83-#873-12284

12/84

GEOPHYSICAL REPORT
On An
INDUCED POLARIZATION SURVEY
HOLLYCROFT RESOURCE CORP.
CONDOR 3 and 5 MINERAL CLAIMS
Harrison Lake, B.C. New Westminster, M.D.
NTS 92H/12W, Lat.49°37'N, Long.121°54'W
Author: Glen E. White B.Sc., P.Eng.
Date of Work: Nov. 9-21, 1983
Date of Report: January 16, 1984

Glen E. White GEOPHYSICAL CONSULTING & SERVICES LTD.

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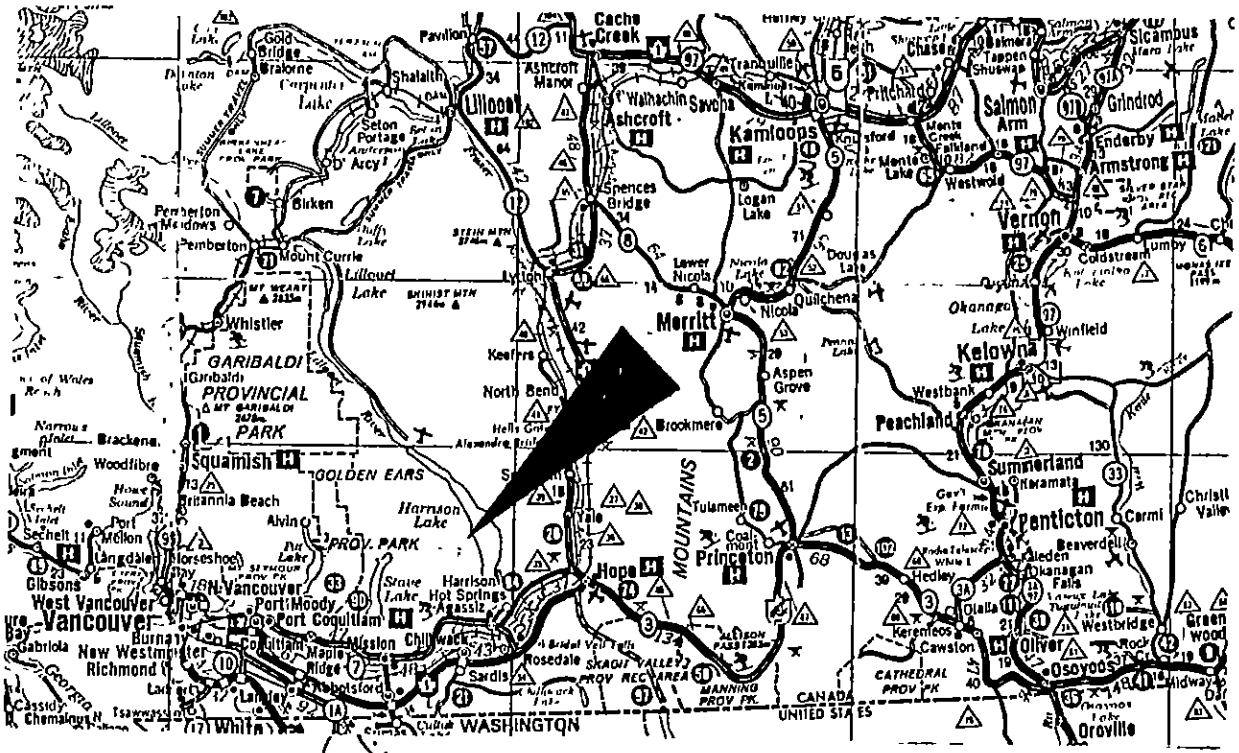
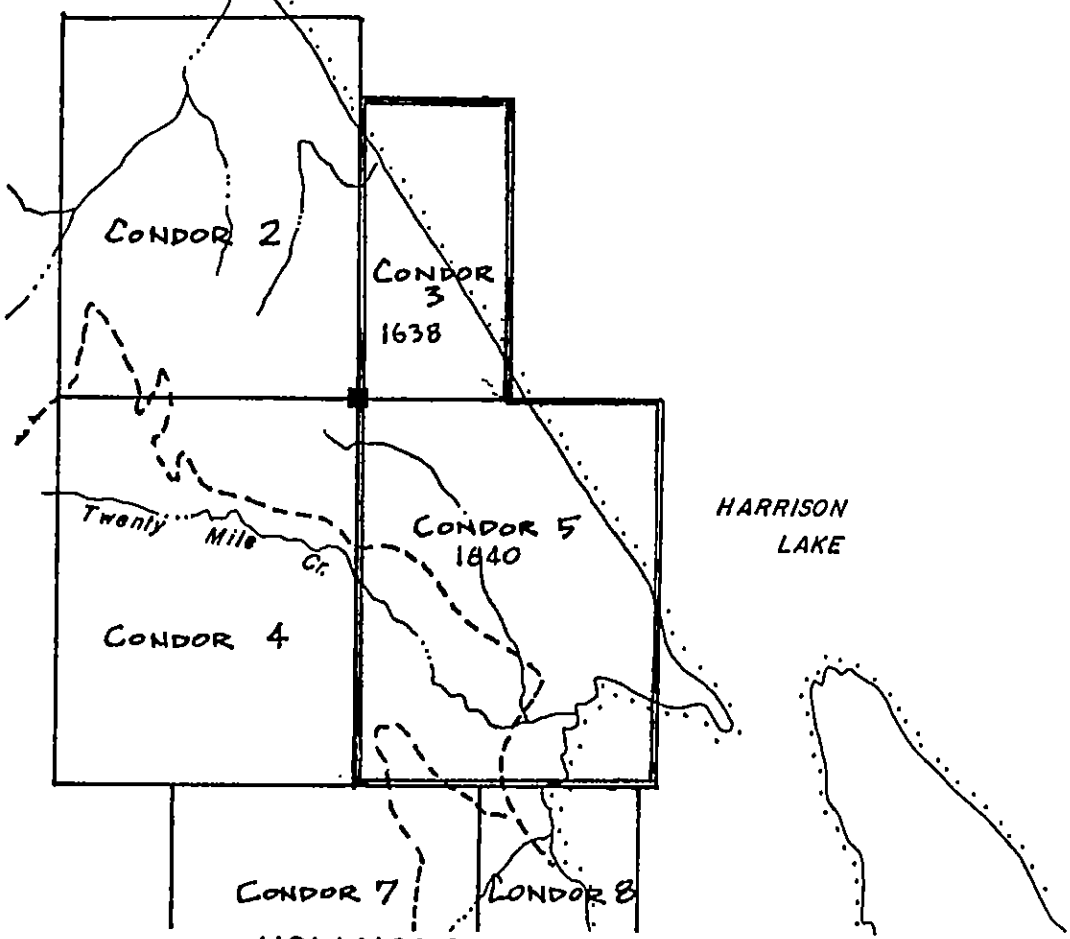
ILLUSTRATIONS





HOLLYCROFT RESOURCE CORP.
CONDOR 3 & 5 CLAIMS
LOCATION AND CLAIMS MAP

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FIGURE 1

INTRODUCTION

During the period Nov. 9-21/83 a program of reconnaissance multipole induced polarization surveying was conducted over roads on the CONDOR 3 and 5 mineral claims.

Multipole induced polarization surveying successfully detected new gold bearing pyrite zones on the nearby Rhyolite Resources Inc. property. Thus this survey on the CONDOR claims was undertaken along access roads to see if any anomalous chargeability zones could be detected that would require a detail survey.

PROPERTY

The claim group consists of the CONDOR 3 and 5 claims comprising the Condor 35 group. The survey work was completed along roads on the CONDOR 5 claim. The claims are CONDOR 3, Record #1638 and CONDOR 5, Record #1640 recorded Dec. 16/82

LOCATION AND ACCESS

The claims are located on the west shore of Harrison Lake across from Long Island. A main logging road passes near the western boundary of the CONDOR 5 claim. Access onto the claim is from a bush road which turns eastward just north of Twenty Mile Creek. Lat.49^{o}37'N, Longitude 121^{o}54'W, NTS 92H/12W. New Westminster M.D., B.C.

GENERAL GEOLOGY

The history, economic potential and regional geology is best described by J. Vincent P.Eng. as follows:

HISTORY

Prospecting and claim staking in 1897 -1898 was focused on gold-silver discoveries on Fire Mountain and the west side of Harrison Lake at the Providence about 15 miles northwest of Harrison Hotsprings. About 55 tons of unknown value was produced from the Fire Mountain prospect, and 350 tons with a value of $34/ton in gold and silver was produced from the Providence showing. Further work was done on the Providence in 1929 by the Harrison Gold Mining and Development Co., but without success. During the period 1930 - 1934, further underground exploration work was carried out on the Fire Mountain occurrences.

In the early 1950's exploration interest through the area along the southwest side of Harrison Lake was sparked with the discovery of copper-zinc sulphides. In 1971, Cominco geologists recognized the geological setting as similar to the Kuroko-type and Noranda-type environment which has been exceptionally productive in Japan. Since then, exploration activity has continued in varying degrees, and the SENECA prospect, No. 13 on the map, has received considerable effort by Noranda, Cominco and Chevron. In 1972 and 1973, the B.C. Mines Branch completed a mapping project which contributed to the understanding of the geological setting.

At present, Curator Resources Ltd. of Calgary holds the prospect under option and during the 1983 season completed 8400 feet of drilling in 18 diamond drill holes. Eleven holes intersected the mineralized zone, and a release of information will be forthcoming. A search of the records shows a number of assessment reports filed on prospects which consist of varying amounts of base

metal sulphides hosted by the Harrison Lake volcanics.

The present interest in the area has been generated by the discovery in 1981-82 of gold-silver mineralization approximately 3 miles northwest of the PROVIDENCE in the Doctor's Point area. Trenching and diamond drilling in 1982 and 1983 has defined a significant zone of gold-bearing mineralization which occurs in the Fire Lake Group of rocks. The drilling program is continuing with very encouraging results, and an induced polarization survey was successful in delineating additional target areas.

ECONOMIC POTENTIAL

Mineral prospects which have been included in the Provincial Mineral Inventory are plotted on Figure 3 and illustrate that occurrences of interest have been prospected along the full length of the belt. At the south end, the SENECA property has received the most concentrated work and comprehensive studies have shown that massive sphalerite, pyrite, and chalcopyrite occur as discontinuous lenses within a thin horizon of rhyolitic lithic and lapilli tuff. In 1961, 287 tons were shipped to Britannia Beach, and the grade recovered averaged 0.06 ounces of gold per ton, 3.34 ounces of silver per ton, 1.24% copper and 7.08% zinc. Although subsequent exploration has not outlined an orebody to date, work continues in a promising and complex environment.

A study of assessment files shows that a number of sulphide occurrences in similar stratigraphic settings have been prospected to varying degrees. Although an economic discovery has not been made, the geologic setting is most encouraging..

The present activity towards the north end of the belt has developed as a result of the gold discovery made on the property of Rhyolite Resources Inc. on the west side of Harrison Lake on Westwood Bay. Published information indicates that the precious metal values are hosted by a gently dipping altered and mineralized zone in the Fire Lake rocks which varies in thickness up to 10 metres. Trenches and road cuts expose the zone, and the 1982-83 drilling program and IP survey has established a trend and geological control.

Although continuing work will contribute to the understanding of the geological setting, there are strong indications that the association of volcanic stratigraphy represents an important discovery perhaps similar to those found in the Precambrian volcanic terrains of Ontario and Quebec. The Noranda-type setting has been established for the SENECA prospect to the south, and the overall package of volcanic and volcanoclastic rocks represented by the Harrison and Fire Lake sections deserve thoughtful evaluation and exploration in the light of recent conceptual work relative to gold deposits.

GEOLOGY

Regional

The west side of Harrison Lake is underlain by the Harrison Lake Formation and Fire Lake Group of rocks which consists predominantly of a volcanic and volcanoclastic stratigraphic sequence. The Fire Lake Group is exposed in the north half of the area while the Harrison Lake section occupies the southern portion. The most recent compilation (GSC Map 1386A) places the Harrison Lake Formation in the Middle Jurassic and the Fire Lake Group in the Lower Cretaceous. Midway up the lake, outliers or segments of the Broken Back Hill Formation and Bill Hook Creek Group occur on Long Island and the west side of the lake. The former lies stratigraphically above the Fire Lake Group; and the latter between the Harrison Lake and Fire Lake rocks. They appear to be predominantly sedimentary, but have a pyroclastic content. In GSC Memoir 335, Dr. J.A. Roddick regards these areas as comprising roof pendants of varying size within the intrusive Coast Range plutonic complex.

The Chehalis Pendant includes the extensive area of Harrison Lake Formation along the west side of the Lake. The characteristic rocks are described as a thick sequence of metamorphosed porphyritic andesite and dacite. Since this work was completed in 1955, logging and mining exploration activity has opened up the area with the result that the stratigraphy has taken on considerable economic significance. Base and precious metal mineralization has been discovered in association with particular structural and stratigraphic features which suggest a volcanogenic relationship.

The Fire Lake Group also occupies a roof pendant. In the Fire Lake area, northwest of Harrison Lake, three stratigraphic units have been mapped (Memoir 335,P.42):

1. An upper unit of clastic feldspathic greenstones, chlorite schist and minor conglomerate has a thickness of 7000 feet.

2. A middle unit of dark slates, shales, argillite, and greywacke is approximately 6000 feet thick.

3. A basal section consisting of granulites, andesite, conglomerate, limestones and quartzite is approximately 2000 feet thick.

From the description provided by Dr. Roddick, it is apparent that the stratigraphic section represents well mixed volcanic and sedimentary activity during this period of geologic time.

In the vicinity of Bremner Creek, the upper unit of the Fire Lake section is exposed on the northern limb of a westward plunging anticline which exposes the Harrison Lake rocks in the core. The Fire Lake rocks consist of volcanic breccias, volcano-clastics and interbedded flows of andesite and rhyolite.

Intrusive rocks in the area belong to the Coast Plutonic Complex which represents a variety of phases and compositions. Outcrops along the west side of Harrison Lake expose a medium grey hornblende granodiorite which is regarded a Middle Eocene in age.

LEGEND

EOCENE

20	Granodiorite
19	Quartz Diorite

LOWER CRETACEOUS

16	FIRE LAKE GROUP: Pyroclastics, greenstones, slate, greywacke, conglomerate, limestone.
15	BROKEN BACK HILL: Pyroclastics, greywacke

MIDDLE JURASSIC

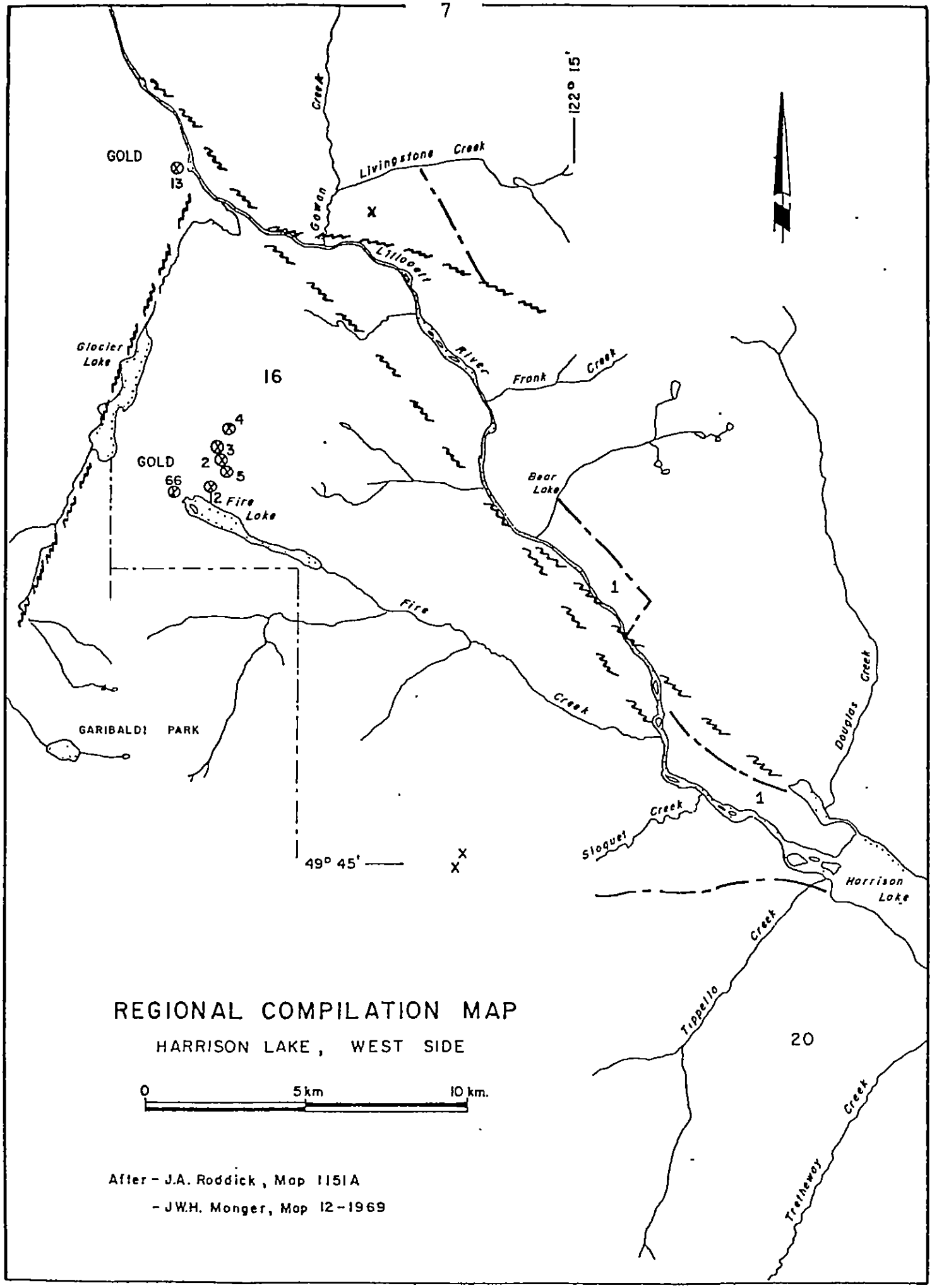
9	BILLHOOK CREEK FORMATION: Tuff, sandstone
8	MYSTERIOUS CREEK FORMATION: Pelite
7	ECHO ISLAND: Argillite, tuff
6	HARRISON LAKE: Flows, volcanoclastics, pyroclastics

TRIASSIC (and older)

1	HOZAMEEN GROUP: Volcanics, sediments

SYMBOLS

———	Geological Contacts, approximate
⊗13	Mineral Prospect; MI number
X	Recorded Pyritization
50°	Bedding Attitude



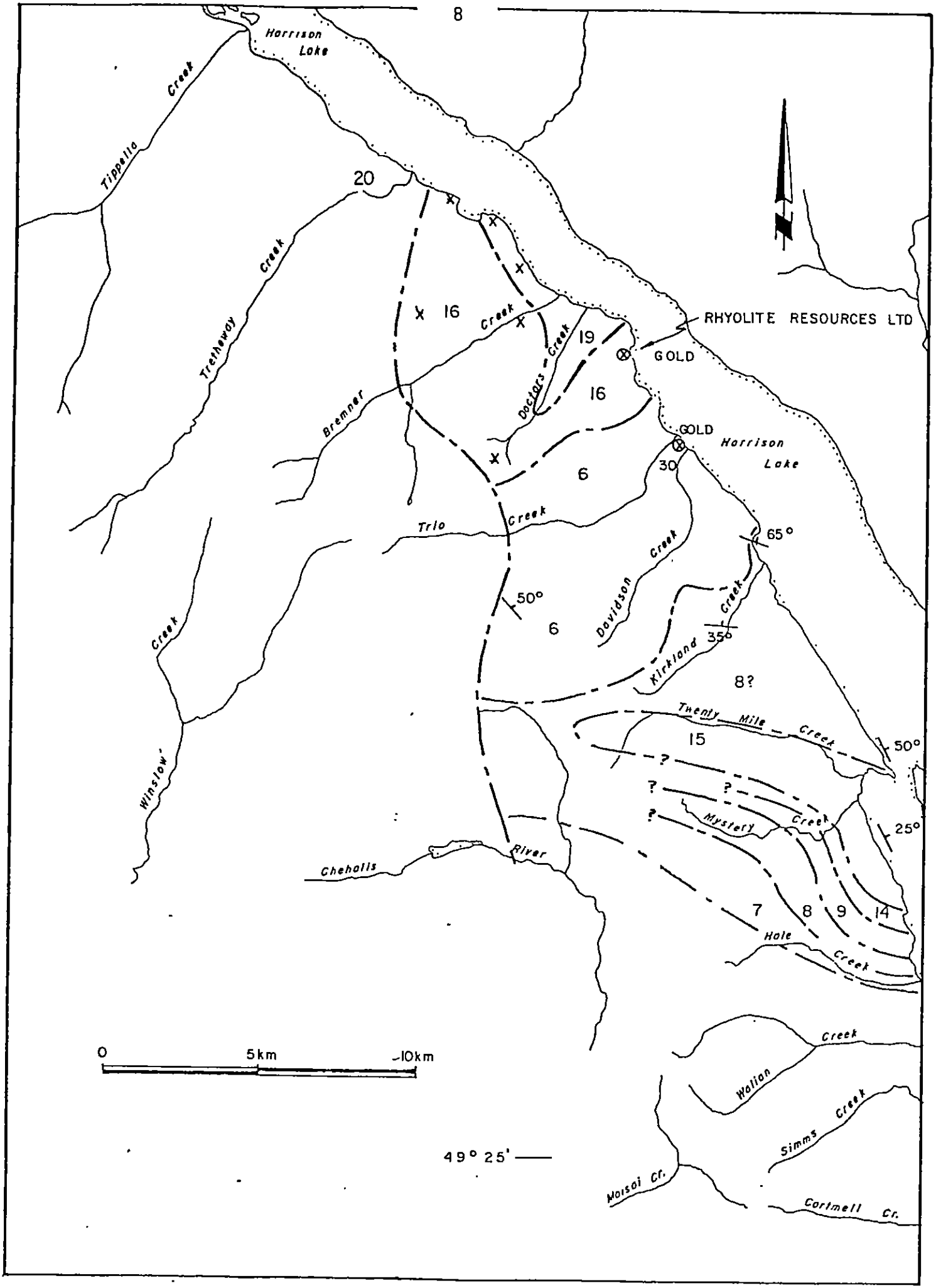
REGIONAL COMPILATION MAP

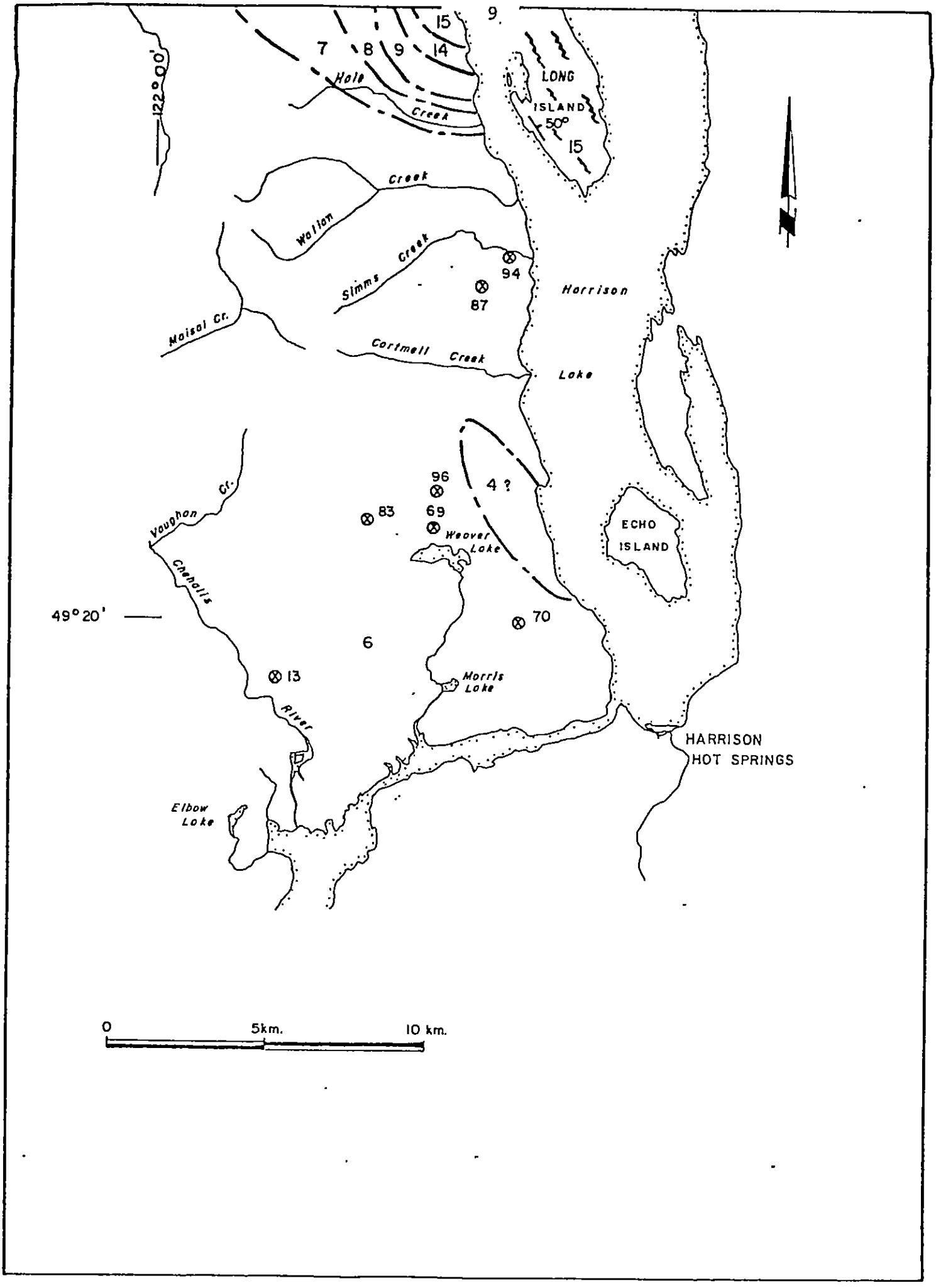
HARRISON LAKE, WEST SIDE

0 5km 10 km.

After - J.A. Roddick, Map 1151A

- J.W.H. Monger, Map 12-1969


Harrison Lake
Tippella Creek
Trethewey Creek
Brenner Creek
Doctors Creek
Trio Creek
Davidson Creek
Kirkland Creek
Twenty Mile Creek
Mystery Creek
Hale Creek
Walton Creek
Simms Creek
Morsai Cr.
Cortmell Cr.
Winslow Creek
Chehalis River
RHYOLITE RESOURCES LTD
GOLD
GOLD
20
16
19
16
6
30
6
8?
15
7
8
9
14
65°
50°
35°
50°
25°
?
?
?
?
0
5km
10km
49° 25'


122°00'
49°20'
15
9
7
8
9
14
Hale
Creek
LONG
ISLAND
50°
15
Creek
Walton
Slimms Creek
94
87
Harrison
Maisal Cr.
Cortmell Creek
Lake
96
4 ?
83
69
Weaver Lake
ECHO
ISLAND
Vaughan Cr.
Chapalls
70
6
13
Morris Lake
River
HARRISON
HOT SPRINGS
Elbow Lake
0
5km.
10 km.

MULTIPOLE INDUCED POLARIZATION SURVEY

The equipment used on this survey was the Huntec Mark IV transmitter and Mark III receiver. Power was obtained from a Briggs and Stratton motor coupled to a 2.5 KW 400 cycle, three phase generator, providing a maximum of 2.5 KW D.C. to the ground. The cycle time is 2.0 seconds "current on" and 2.0 seconds "current off", with the pulse alternately reversing in polarity. Power was transmitted to the ground through two potential electrodes, C_1 and C_2, which were deployed in an expanding array pattern designed to provide a range of depths of search.

The induced polarization parameters are measured at potential electrodes, P_1 and P_2, situated at a range of positions both between the C_1 and C_2 electrodes, (gradient array) and outside the C_1, C_2 electrodes (double dipole array), through a 52 conductor cable with takeouts at 25 metre intervals. This cable allows rapid access to a large number of P_1, P_2 dipoles from a given receiver position and for a given C_1, C_2 position. The cable is segmented into 150 metre lengths for deployment.

The apparent resistivity is obtained from the ratio of the primary voltage measured between P_1 and P_2 during the current on part of the cycle to the current flowing through electrodes C_1 and C_2. A geometric factor is computed from the C_1, C_2, P_1 and P_2 locations to arrive at the apparent resistivity, measured in ohm-metres.

The apparent chargeability (M') in milliseconds, is calculated by $T_P\ (M_1+2M_2+4M_3+8M_4) = M'$, where T_P is the basic integrating time in tenths of seconds. M_1,M_2,M_3 and M_4 are the chargeability effects at various times on the

voltage decay curve following switch off of the transmitter, measured as a percentage of the primary voltage, V_p recorded during the "current on" time. By the use of these factors, one can gain an estimate of the decay curve in terms of chargeability for the given time T_p.

Field data logging, reduction and plotting is accomplished with a HP-85 computer.

Harrison Lake fault system, particularly its northern section where it intersects both granitic plutons and the Fire Lake Group, could represent an interesting exploration target for both higher temperature vein and epithermal, Cinola-type gold mineralization.

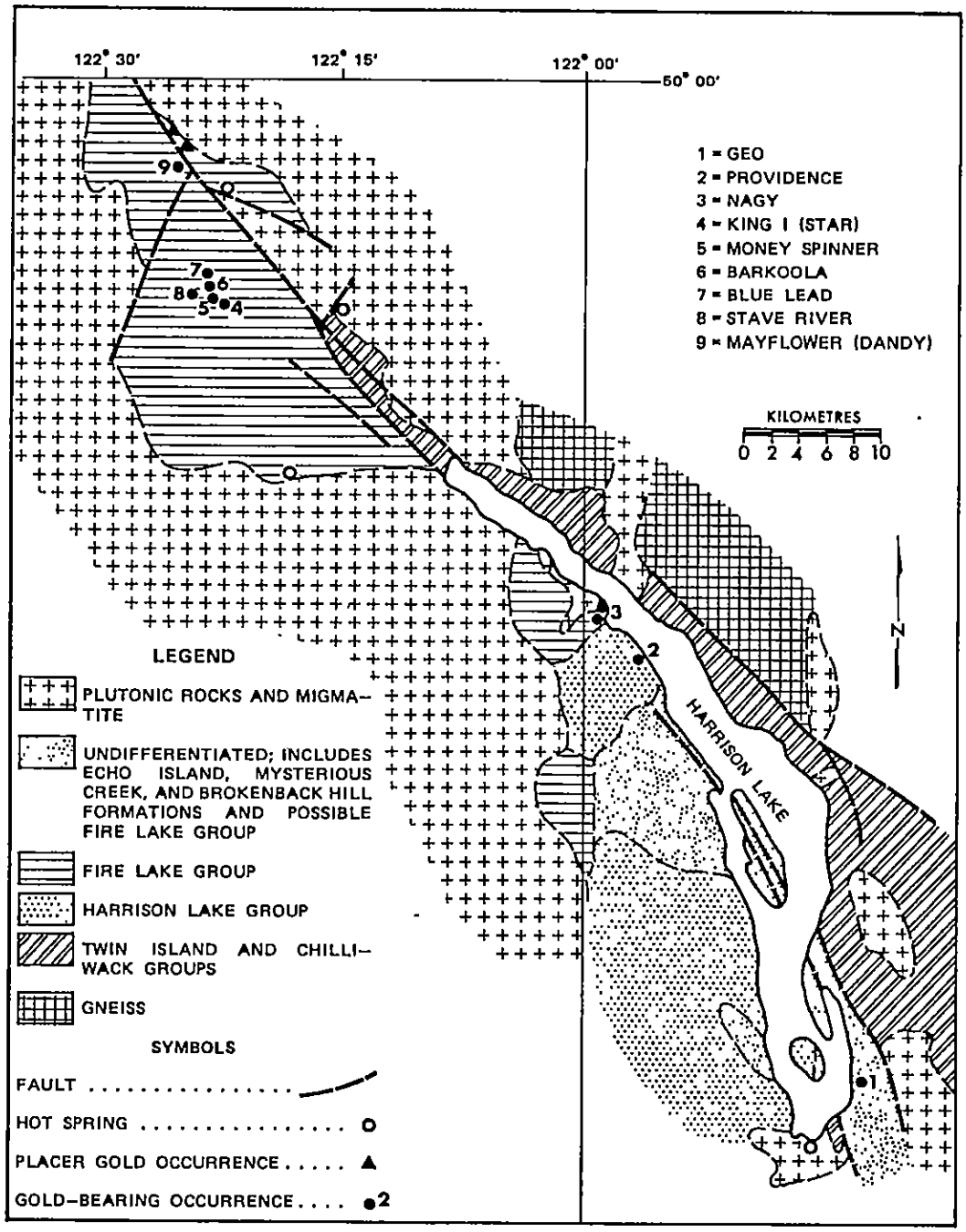


Figure 21. Regional geology of the Harrison Lake fault system showing hot spring and gold occurrences. [Geology adapted after Roddick (1965) and Monger (1970)].

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PLATE 1

DISCUSSION OF RESULTS

The multipole chargeability and apparent resistivity data are shown on Figures 3-8. Plate 1 is taken from the 1982 BCDM Summary of Field Activities. It is important in that it shows a series of faults which trend through Long Island and the CONDOR 3 and 5 claims. The Harrison Lake fracture system is associated with regional hot spring activity and sporadic gold mineralization and may possibly host epithermal and/or mesothermal gold deposits. Exploration work at the Rhyolite Resources Inc. property has intersected gold-silver-bismuth mineralization in sulphide bearing quartz vein which give strong induced polarization chargeability responses.

Some 3 km of reconnaissance induced polarization surveying was conducted across the claim to try and detect any significant chargeability anomalies. Figure 2 shows the survey plan and Figures 3-8 the multipole survey data. Line MR Figure 3 shows a small pod like response at 300E and a strong deeper easterly dipping veinlike zone at 435E. These two anomalies are on the sides of a weak resistivity high which may possibly indicate a change in rock type. The apparent resistivity data is low in the order of 100 to 200 ohm-metres. This order of magnitude usually indicates sheared and altered rocks with a high moisture content which allows for easier current flow. Figure 4 shows a narrow strong response at 775E with a resistivity low. This anomaly may be a mineralized fault.

A major chargeability response was detected near the end of the line at 950E. Line AS Figure 5 (airstrip) shows a strong response at the beginning of the line which gives an anomaly across some 200m. The apparent resistivity data is low once again suggesting altered volcanic or sedimentary rocks. Figure 6 shows a good dike like response at 600E and an off the line high at 750E. The apparent resistivity is decreasing suggesting a higher water content in the underlaying rocks.

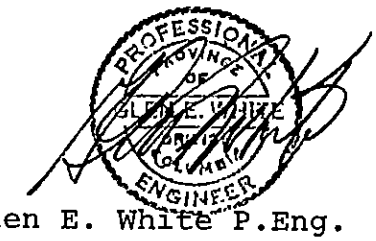
Figure 7 shows line SR which commences midway along line AS where a good chargeability high was obtained. This response also occurs on the beginning of line SR. A strong narrow high occurs at 750E coincident with a low order conductive response which suggests a major mineralized fault zone. This anomaly is close to one of the faults shown on Plate 1. A similar response was obtained along the point near the end of the line.

CONCLUSION AND RECOMMENDATIONS

A reconnaissance induced polarization survey was conducted over the CONDOR 5 mineral claim along access roads to search for any significant chargeability anomalies. Several strong dike like responses were obtained which correlate with resistivity lows. These anomalies are interpreted as representing mineralization in shear or fault zones which could be part of the Harrison Lake auriferous tectonic system.

It is recommended that the reconnaissance chargeability anomalies be detailed by the multipole induced polarization method and geology, geochemistry and ground magnetometer surveys.

Respectfully submitted,



Glen E. White P.Eng.

INSTRUMENT SPECIFICATIONS

INDUCED POLARIZATION SYSTEM

A. Instruments

(a) Type - pulse

(b) Make - Huntec

(c) Serial No. - transmitter #107 - receiver #3016

B. Specifications

(a) Size and Power - 2.5 KW

(b) Sensitivity - 300 x 10.5 volts

(c) Power Sources - 2.5 KW 400 cycle - three-phase generator

(d) Power - 8 H.P. Briggs and Stratton @ 3000 R.P.M.

(e) Timing - electronic, remote and direct.

(f) Readings - (i) ampls (ii) volts primary and secondary

(g) Calculate (i) Resistivity - ohm-meters (ohm-feet)

(ii) Chargeability - milliseconds

C. Survey Procedures

(a) Method - power supplied to mobile probe along TW 18 stranded wire from stationary set-up

(b) Configuration - Pole-dipole (three electrode array) Plot point midway between C_1 and P_1

D. Presentation

Contour Maps (i) Chargeability - milliseconds

(ii) Resistivity - ohm-meters (ohm-feet)

STATEMENT OF QUALIFICATIONS

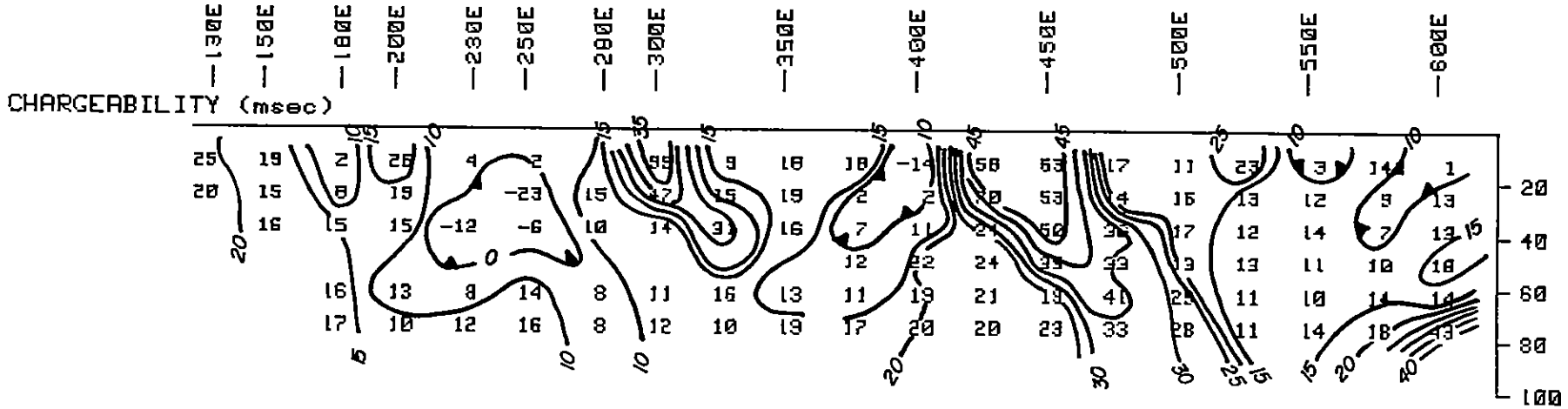
NAME:	White, Glen E., P.Eng.
PROFESSION:	Geophysicist
EDUCATION:	B.Sc. Geophysicist- Geology University of British Columbia
PROFESSIONAL ASSOCIATIONS:	Registered Professional Engineer, Province of British Columbia
	Associate member of Society of Exploration Geophysicists.
	Past President of B.C. Society of Mining Geophysicists.
EXPERIENCE:	Pre-Graduate experience in Geology - Geochemistry - Geophysics with Anaconda American Brass.
	Two years Mining Geophysicist with Sulmac Exploration 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.
	Twelve years Consulting Geophysicist.
	Active experience in all Geologic Provinces of Canada.

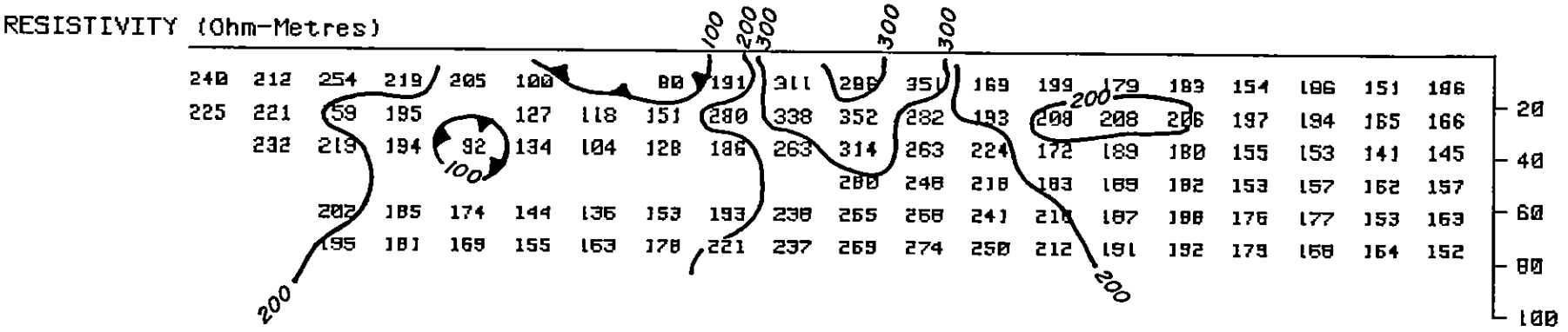
COST BREAKDOWN

PERSONNEL	DATE	WAGES	TOTAL
J. McKenzie	Nov. 9-21/83	325	$3,515.00
K. Jones	Nov. 9-21/83	225	2,475.00
J. Merrill	Nov. 9-21/83	195	2,145.00

Meals and accommodations	1,980.00
Vehicle	1,100.00
Multipole induced polarization system	5,225.00
Computer processing	600.00
Drafting	425.00
Interpretation and Reports	1,800.00
	$19,325.00

The above geophysical report was conducted with a new multipole method, and in effect the ground was covered six times to get depth and resolution. Therefore, the some 2.5 km of survey coverage was under normal surveying techniques equivalent to 15 km of survey work. The survey cost some 10-15% more than it should have; this was due to very miserable rainy weather which impeded the survey progress.





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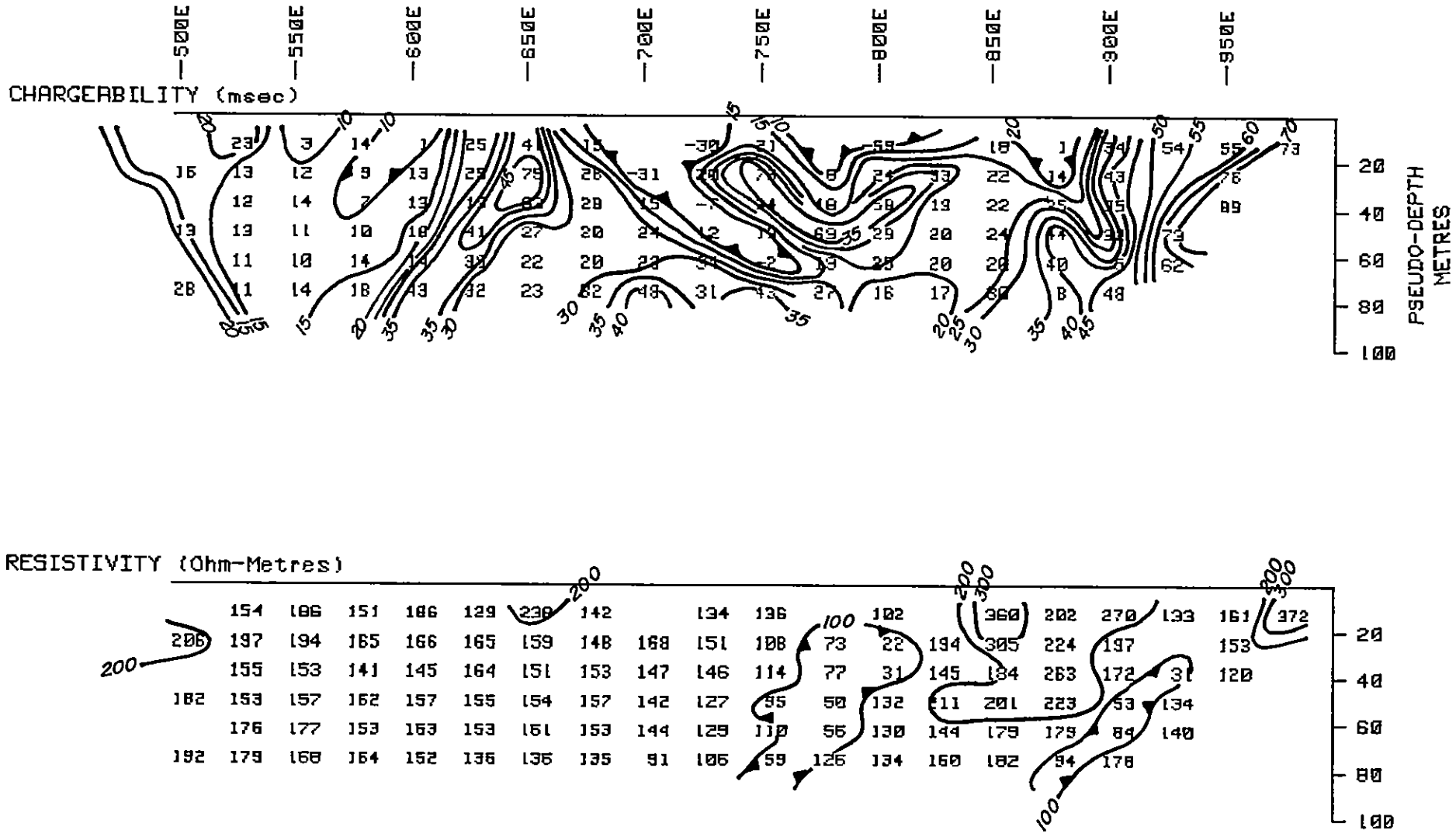
INSTRUMENT: HUNTEC TIME DOMAIN

METRES
0 25 50 75 100

HOLLYCROFT RESOURCE CORP.
HARRISON LAKE PROJECT
MULTIPOLE INDUCED POLARIZATION
LINE MR

DATE: OCT/83 | FIG.: 3



METRES
0 25 50 75 100

GLEN E. WHITE
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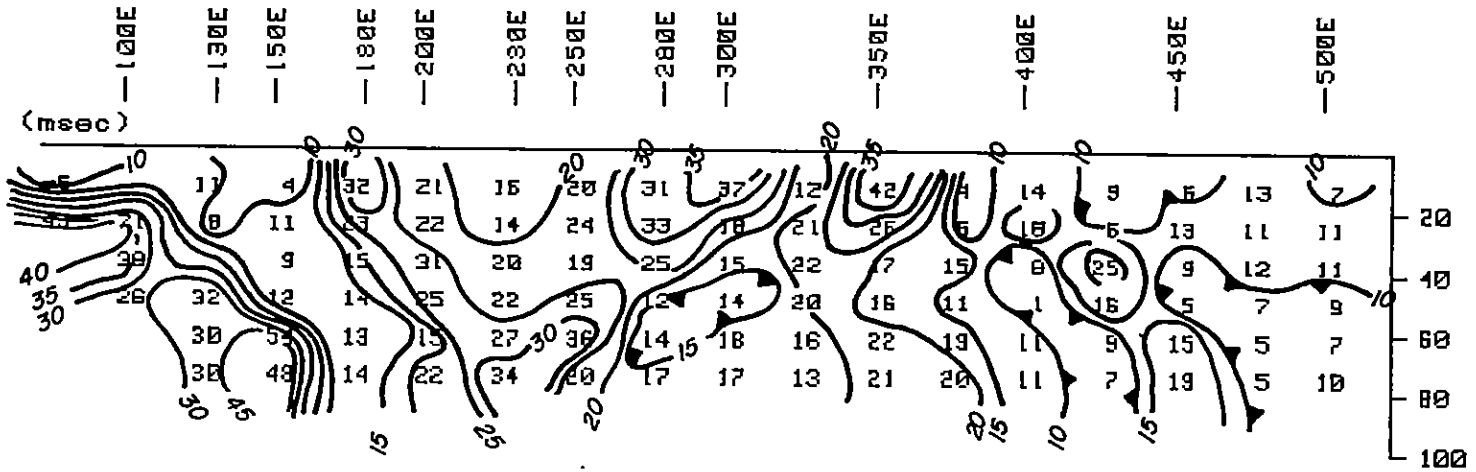
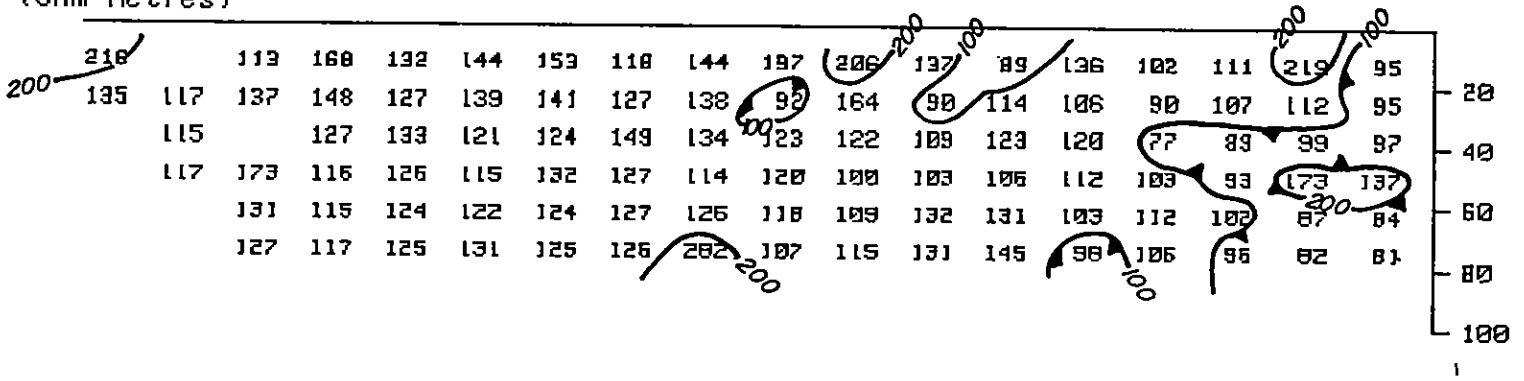
INSTRUMENT: HUNTEC TIME DOMAIN

HOLLYCROFT RESOURCE CORP.
HARRISON LAKE PROJECT
MULTIPOLE INDUCED POLARIZATION
LINE MR

DATE: OCT/83 | FIG.: 4





HOLLYCROFT RESOURCE CORP.
HARRISON LAKE PROJECT
MULTIPOLE INDUCED POLARIZATION
LINE A5

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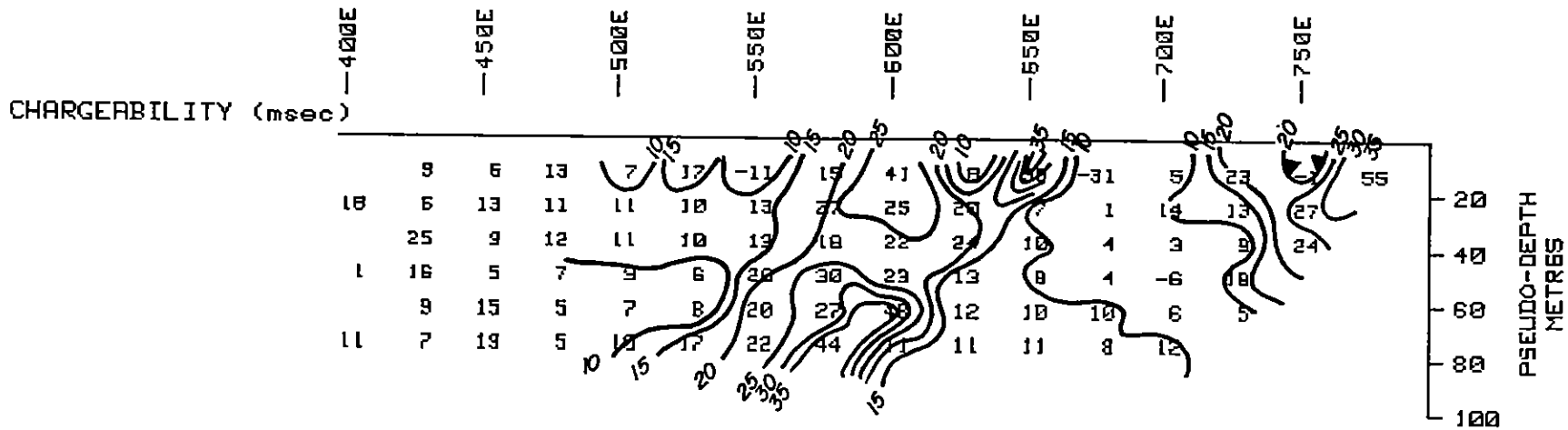
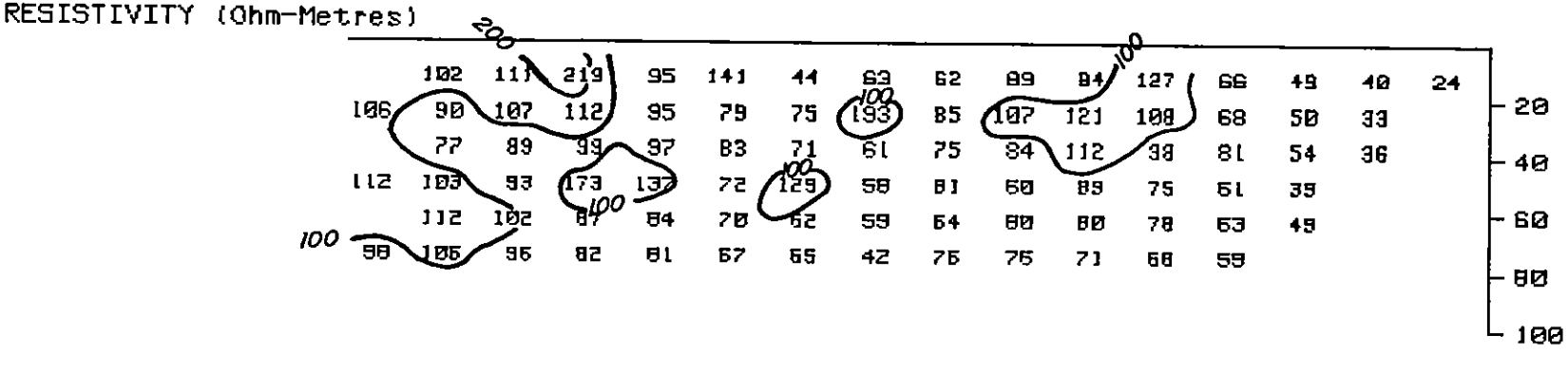
INSTRUMENT: HUNTEC TIME DOMAIN

METRES
0 25 50 75 100

DATE: OCT/83

FIG.: 5





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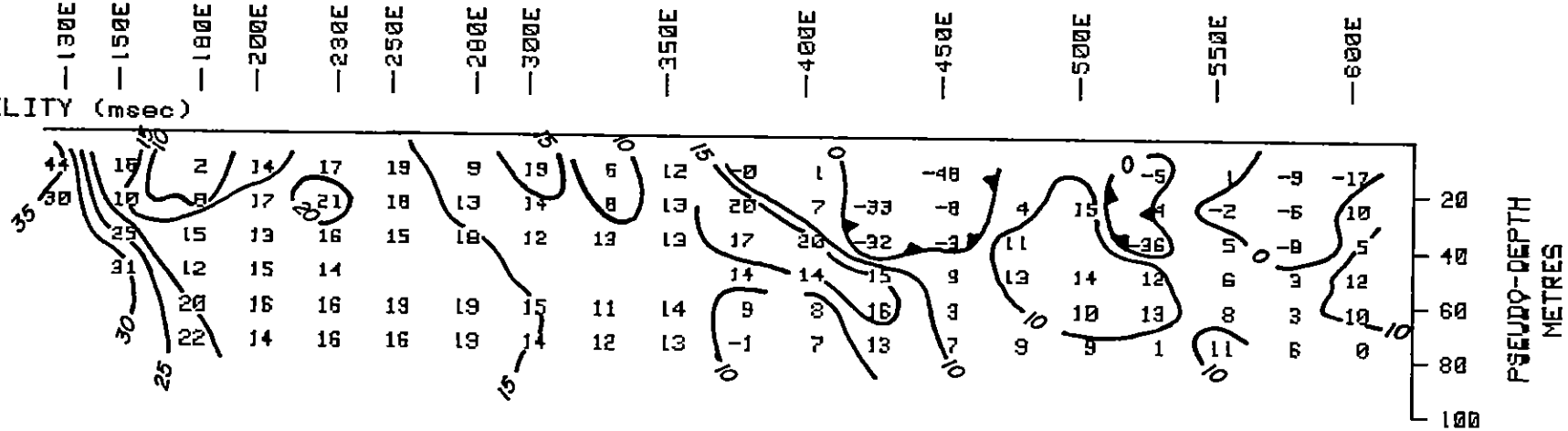
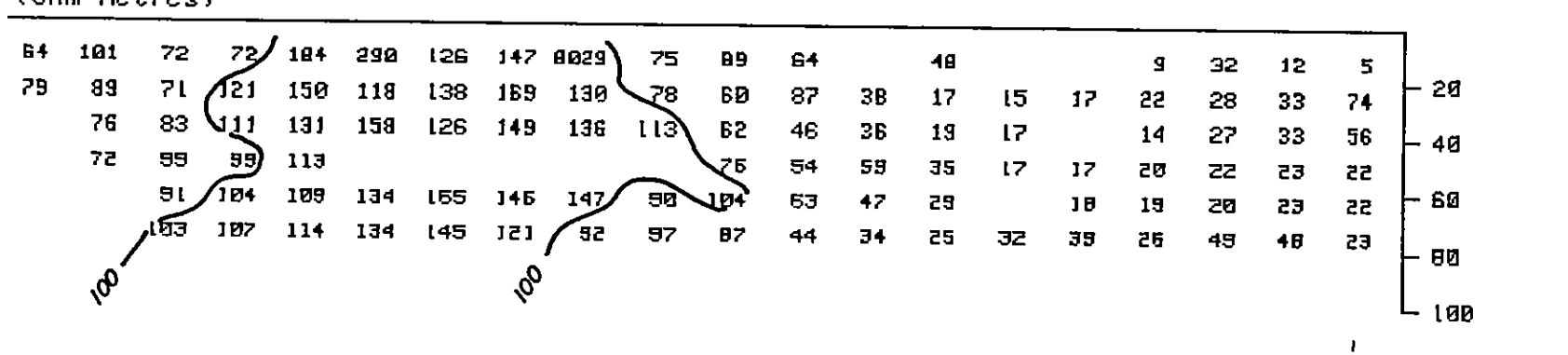
INSTRUMENT: HUNTEC TIME DOMAIN

METRES
0 25 50 75 100

HOLLYCROFT RESOURCE CORP.
HARRISON LAKE PROJECT
MULTIPOLE INDUCED POLARIZATION
LINE A5

DATE: OCT/83 | FIG.: 6





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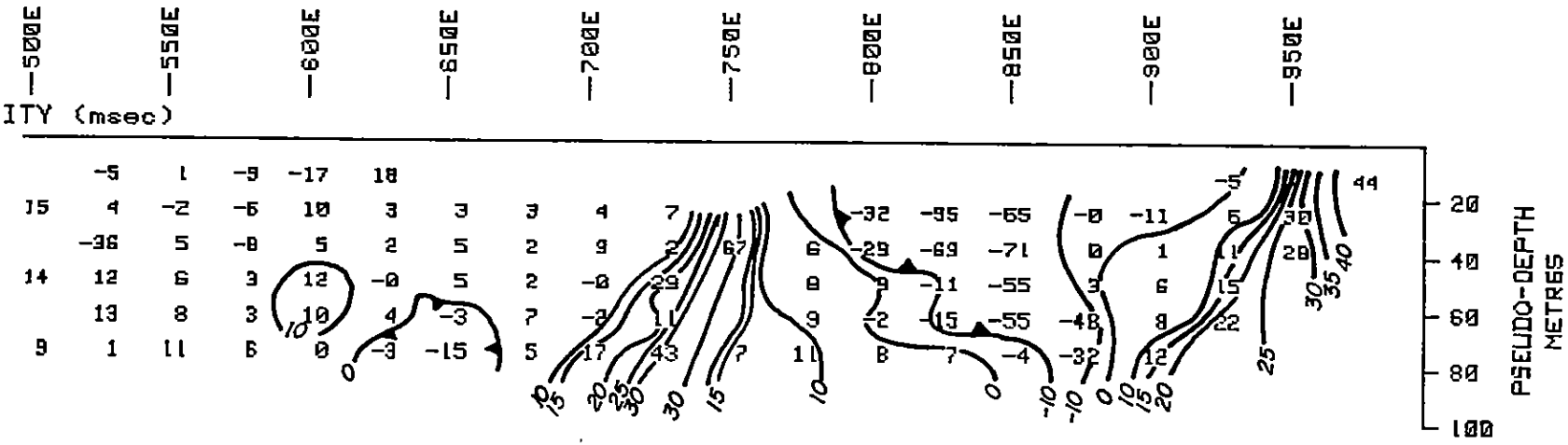
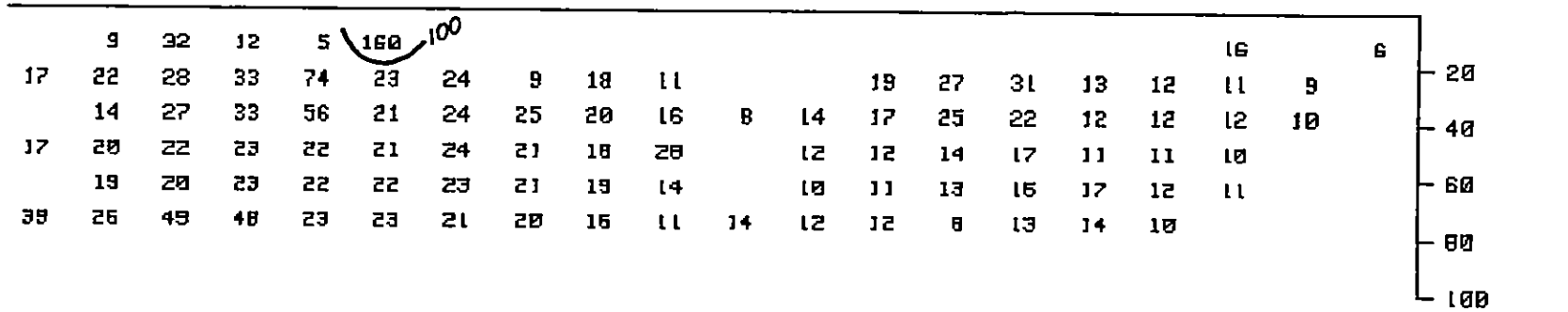
INSTRUMENT: HUNTEC TIME DOMAIN

METRES
0 25 50 75 100

HOLLYCROFT RESOURCE CORP.
HARRISON LAKE PROJECT
MULTIPOLE INDUCED POLARIZATION
LINE 5R

DATE: OCT/83 | FIG.: 7





GLEN E. WHITE
GEOPHYSICAL CONSULTING
& SERVICES LTD.

INSTRUMENT: HUNTEC TIME DOMAIN

METRES
0 25 50 75 100

HOLLYCROFT RESOURCE CORP.
HARRISON LAKE PROJECT
MULTIPOLE INDUCED POLARIZATION
LINE 5R

DATE: OCT/83 | FIG.: 8

CONDOR 3 CLAIM
L.C.P.
L.C.P.
CONDOR 5 CLAIM

Harrison Lake

– MR 0+00

SEE FIG. 3

– MR 5+00E

SEE FIG. 4

STRONG NARROW RESPONSE

STRONG RESPONSE

STRONG NARROW RESPONSE

STRONG RESPONSE, EDGE EFFECT

SEE FIG. 7

– MR 10+00E

MAJOR ANOMALY

MAJOR ANOMALY

– SR 0+00

– SR 5+00E

WEAK RESPONSE

AS 0+00

SEE FIG. 8

SEE FIG. 5

GOOD RESPONSE

GOOD RESPONSE

MAJOR NARROW RESPONSE

– 10+00E

STRONG RESPONSE

AS 5+00E

SEE FIG. 6

STRONG RESPONSE

Twenty Mile Creek

AS 7+50E

Twenty Mile Bay

LEGEND:

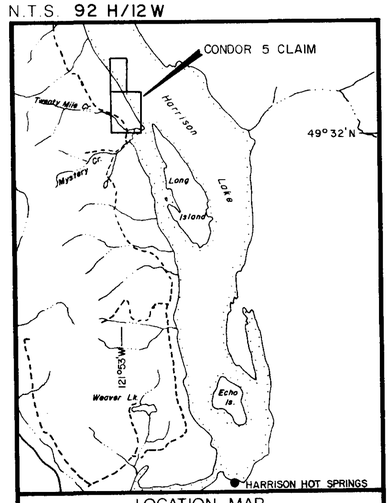
- STREAM
- ROAD
- LAKE SHORE
- CLAIM BOUNDARY
- CULVERT
- INDUCED POLARIZATION ANOMALY, CHARGEABILITY – milli seconds

INSTRUMENT: HUNTEC TIME DOMAIN I.P.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

12,284

N.T.S. 92 H/12W



LOCATION MAP
1 : 250,000

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
GLEN E. WHITE

50m 0 100m 200m 300m 400m
1 : 5000

HOLLYCROFT RESOURCE CORP.
— CONDOR 5 CLAIM —
NEW WESTMINSTER MINING DIVISION — BRITISH COLUMBIA

INDUCED POLARIZATION SURVEY

Glen E. White
geophysical consulting
& services ltd.

Interpreted By:	G.E.W.
Drawn By:	FINELINE DRAFTING
Checked By:	G.E.W.
Date:	JAN./84
Fig. No.:	2

To Accompany Geophysical Report on
CONDOR 5 CLAIM
Date JAN./84
By GLEN E. WHITE · B.Sc. ..... GEOPHYSICIST

JANCAL 1133