

3322

This is Geophysical Report No. EM-70-107-E
For Highland Chief Mines Ltd.
Ben Claims Group
Five Miles East of Clapperton, B.C.
November 5, 1970 to December 22, 1970.

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Plans

#1 Anomalous Plan	EM-70-107-E
2 Location Plan	EM-70-107-EL

ELC Geophysics Ltd.
250 North Grosvenor Ave.
Burnaby 2, B.C.
298-9619

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 3322 MAP.....

ELC GEOPHYSICAL REPORT NO. EM-70-107-E COVERING THE
BEN CLAIMS GROUP IN THE KAMLOOPS MINING DISTRICT
APPROXIMATELY FIVE MILES EAST OF CLAPPERTON, B.C.
(120° W - 50° N) FOR HIGHLAND CHIEF MINES LTD.
NOVEMBER 5, 1970 to DECEMBER 22, 1970.

Purpose:

The purpose of the EM survey No. EM-70-107-E was to extend the previous geophysical survey No. EM-70-107 to the northeast to thereby determine if EM anomalous features, extend to the north, from the coordinates 60+00 N to 110+00 N and 50+00 E to 95+00 E.

Geological Reference:

The department of mines technical surveys Map 1010A of the geological series.

Location:

The Ben claims group is north and east of the Papsilqua Indian Reserve and northeast of Papsilqua Creek. The town of Clapperton on the Nicola River is

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west-southwest approximately 5 miles. The map reference coordinates are 121° W longitude and 50° N latitude. See location plan EM-70-107-EL.

Presentation:

The plan EM-70-107-E covers the area surveyed. The coordinates are an extension from the coordinates shown on the plan of the previous survey No. EM-70-107 of September 21, 1970. The east-west gridlines have an average line spacing of 500 feet with the average station-
ed spacing 100 feet or less. There are eleven grid-
lines on approximately 4000 feet and three north-south
base control lines extending approximately 5000 feet. The approximate total linear footage on the plan is 60,000 feet.

The EM values are shown along the gridlines in profile form, the vertical components shown in the dark lines, and the horizontal components in light lines. Interpretation of these Ronka EM16 instrument readings are based on the related values, the phase of the progressive changes, and the reversal of values, in

con't...

association with the values of the neighbouring grid-lines.

Instrumentation:

The EM instrument manufactured by Geonex Instruments of Toronto, Ontario is a Type EM16 and was operated from an infinite source consisting of the Naval Radio Station NPG in the state of Washington, U.S.A, on a frequency of 18.6 KHZ. An azimuth of 200° was carried throughout the survey.

Results:

The results are indicated on the plan EM-70-107-E. The prominent north-south linear anomaly CL1E having a nearly north-south strike and is a continuation of the CL1 anomaly of the previous survey. The CL2E conductive linear anomaly follows closely to the drainage pattern of a creek having a northeast-southwest trend. The CL3E conductive linear anomaly appears to have the same strike but with much weaker values. The CL4E anomaly indicates the eastern edge of an apparent formation change and CL5E indicates the western side.

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Conclusions:

The prominent anomaly CL1E is undoubtedly a continuation of the previous surveyed anomaly CL1, wherein the gridline 60+00 N is common to both surveys, with the exception of the change in scale of the plans. C2E may be an extension of the previous contact anomaly C2. The conductive linear anomaly CL2E may be influenced by the conduction of the drainage creek bed, although structure is also indicated, thereby suggesting the creek follows closely to the formational influence. There is no relation between the C2E formational interface boundary and the C2E referred to in the previous survey.


Summary:

The prominence of the conductive linear anomaly CL1 and CL1E throughout two surveys shows a total of approximately 20+00 N to 105+00 N, having both geological structural, and conductive indications. The associated zone Z1A of the previous survey is again simulated between the linear anomalies CL2E and C2E.

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Recommendations:

The anomalous features of prominents are sufficiently well defined to warrant geological investigation. Geochemical surveys of these areas would be a logical step.



D.L. HINGS, P. Eng.
Geophysicist

A statement of costs for Geophysical Survey No. EM-70-107-E
 Covering the BEN Claims Group, Kamloops Mining District,
 Five Miles East of Clapperton, B.C. For Highland Chief
 Mines Ltd.
 November 5, 1970 to December 22, 1970.

11.5 mi

Survey Crew

R.L. Reece	18 days @ 60.00	\$ 1080.00
W. Mather	15 days @ 40.00	600.00
G. Olheiser	15 days @ 40.00	600.00
G. Childs	8 days @ 35.00	<u>280.00</u>

2560.00

Transportation

4 x 4 Truck, 15 days @ 12.00	180.00
Mileage - 750 miles @ 12¢	<u>90.00</u>

270.00

Living Costs

53 Field man days @ 10.00

530.00

Equipment & Supplies

15 days @ 5.00

75.00

Instrument

Ronka EM16 15 days @ 10.00

150.00

Data Processing & Drafting

D.A. Cramer 8 days @ 60.00

480.00

Interpretation & Report

D.L. Hings, P. Eng.
 3 days @ 120.00

360.00

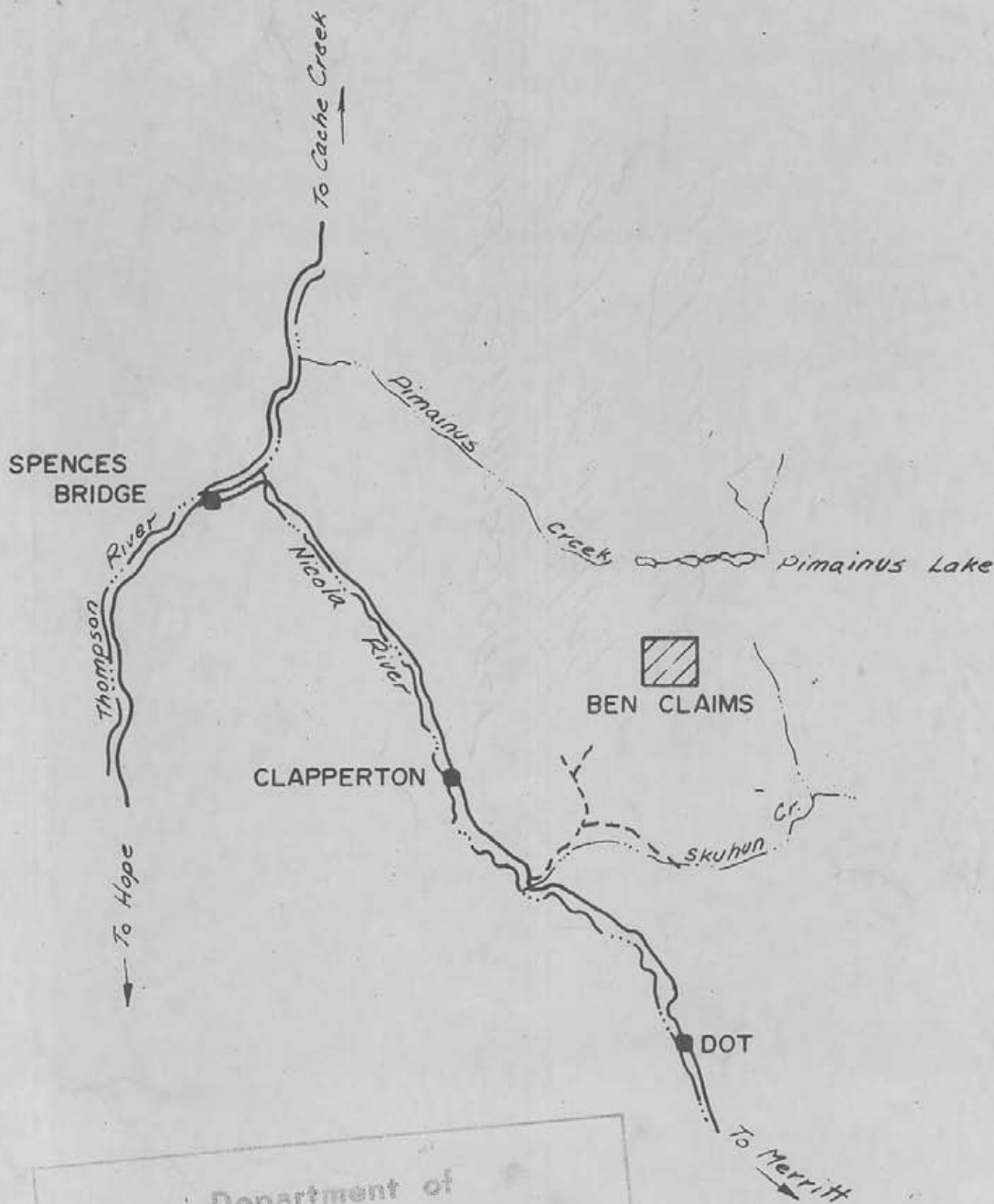
TOTAL

\$ 4425.00

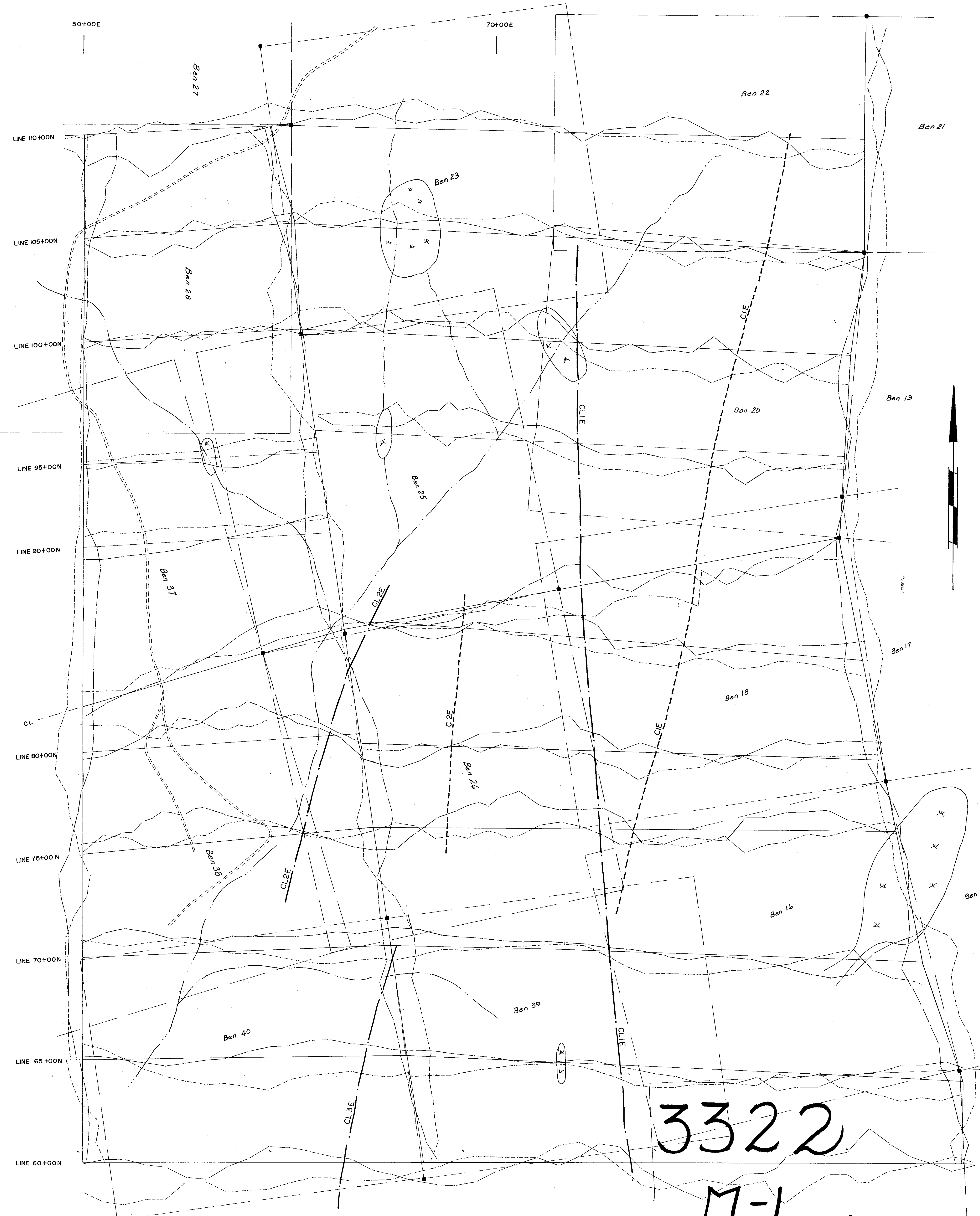
Declared before me at the
 of **VANCOUVER, B.C.**
 Province of British Columbia, this **SEP. 27 1971**, A.D.
 day of *September*
Sub. Mining Recorder.

A Commissioner for taking Affidavits within British Columbia or
 A Notary Public in and for the Province of British Columbia.

LOCATION MAP
Ben Claims Group
HIGHLAND CHIEF MINES Ltd.
Kamloops Mining District, B.C.
SCALE: 1" = 4 Miles



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3322 MAP #2



3322
M-1

ELC GEOPHYSICAL SURVEY
 BEN GROUP HIGHLAND CHIEF MINES LTD.
 CLAPPERTON, BC. AREA.
 DEC. 1970 SCALE: 1"=200' DWG. NO. EM-70-107-E
 EM PROFILES
 APPROVED *[Signature]*

- NOTE --
- SURVEY LINES
 - ZERO LINE
 - IN-PHASE (I²=100%)
 - QUADRATURE (I²=40%)
 - CLAIM POST
 - ROAD
 - CREEK
 - CONTACT
 - CONDUCTIVE LINEAR ANOMALY
 - CLAIM LINE
 - SWAMP

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 3322 MAP #1