitude  $49^{\circ}07'N$  and longitude  $124^{\circ}27'W$  as shown on Figure 1.

## PREVIOUS WORK

A report by J.S. Vincent P.Eng. dated August 15, 1979, describes a geological investigation of the AJ mineral claim conducted on behalf of Oliver Resources Ltd. On the recommendation of this report the AJ2 claim was staked and a systematic geochemical sampling was conducted by Glen E. White Geophysical Consulting & Services Ltd. during Oct-

ober and November, 1979. The results of this survey were described by Glen E. White, P.Eng. in a report dated January 3, 1980. Geochemical sampling was continued during June, July and August 1980 along with a VLF-EM and Magnetometer survey and reported on by Glen E. White, P.Eng. on September 4, 1980.

These surveys detected a moderately strong NW-SE trending VLF-EM conductor in an area of anomalous zinc, copper, lead and silver geochemical values. The conductor is believed to be either associated with graphitic/argillaceous rocks located to the west of the conductor or a reflection of a near vertical fault or shear zone.

#### LOCAL GEOLOGY

The following description is copied from the Geochemical - Geophysical Report on the AJ and AJ2 mineral claims by Glen E. White P.Eng. dated September 4, 1980.

"The property is covered by a thin mantle of overburden and large stands of virgin timber. Numerous steep bluffs occur throughout the grid area which makes surveying difficult.

The most recent geological map is by J.E. Muller in 1977 on a scale of 1:250,000. In 1965, Gunnex Ltd. conducted a regional geological-geochemical program over this area in a search for porphyry copper deposits. This area was mapped as Vancouver volcanics and a small copper showing in calcite rich rocks was detected along the southwest side of the small lake to the south of Labour Day Lake. Muller has mapped the area as Triassic Karmutsen volcanics, these being the predominant rock type in fault contact with Jurassic Island intrusives to the south. A black argillite has been noted in a small waterfall in the drainage to the southeast of Labour Day Lake. This rock is typical of the Sicker sedimentary series and may possibly represent a window of Sicker sediments."

## GEOCHEMICAL SURVEY

Soil samples of the upper "B" horizon were taken along the traverse lines at 50 m intervals. The soil samples were then placed in soil envelopes provided by Chemex Labs Ltd. of North Vancouver, B.C. The samples were delivered to the above lab where -80 mesh sieving, digestion by hot perchloricnitric acid and analysis by atomic absorption were carried out under the supervision of professional geochemists. 274 samples were obtained and analysed for ppm copper, lead, silver and zinc.

## DISCUSSION OF RESULTS

Two survey grids were established by compass and hip chain in order to extend soil geochemical sampling to the northwest and southeast along the major geochemical trend noted from previous surveys. To the northwest, eleven lines, labelled 0+00N through 10+00N inclusive, were spaced at 100 metre intervals and flagged with 50 metre stations from 20+00W to 5+00E. This grid covers the newly staked AJ3 claim. To the southeast, lines 16+00S through 20+00S were established and flagged from 10+00E to 18+50E. Both grid extensions are illustrated on the geochemical trend maps Figures 2 through 5.

Soil samples were gathered at 50 metre intervals along the extension grids and analyzed for copper, lead, silver and zinc. The data is presented along with all previous geochemical data gathered as Figures 2 through 5 inclusive.

The major geochemical trend weakens but does continue to the southeast as evidenced by the copper and zinc values

observed on the grid extension. High values of 280 ppm zinc and 200 ppm copper were noted on line 16+00S. The copper geochemical values appear to be concentrating in two narrow and parallel zones which weaken to the southeast. No anomalous lead or silver geochemical values were observed in this southeast extension.

To the northwest the anomalous zinc trend, as defined by a 75 ppm threshold, parallels the northeast shore of Labour Day Lake and is considered open north of line 10+00N. Within the general trend increased zinc concentrations are noted at three sites: 1500 ppm at 2+00N and 1+00E, 1700 ppm at 2+00N and 3+00W and 1050 ppm at 6+00N and 5+00W.

The copper trend to the northwest matches closely to the zinc trend described above. In addition, anomalous values, only weakly evident on the zinc analysis, infer a second copper trend on lines 7+00N and 8+00N between 2+00E and 3+00E. Extreme terrain variations between this area and the location of the major trend to the south prevented gathering of soil samples and the relationship of this second trend to the major trend is not established.

The silver geochemical trend, coincident with the copper and zinc trends on lines 2+00S through 5+00S, is not present on the northwest extension grid. Isolated, one station anomalous silver values of 1.2 ppm (0+00N, 1+00E), 1.3 ppm (7+00N, 5+00E) and 1.3 ppm (10+00N, 11+00W) are observed in this area. A gradual increase in background values from 0.1 ppm on lines 0+00N through 5+00N to 0.3 ppm by line 10+00N is the only silver geochemical trend noted.

Isolated lead highs were observed across the major trend defined by the copper, zinc, and silver values as illustrated on Figure 3. Similar responses are observed

to the northwest with high lead values of 100 ppm (2+00N, 1+00E), 34 ppm (0+00N, 4+00E) and 145 ppm (7+00N, 0+50E) noted.

No anomalous values were observed in either the copper, zinc, silver or lead analysis to the west of Labour Day Lake.

#### SUMMARY

During the summer of 1981 Glen E. White Geophysical Consulting & Services Limited conducted some 40 line kilometres of line cutting and soil sampling across the Oliver Resources Limited AJ property. Two grids were established to extend to the northwest and southeast, geochemical analysis of a major copper, zinc, silver and lead anomaly. Data from this survey is presented along with geochemical values gathered during two previous surveys across the claims area.

To the southeast, zinc and copper geochemistry delineate a continuation of the major trend, however both indicate a gradual weakening of the anomaly in this direction. The copper trend delineates two narrow and parallel zones in this region. No anomalous lead or silver values were observed on this grid extension.

As to the southeast, the copper and zinc geochemical values define a continuation of the major anomalous trend to the northwest, along the shore of Labour Day Lake leaving the anomaly open to the north of line 10+00N. Strong responses within the general trend occur coincidentally between copper and zinc near 2+00N and 1+00E and along the shore of Labour Day Lake from 2+00N to 4+00N and from 6+00N to 7+00N. An isolated anomalous lead response occurs coin-



cidentally with the copper and zinc highs at 2+00N and 1+00E. No anomalous silver trends were observed on the northwest grid extension.

A second trend, well defined but weaker than the above mentioned zone, is observed on the east ends of lines 7+00N and 8+00N on both zinc and copper geochemical analysis.

RECOMMENDATIONS

A fourth claim (AJ4) should be established as a 3 west by 2 north unit block along the northern boundary of the AJ claim and the eastern boundary of the AJ3 claim to cover a possible projected strike to the second copper and zinc geochemical trend observed on this survey. A continuation of line cutting and soil sampling to delineate the trend in this area should be the initial exploration procedure.

An induced polarization survey using an "a" spacing of 50 metres and  $n=1$  should be run from line 13+00S to the north to cover the major trend defined by the copper and zinc geochemical analysis. Lines 4+00S, 6+00S and 8+00S should be extended west to station 8+00W to survey the weaker trends noted in this area.

The southeast grid extension (lines 16+00S to 20+00S stations 10+00E to 19+00E) should be surveyed with the same procedure.

Based on the results of the initial induced polarization survey selected anomalous areas should be detailed with  $n=2$  and  $n=3$ .

Respectfully submitted,



E. Trent Pezzullo, B.Sc.,  
Geophysicist




J.S. Vincent, B.Sc., M.Sc., P.Eng.,  
Consulting Geologist

STATEMENT OF QUALIFICATIONS

NAME: PEZZOT, E. Trent

PROFESSION: Geophysicist - Geologist

EDUCATION: University of British Columbia -  
B.Sc. - Honors Geophysics and Geology

PROFESSIONAL  
ASSOCIATIONS: Society of Exploration Geophysicists

EXPERIENCE: Three years undergraduate work in  
geology - Geological Survey of Canada,  
consultants.

Three years Petroleum Geophysicist,  
Senior Grade, Amoco Canada Petroleum  
Co. Ltd.

Two years consulting geophysicist,  
Consulting geologist - B.C., Alberta,  
Saskatchewan, N.W.T., Yukon, western  
U.S.A.

Two years geophysicist with Glen E.  
White Geophysical Consulting & Ser-  
vices Ltd.

CERTIFICATE

I, John S. Vincent, with residential and business address at 4859 - 12A Avenue, Delta, B.C., do hereby certify that:

1. I am a practising Mining Geologist and a registered Professional Engineer in good standing in the Province of British Columbia.
2. I am a graduate of Queen's University, B.Sc., 1959, Geological Sciences, and of McGill University, M.Sc., 1962, Economic Geology.
3. I have practiced my profession since graduation in 1959.
4. The information presented in this report was obtained from surveys carried out by personnel under the supervision of our office.
5. I have no interest in the properties or securities of Oliver Resources Ltd., nor do I intend to obtain such interest.
6. Permission is granted for the use of the attached report for the purpose of financing as may be required.

Respectfully submitted,

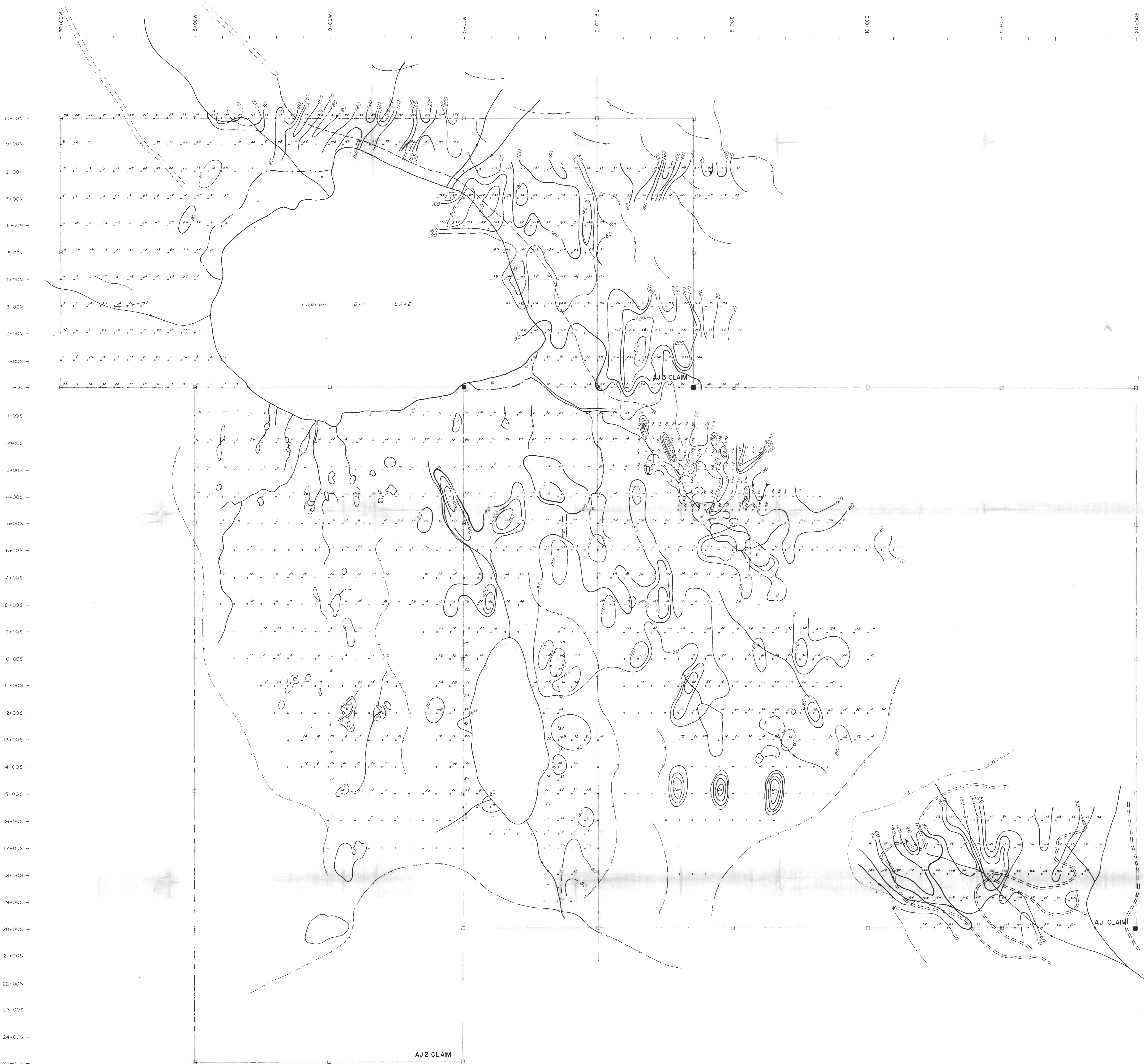
*John*

John S. Vincent, P. Eng.  
Vancouver, B.C.  
August 13, 1988

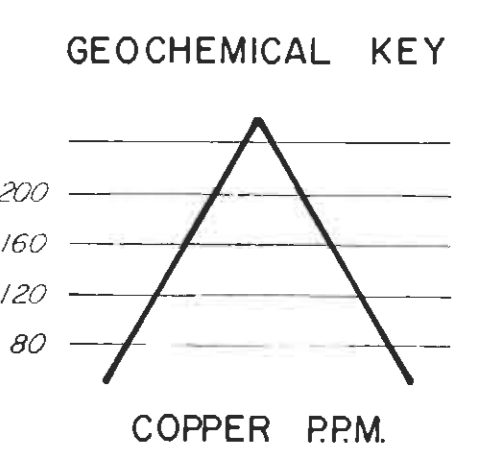


COST BREAKDOWN

<u>PERSONNEL</u>	<u>DATES</u>	<u>WAGES</u>	<u>TOTAL</u>
O. Aareskjold	April 29-May 3, June 17-25	\$160/day	\$2,240.00
B. Hamilton	April 29-May 3	\$150/day	\$ 750.00
K. Smith	June 17-25	\$150/day	\$1,350.00
Vehicle (all inclusive) .....			\$1,190.00
Meals & Accommodations .....			\$1,120.00
Geochemical Analysis & materials .....			\$1,800.00
Drafting .....			\$ 325.00
Interpretation & Reports .....			\$ 750.00
Total .....			\$9,525.00



- LEGEND**
- CLAIM BOUNDARY
  - CLAIM POST
  - LEGAL CLAIM POST
  - SWAMP
  - LAKE OR POND
  - CLIFF
  - GEOCHEMICAL SAMPLE STATION
  - STREAM
  - LOGGING ROAD
  - TRAIL
  - TREE LINE



MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**10390**  
No.



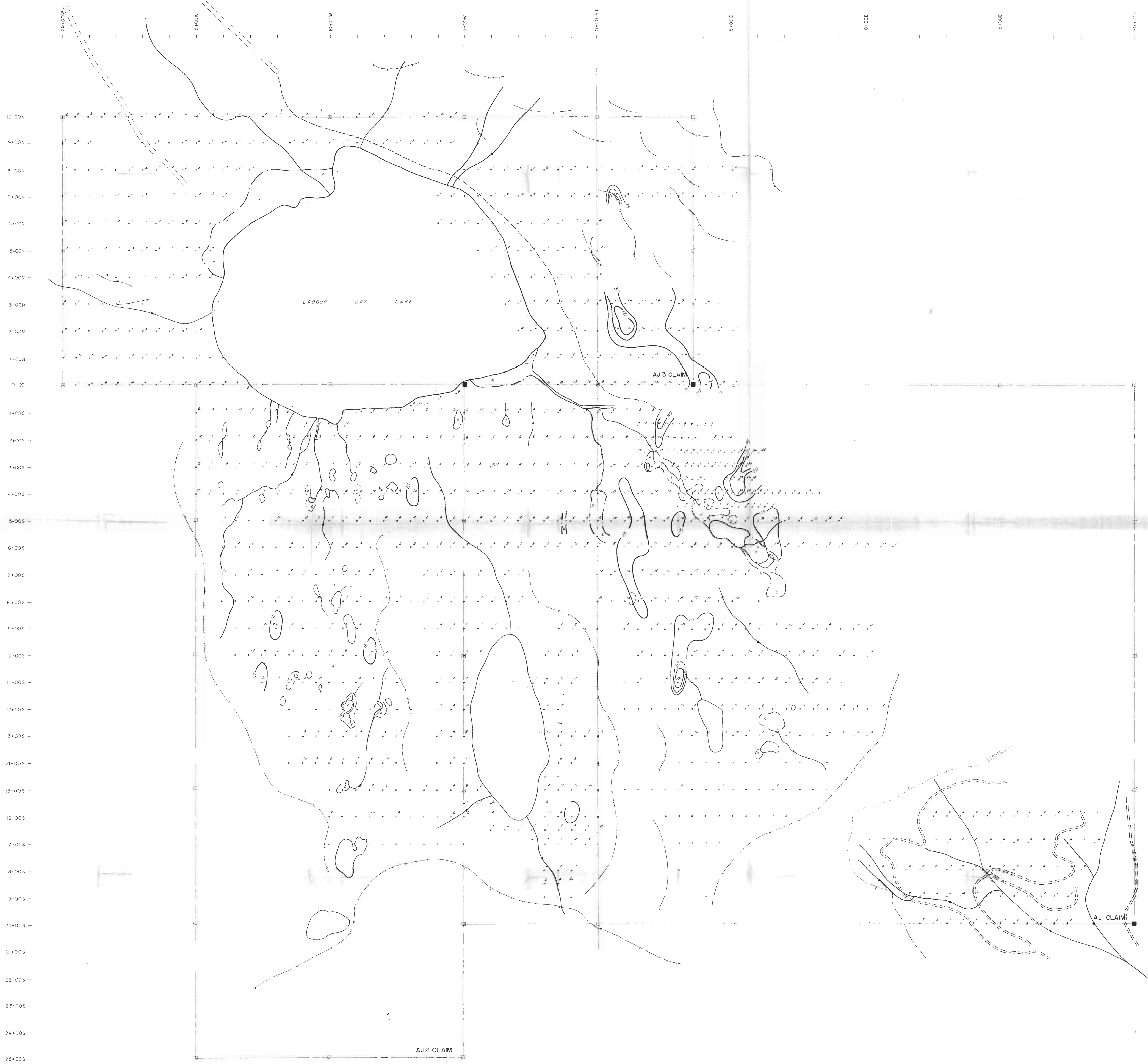
**OLIVER RESOURCES LTD.**  
AJ, AJ2 & AJ3 CLAIMS  
NANAIMO MINING DIVISION - BRITISH COLUMBIA

**GEOCHEMICAL MAP**  
COPPER PPM.

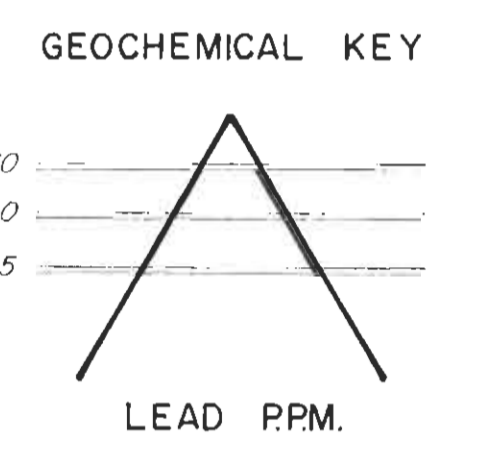
*Alan S. White*  
geophysical consulting  
&  
services Ltd.

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Drawn By: N.L.P.  
Checked By: J.J.  
Date: JULY/81  
Fig. No: 2

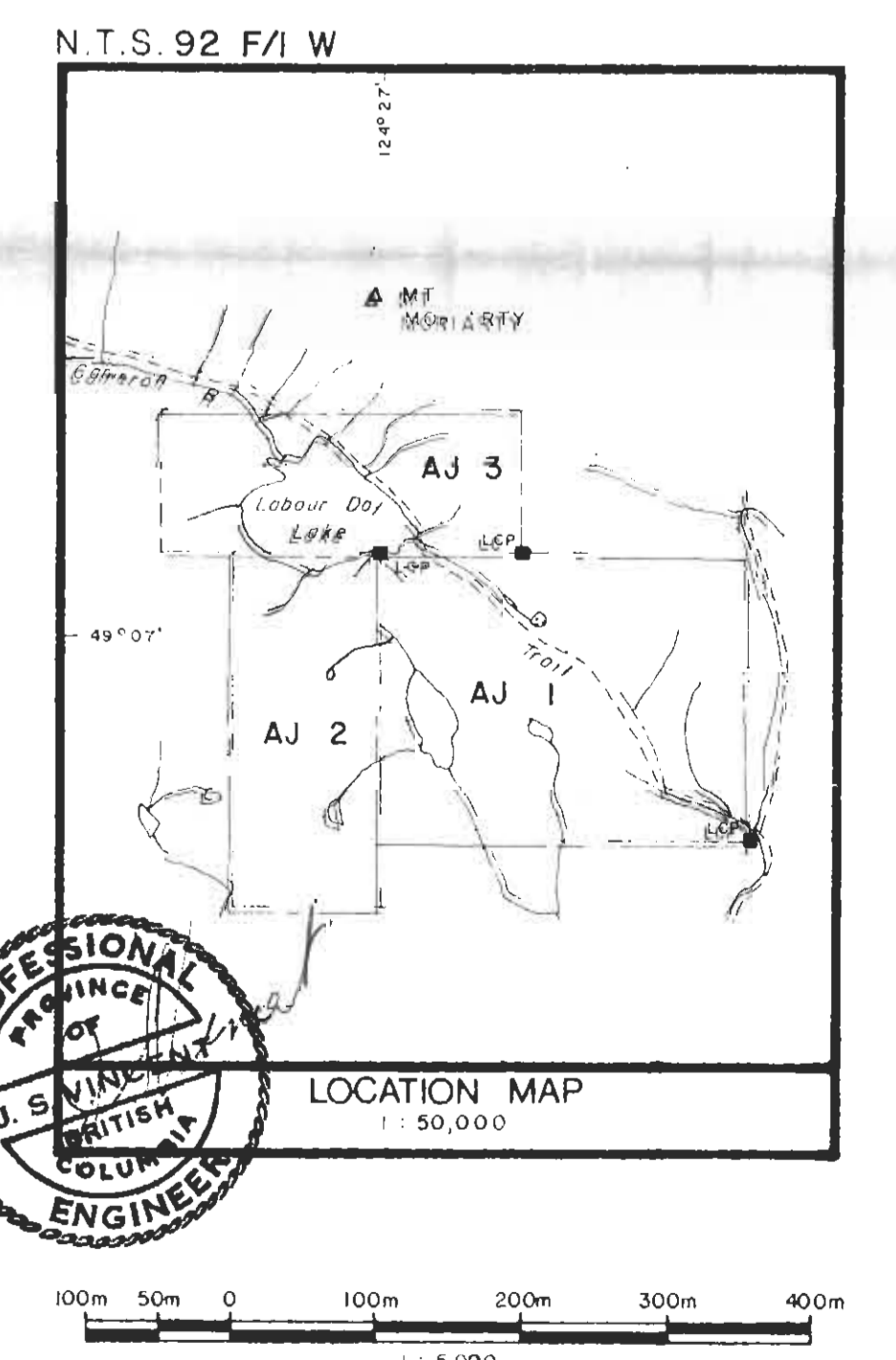
To Accompany Geophysical Report on  
AJ CLAIMS  
Date: JULY/81



- LEGEND**
- CLAIM BOUNDARY
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  - TREE LINE



MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**10390**



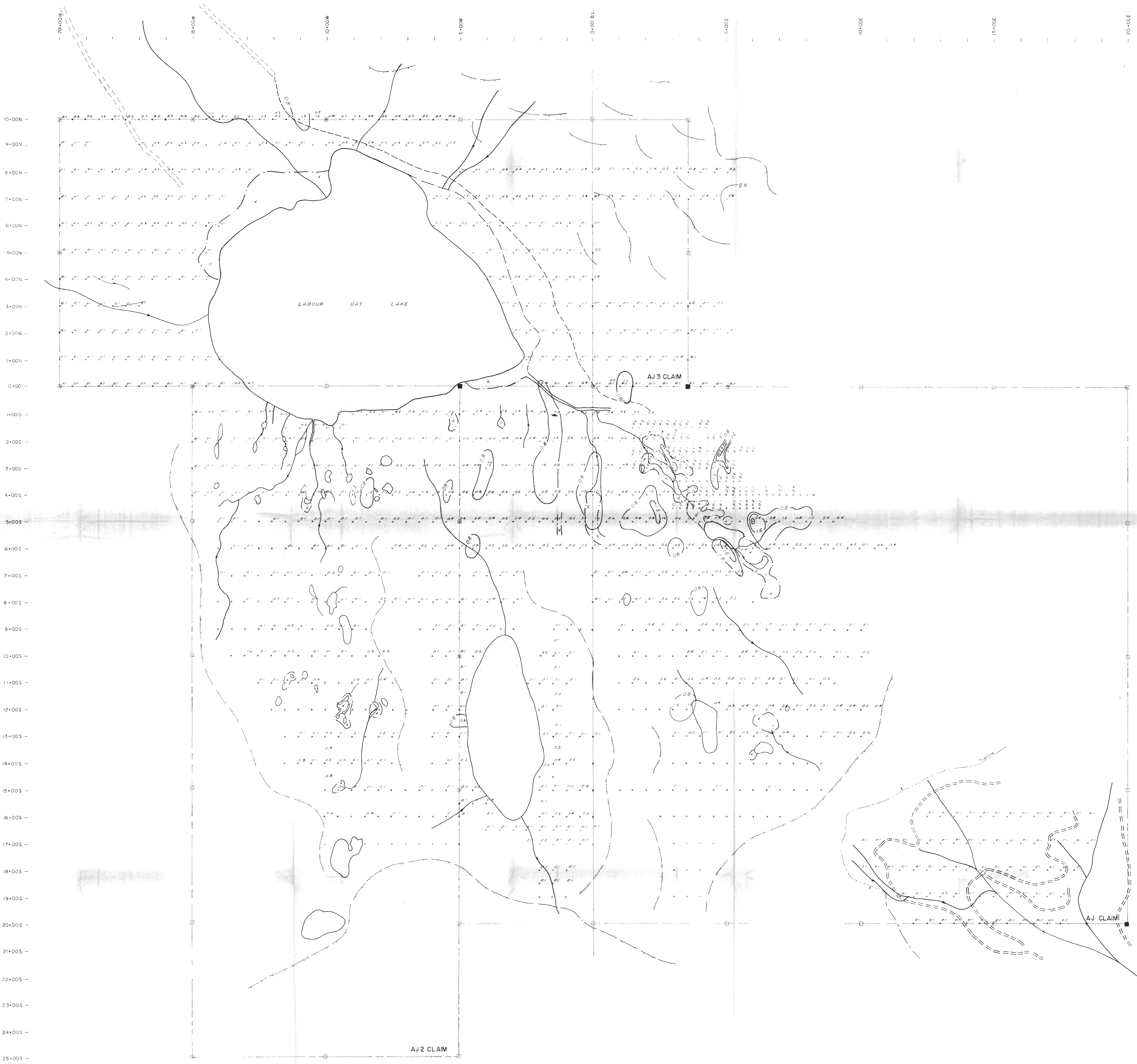
**OLIVER RESOURCES LTD.**  
AJ, AJ2 & AJ3 CLAIMS  
NANAIMO MINING DIVISION - BRITISH COLUMBIA

**GEOCHEMICAL MAP**  
LEAD PPM

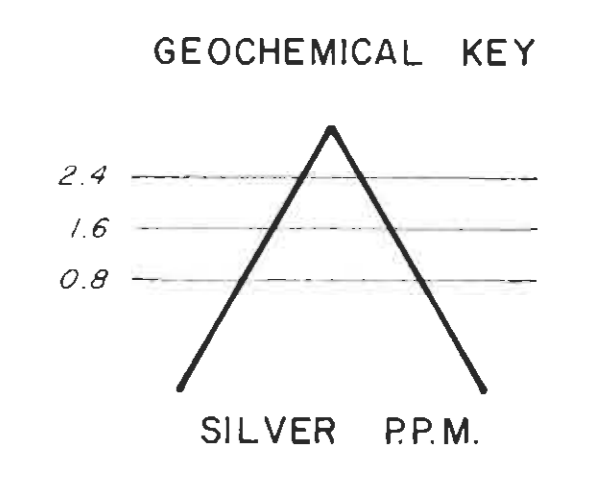
*Don E. White*  
geophysical consulting  
services ltd.

Incorporated by L.T.P.  
Drawn by: N.L.P.  
Checked by: J.V.  
Date: JULY / 81  
Fig. No. 3

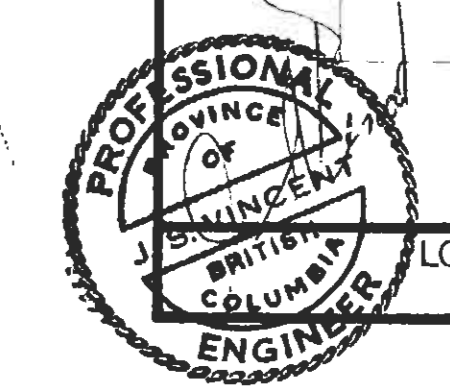
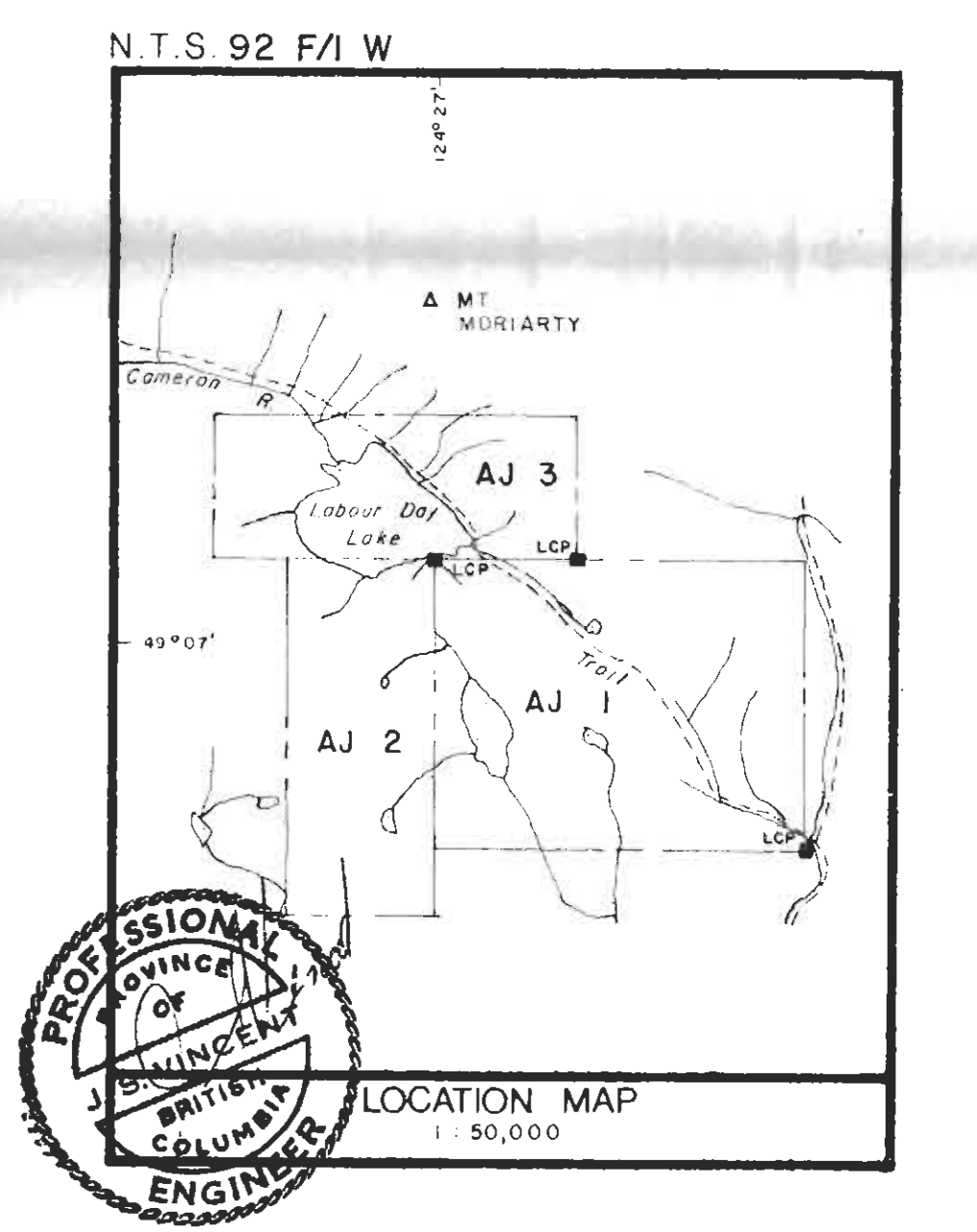
To Accompany Geophysical Report on  
AJ CLAIMS  
Date: JULY / 81



- LEGEND**
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  - CLAY POST
  - LEGAL CLAIM POST
  - SWAMP
  - LAKE OR POND
  - CLIFF
  - GEOCHEMICAL SAMPLE STATION
  - STREAM
  - LOGGING ROAD
  - TADL
  - TREE LINE



MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**10390**



**OLIVER RESOURCES LTD.**  
AJ, AJ2 & AJ3 CLAIMS  
NANAIMO MINING DIVISION - BRITISH COLUMBIA

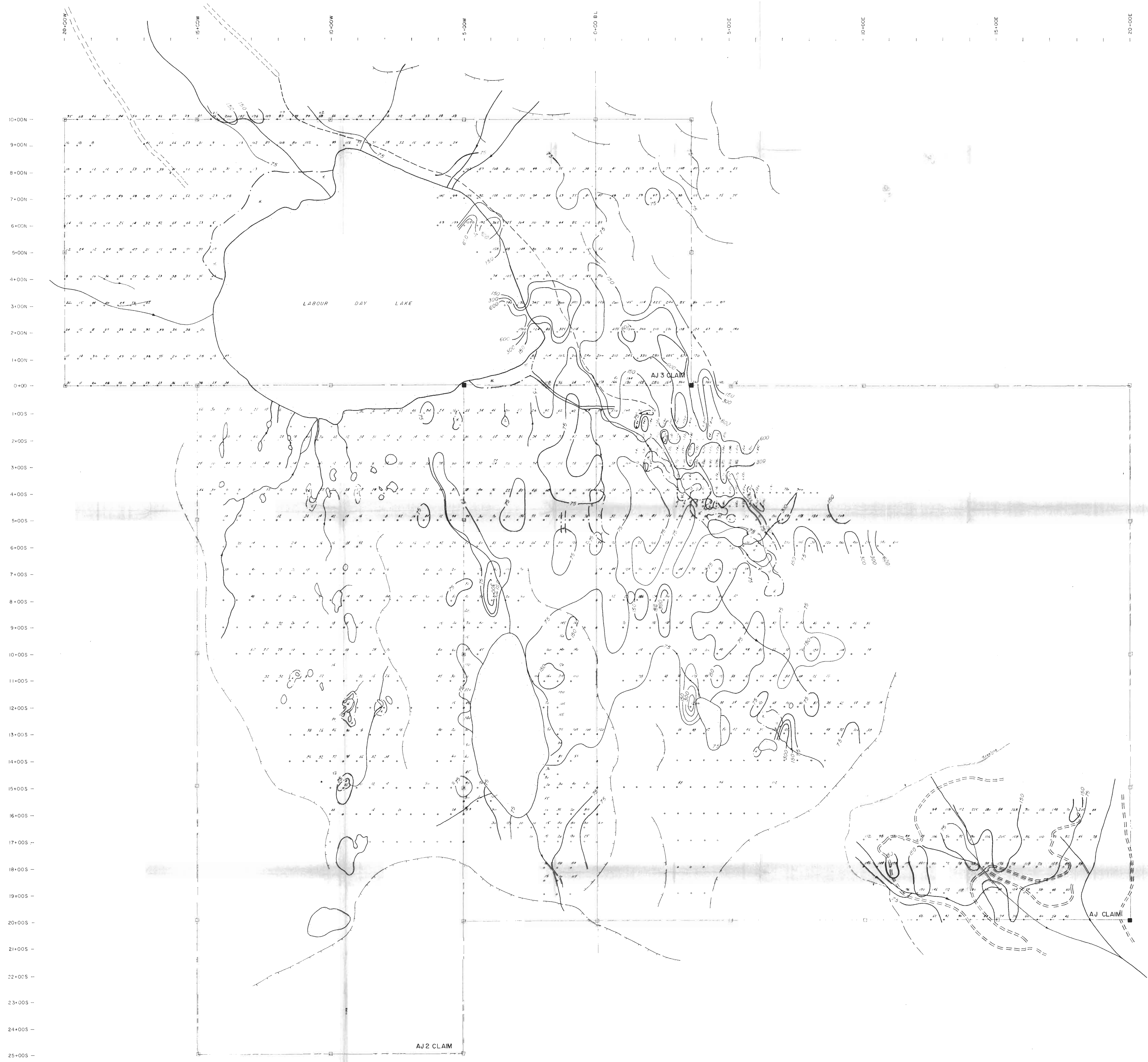
**GEOCHEMICAL MAP**  
SILVER PPM.

Interpreted By: E.T.P.	Drawn By: N.L.P.
Checked By: J.	Date: JULY/81
Fig. No. 4	

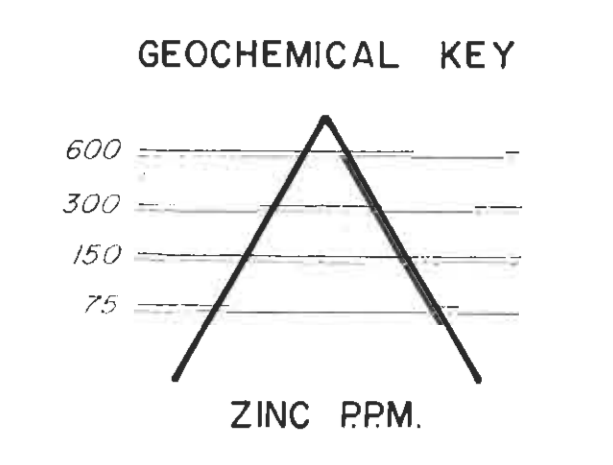
*Glen C. White*  
geophysical consulting  
Oliver Resources Ltd.

To Accompany Geophysical Report on  
AJ, AJ2 & AJ3 CLAIMS  
Date: JULY/81

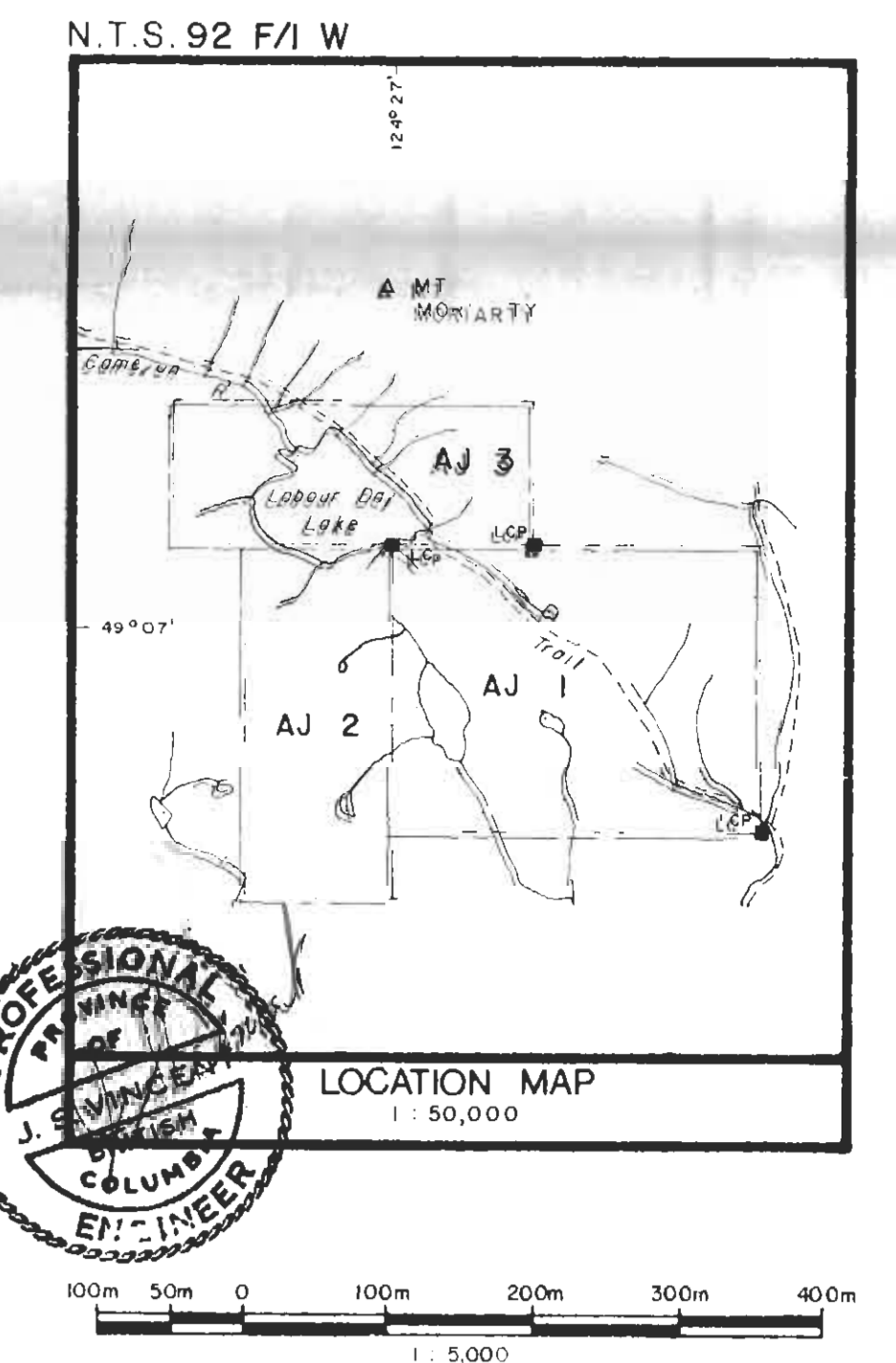




- LEGEND**
- CLAIM BOUNDARY
  - CLAIM POST
  - LEGAL CLAIM POST
  - SWAMP
  - LAKE OR POND
  - CLIFF
  - GEOCHEMICAL SAMPLE STATION
  - STREAM
  - LOGGING ROAD
  - TRAIL
  - TREE LINE



MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**10,390**  
NO.



**OLIVER RESOURCES LTD.**  
AJ, AJ2 & AJ 3 CLAIMS  
NANAIMO MINING DIVISION - BRITISH COLUMBIA

**GEOCHEMICAL MAP**  
ZINC PPM.

<i>J. S. White</i> geophysical consulting resources ltd.	Interpreted By: C.T.P. Drawn By: N.L.P. Checked By: J.J. Date: JULY 78 Fig. No.: 5
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To Accompany Geophysical Report on  
AJ CLAIMS  
Date: JULY 78