

1954

GEOCHEMICAL AND GEOLOGICAL REPORT ON THE
JESS 1-26 AND HOLLY 1-16 CLAIMS, LOCATED
ON THE WEST SIDE OF KAZA LAKE (McCONNELL
CREEK, $56^{\circ} 126^{\circ}$ SE.), OMINECA M.D.

BY R. WOLFE, P.ENG. ON BEHALF OF
BAYLAND MINES LTD. (N.P.L.)

WORK DONE BETWEEN JUNE 16 AND JULY 9, 1969

DATED AUGUST 25, 1969

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Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 1954 MAP

INTRODUCTION

The following report is a record of the exploration work done in June and July, 1969 on the JESS and HOLLY claims owned by Bayland Mines, Ltd. (N.P.L.).

The claims were acquired by the company in 1967, at which time a reconnaissance geochemical silt and soil sampling program was carried out.

The objective of the 1969 program was to follow up and extend any potentially interesting results obtained in 1967 as set out by A.D.K. Burton, P. Eng. in a report titled: "Report on the Kaza Lake property of Bayland Mines, Ltd., Omineca Mining Division", dated October 11, 1967.

The company also owns the SYLV 1-10 claims to the northeast of the Jess and Holly claims, but there was no time available to do any exploration on these claims in the summer of 1969.

LOCATION AND ACCESS

The claims are 90 airmiles northeast of Smithers, 20 miles north of Takla Lake on the west side of Kaza Lake. Latitude: $56^{\circ} 02'$ Longitude: $126^{\circ} 18'$
Access is by floatplane from Smithers.

GEOMORPHOLOGY

The claims are situated on the east slope of a northerly trending hill. The hill rises from 4000' at Kaza Lake to over 5000'.

Outcrop is abundant towards the south end of the claims and near the top of the hill. Vegetation is fairly dense, consisting mostly of spruce and willow and some fir.

PROPERTY AND OWNERSHIP

All claims are owned outright by Bayland Mines Ltd. (N.P.L.).

<u>CLAIMS</u>	<u>RECORD NO.</u>	<u>ANNIVERSARY DATE</u>
JESS 1-14	54711-54724	August 14
JESS 15-26	54725-54736	August 17
HOLLY 1-4	54707-54710	August 14
HOLLY 5-14	54737-54746	August 17
HOLLY 15-16	56114-56115	October 10
SYLV 1-10	51812-51821	July 27

The claims are divided into 2 groups:

- (1) The JESS group, consisting of JESS 7,8,9,10,11, 12,13,14,16,18,20, and 22 (total 12 claims).
- (2) The HOLLY-JESS group, consisting of JESS 1,2,3, 4,5,6,15,17,19,21,23,24,25,26, and Holly 1 to 16 inclusive (total 30 claims).

COST BREAKDOWN AS APPLICABLE TO ASSESSMENT WORKJess Group of 12 claims

Linecutting 25 mandays @\$30	\$750.
Soil Sampling 30 mandays @\$25	750.
Soil Analysis 209 Samples	260.
Board 57 mandays @\$8/manday	456.
Supervision 2 days @\$100/day	200.
	<hr/>
Total	2,416.

Two years of work was applied to all claims.

Expiration date: August 14, 1971

Holly-Jess group of 30 claims

Linecutting 30 mandays @\$30	\$ 900.
Soil Sampling 40 mandays @\$25	1,000.
Soil Analysis 200 Samples	250.
Board 73 mandays @\$8/manday	584.
Geology 3 days @\$100/day	300.
	<hr/>
Total	3,034.

2146
5180

3034
2416
5450

One year of work was applied to all claims.

Expiration date: respective anniversary dates (see pg 3)
in 1970.

QUALIFICATIONS OF OPERATORS

Party chief Mike Crocker has worked for the author for 2 field seasons in the capacity of soil and silt sampler. He is thoroughly experienced in conducting geochemical programs in various different areas of British Columbia and has proved himself to be dependable and conscientious in his work.

P. McKay, I. Maitland, and D. Ball are university students and were thoroughly trained to take soil samples previous to their move to Kaza Lake. They worked under the supervision of either Crocker or the author at all times.

DOMINION OF CANADA:
 PROVINCE OF BRITISH COLUMBIA.

In the Matter of

To Wit:

I, ROBERT WOLFE, P. ENG.

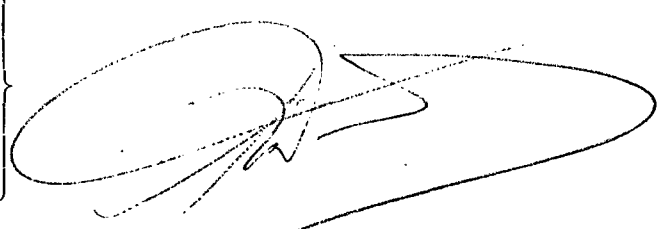
of RR#1, HALFMOON BAY, B. C.

in the Province of British Columbia, do solemnly declare that

<u>NAME</u>	<u>POSITION</u>	<u>NO. OF DAYS</u>	<u>DATES</u>	<u>AVERAGE RATE</u>	<u>AMOUNT</u>
R. Moisan	Linecutter	11	6/16-26	\$30/day	\$ 330.
R. Bolduc	" "	"	"	"	"
C. Gagnon	" "	"	"	"	"
B. Marcel	" + foreman	"	"	"	"
B. Trembley	Cook	"	"	"	"
Total		55			\$ 1,650.
P. McKay	S Sampler	14	6/23-7/7	\$25/day	\$ 350.
I. Maitland	"	"	"	"	"
D. Ball	"	"	"	"	"
M. Crocker	foreman	"	"	"	"
J. Hartline	cook	"	"	"	"
		70			\$ 1,750.
R. Wolfe	geological consultant	5	6/18,25 7/7,8,9	\$100/day	\$ 500.
Food	130 Mandays @ \$8/manday				1,040.
Soil Analyses	409 Samples				510.
TOTAL					\$ 5,450.

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the Cux
 of Vancouver, in the
 Province of British Columbia, this 8
 day of Sept 1969, A.D.



Joan Turner
 A Commissioner for taking Affidavits within British Columbia or
 A Notary Public in and for the Province of British Columbia. SUB-MINING RECORDER

In the Matter of

Four sets of horizontal dashed lines for entering details of the matter.

Statutory Declaration
(CANADA EVIDENCE ACT)

Four sets of horizontal dashed lines for the declaration text.

Vertical text at the bottom of the page, possibly a date or reference number, including fragments like ".0001", ".0002", ".0003", ".0004", ".0005", ".0006", ".0007", ".0008", ".0009", ".0010".

LINECUTTING GRID

A baseline, 12,000 feet long was cut, chained, and marked every 100 feet.

The baseline is 2,000 feet west of the lake and parallel to it in a north-south direction.

Sidelines of varying lengths were cut, chained, and marked in an east-west direction, every 800 feet along the baseline. (see fig. 2)

GEOCHEMICAL SOIL SURVEY

(a) Soil Development

Generally the soil is fairly well-developed and the B horizon present in most areas. In the flat sections the ground tends to be swampy with corresponding abundance of organic material, and some clay.

Higher up on the hill, overburden is thin and the soil contains a lot of talus.

(b) Field Procedure

Samples were collected on all lines every 200 feet. A specially constructed soil auger (diameter 1 inch) was used to facilitate taking samples down to 3 feet. The sample was put in a brown paper envelope and careful notes were kept regarding depth, color, type horizon, texture, angle of slope, and direction of drainage,

type of vegetation, and any other distinguishing landmarks. Wherever present, the B horizon was taken.

Each night, all information from the fieldnotes was transferred to specially printed sheets to form a permanent record and prevent any possible errors. Originally the samples were to be dried and sieved to-80 mesh in the field, but continued rain proved this impractical and the samples were boxed and shipped by rail to the laboratory. All samples were analyzed for copper and every tenth sample was in addition analyzed for molybdenum and zinc.

Every 800' along the baseline, a soil profile was established and samples taken from different horizons and different depths to properly correlate analytical results.

(c) Analytical Procedures

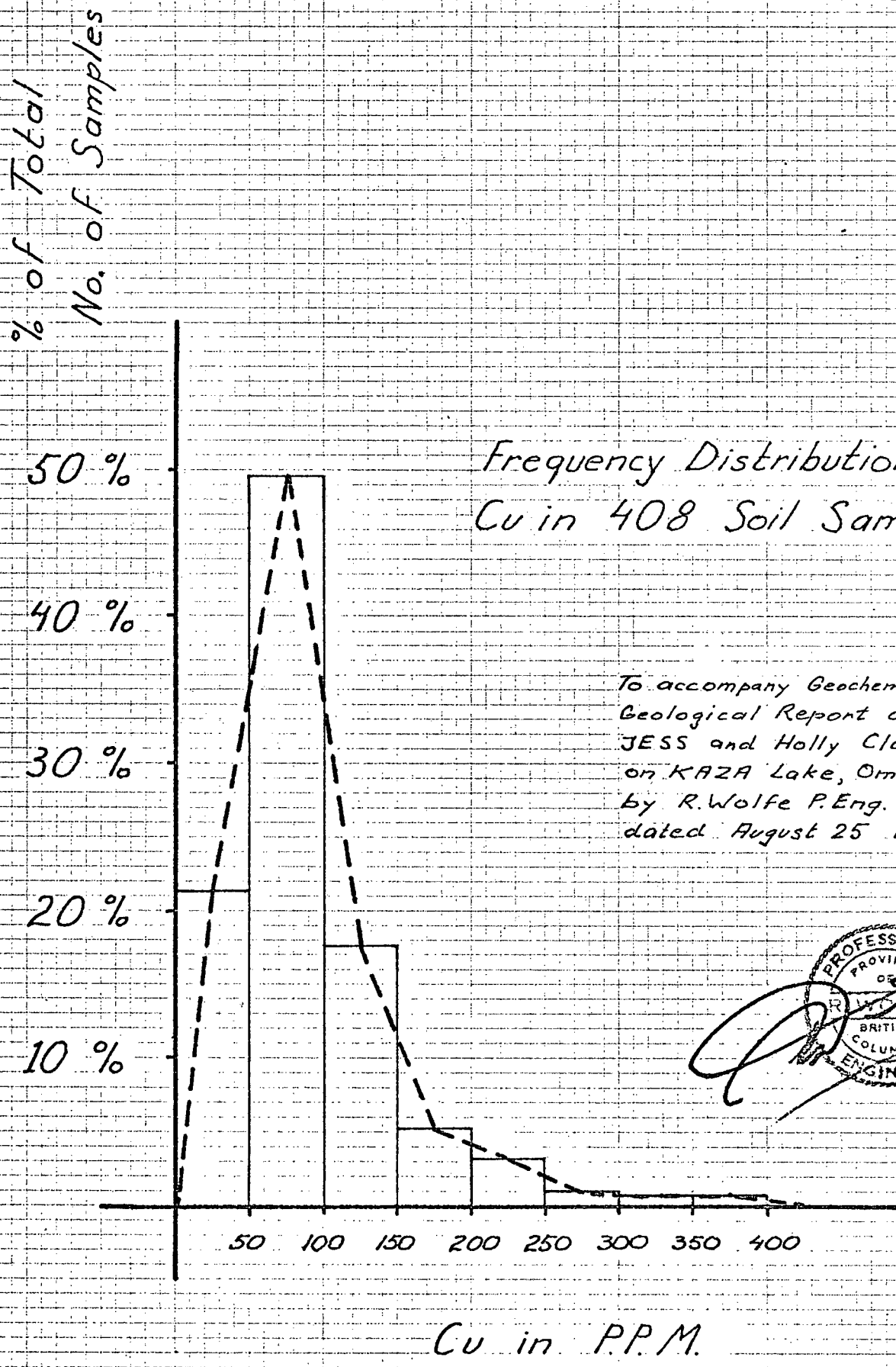
All samples were shipped to: Vancouver Geochemical Laboratories Ltd., 1521 Pemberton Ave., North Vancouver, B.C.

The minus 80 mesh fraction was used; weight of sample-0.5 grain, volume of dilution-10ml., extraction with hot HNO_3 and HClO_4 . Analysis by atomic absorption spec. (techtron AA4), nitrous and acetylene for Mo and Acetylene and air for Cu and Zn.

FREQUENCY DISTRIBUTION TABLE

COPPER IN 408 Soil Samples

Range in P.P.M.	No. of Samples	% of total
0-50	87	21.3
51-100	202	49.5
101-150	72	17.6
151-200	21	5.1
201-250	13	3.2
251-300	5	1.2
301-350	3	0.8
351-400	3	0.8
over 400	2	0.5
	<hr/>	<hr/>
	408	100%



*Frequency Distribution of
Cu in 408 Soil Samples*

*To accompany Geochemical and
Geological Report on the
JESS and Holly Claims
on KAZA Lake, Omineca M.D.
by R. Wolfe P. Eng.
dated August 25 1969*

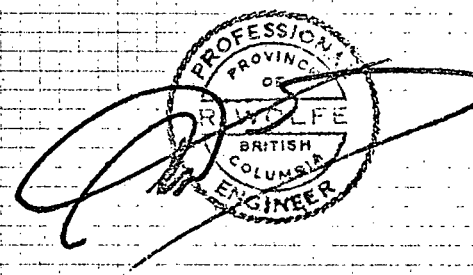


Fig. 1

(d) Discussion and Interpretation of Results

The zinc and molybdenum analysis of every tenth sample showed only low background values for these metals; consequently only copper values were plotted on fig. 3. Four high copper values were re-analyzed as a check and found to be correct. A frequency distribution graph was drawn for copper (see fig. 1). A visual inspection of the graph shows a nearly normal distribution without any obvious "families" of values. Nevertheless, values over 150 ppm could be considered potentially anomalous, depending on their location and contourability. Comparing the location of the higher values on fig. 3 with the location of the outcrops on fig. 4, it can be seen that the area with the highest frequency of outcrop also contains the higher occurrences of copper in the soil. It can be deduced that the copper content of the soil is related to the general depth of overburden.

On fig. 3 the copper values were contoured as well as possible and in general the values do not contour very well except for the area designated A1. Studying the content of organic material in the samples, it was found that well over half of the 47 samples over 150 ppm contained abundant organic material compared to only 9% of the samples under 150 ppm. Organic material tends to concentrate copper.

Rock samples were collected from the potentially anomalous areas and from some random outcrop and analyzed

for copper. (see fig. 3)

It was found that the 2 rock samples from the northern part of the claims only contained 29 and 30 ppm copper (which is very low). The rest of the rock samples ranged from 75 to 150 ppm.

Some of the rock samples from the potentially anomalous areas contained the occasional vesicle filled with pyrite and in 2 instances a tiny speck of chalcopyrite was observed.

There is therefore overwhelming evidence that the higher copper content in some areas is caused by:

(1) shallower overburden, (2) high content of organic material in the soil, (3) higher copper content (not economic) in the underlying rocks.

GEOLOGY

Reference Map 962 A
McConnell Creek, 1 inch to 4 miles

The claims are underlain entirely by volcanic rocks of the Jurassic Takla group.

The Takla strata occupy a broad, northwesterly trending synclitorium.

On the claims, the rocks are of andesitic composition with phenocrysts of pyroxene or plagioclase. Most of the rocks are relatively unaltered, but in a few places moderate propylitic alteration (chlorite, epidote, carbonate) was observed.

Trace amount of pyrite and chalcopyrite are present in a few places. The sulfide minerals occur as distinct grains in the rock and are not accompanied by hydrothermal alteration.

CONCLUSIONS AND RECOMMENDATIONS

A detailed soil sample program on the JESS and HOLLY claims showed that some areas contain potentially anomalous copper values in the soil (on the HOLLY-JESS group).

A careful evaluation of these areas proved that the higher copper content in the soil was not caused by economic mineralization.

No further work is recommended on the 30 claims of the HOLLY-JESS group.

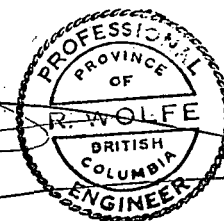
The soil sample program on the 12 claims of the JESS group only showed low background values. Since the overburden on these claims is probably quite thick and outcrop extremely scarce it is suggested that exploration be suspended at this time until more is known of the results on the neighboring ground of NORTHSTAR MINES where extensive diamonddrilling is presently in progress.

The experience gained from the orecontrols on Northstar's property might suggest a new approach to the exploration techniques on the JESS group and also on the SYLV 1-10 claims (which were not worked in the summer of 1969).

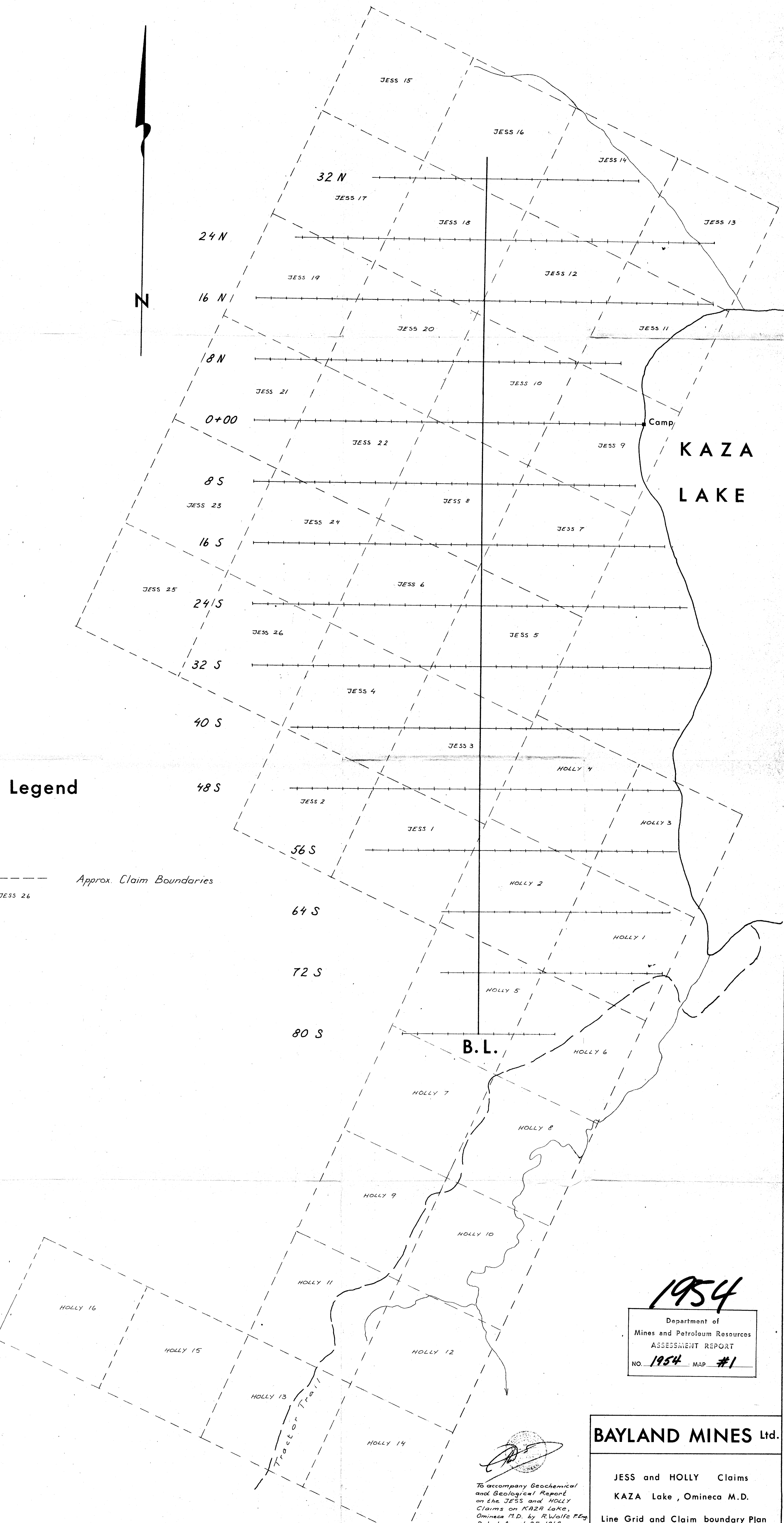
Respectfully Submitted



Robert Wolfe P. Eng.
RR 1 Halfmoon Bay, B.C.



Aug. 25, 1969



Legend

--- Approx. Claim Boundaries
JESS 26

1954

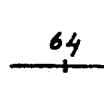
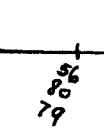
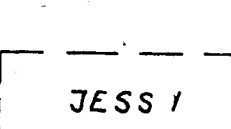


Department of
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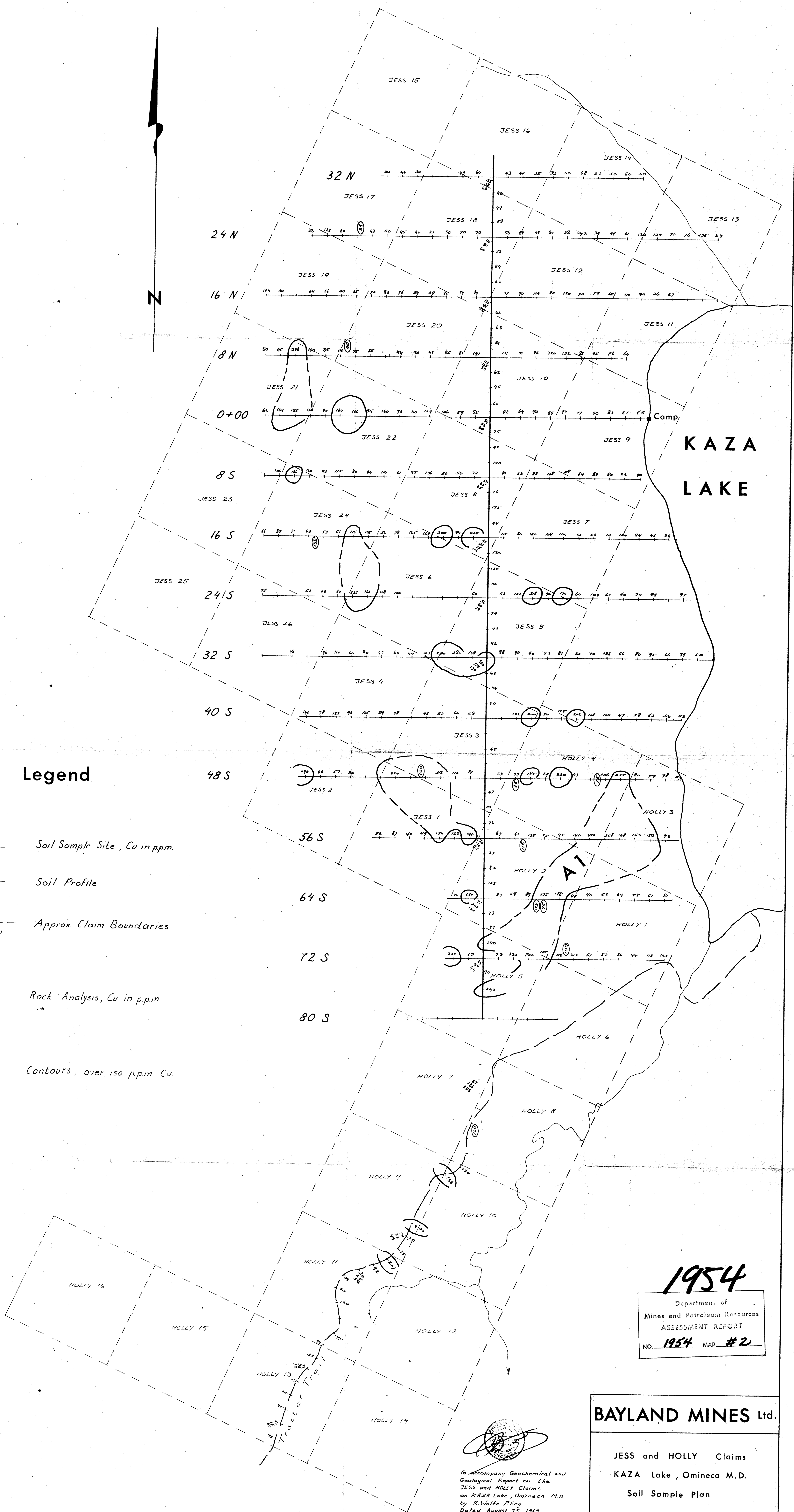
BAYLAND MINES Ltd.

JESS and HOLLY Claims
KAZA Lake, Omineca M.D.
Line Grid and Claim boundary Plan
Scale: 1" = 500'

To accompany Geochemical
and Geological Report
on the JESS and HOLLY
Claims on KAZA LAKE,
Omineca M.D. by R. Wolfe P.Eng.
Dated August 25 1969

Legend

-  Soil Sample Site, Cu in ppm.
-  Soil Profile
-  Approx. Claim Boundaries
-  Rock Analysis, Cu in ppm.
-  Contours, over 150 ppm. Cu.




1954
 Department of
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 ASSESSMENT REPORT
 NO. 1954 MAP #2

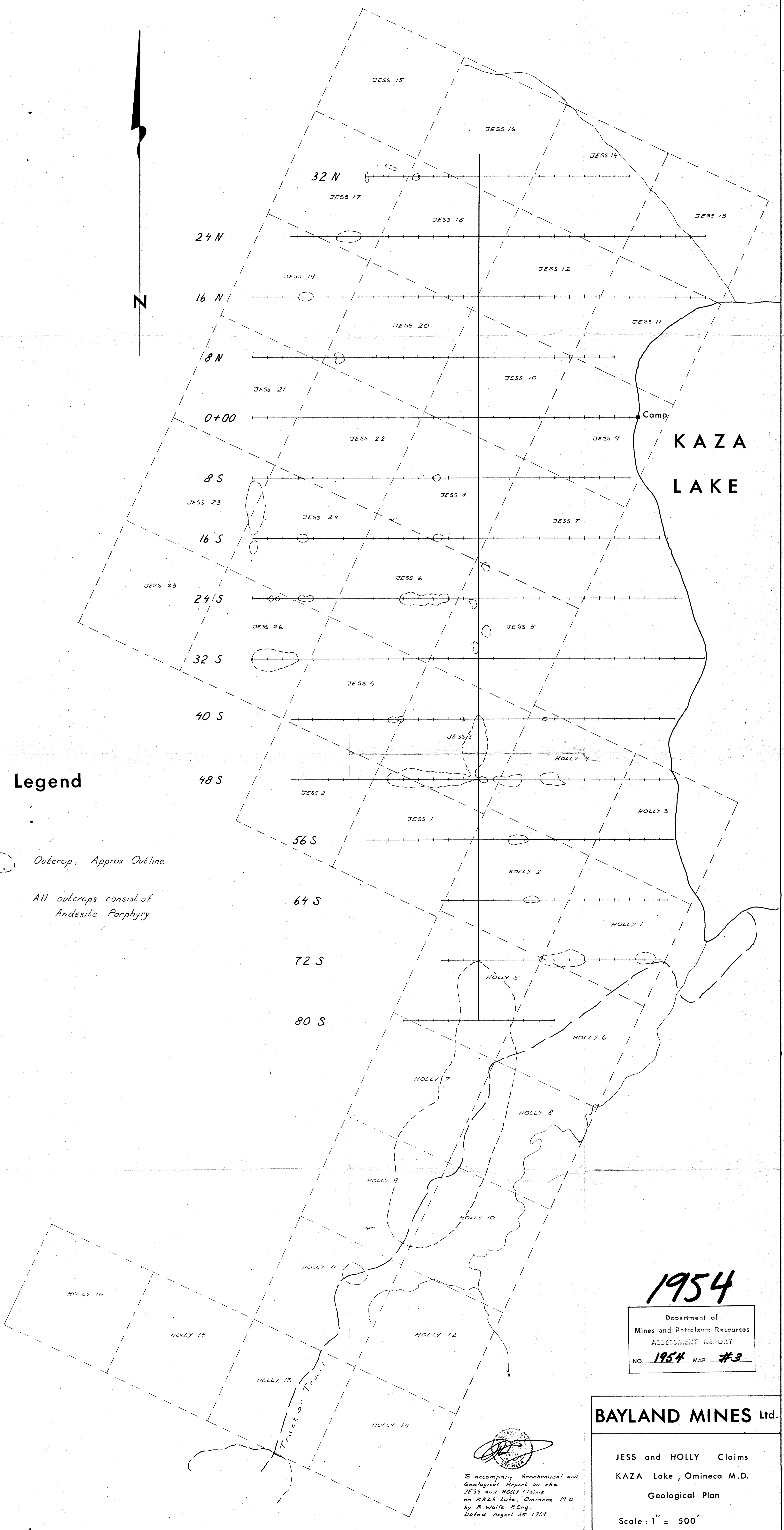
BAYLAND MINES Ltd.
 JESS and HOLLY Claims
 KAZA Lake, Omineca M.D.
 Soil Sample Plan
 Scale: 1" = 500'
 Date: August 25 1969 Drawn: R.W. Fig. 3

To accompany Geochemical and Geological Report on the JESS and HOLLY Claims on KAZA Lake, Omineca M.D. by R. Wolfe P.Eng. Dated August 25 1969



Legend

 *Outcrop, Approx. Outline.*
All outcrops consist of Andesite Porphyry



1954

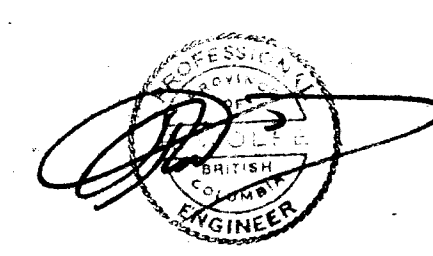
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. **1954** MAP #3

BAYLAND MINES Ltd.

JESS and HOLLY Claims
KAZA Lake, Omineca M.D.
Geological Plan

Scale: 1" = 500'

Date August 25 1969 Drawn: R.W. Fig. 4


To accompany Geochemical and
Geological Report on the
JESS and HOLLY Claims
on KAZA Lake, Omineca M.D.
by R. Wolfe P.Eng.
Dated August 25 1969