

SI-1195-# 9064

Geophysical Report

on an

Induced Polarization Survey

of the

Royal Group of Mineral Claims

Alice Arm - Kitsault River Area

Skeena Mining Division
British Columbia

N.T.S. 103P/12E

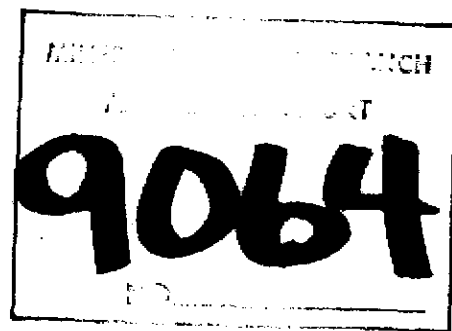
Latitude 55°40'N; Longitude 129°30'W

on behalf of

CONSOLIDATED SILVER BUTTE MINES LTD.

Report by

D. R. Cochrane, P. Eng.,
November 10, 1980,
Delta, B. C.



Cochrane Consultants Limited
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Geotechnical Consulting / Exploration Services

geology
geophysics
geochemistry

TABLE OF CONTENTS

A.	INTRODUCTION	1
B.	SUMMARY AND CONCLUSIONS	3
C.	LOCATION AND ACCESS	6
D.	CLAIMS AND OWNERSHIP	7
E.	GENERAL SETTING	9
F.	FIELD EQUIPMENT AND PROCEDURES	14
G.	DISCUSSION OF RESULTS	
	DOLLY VARDEN TEST LINE	
G-1	Magnetometer Results	16
G-2	Self Potential (SP)	16
G-3	Apparent Resistivity	17
G-4	Apparent Chargeability (IP Response)	17
G-5	Test Line Conclusions	18
	ROYAL GROUP GRID	
G-6	Gradient Self Potential Results	19
G-7	Apparent Resistivity Results	19
G-8	Apparent Chargeability (IP) Response	20
G-9	Metal Factor	22
G-10	Geochemical Test	22

FIGURES

1.	Location Map	Report body
2.	Claims Map	" "
3A.	Dolly Varden Test Line	" "
3B.	Magnetometer (gammas) Dolly Varden Test Line	" "
3C.	Gradient Self Potential (millivolts) Dolly Varden Test Line	" "
3D.	Apparent Resistivity (ohm-metres) Dolly Varden Test Line	" "
3E.	Apparent Chargeability (milliseconds) Dolly Varden Test Line	" "

Cont'd....



FIGURES (cont'd)

3F	Metal Factor (seconds per ohm-metre) Dolly Varden Test Line	Report body
4.	Gradient Self Potential (millivolts)	Map Pocket
5.	Apparent Resistivity (ohm-metres)	" "
6.	Apparent Chargeability (milliseconds)	" "
7.	Metal Factor (seconds per ohm-metre)	" "
8.	Geochemical Data - Au/ppb, Ag/ppm, Cu/ppm, Pb/ppm, Zn/ppm	" "
9.	Prospecting Map	" "
10	Statement of results	" "

APPENDIX

I	Certificate
II	IP Field Procedure

PLATES

I	Sidehill near Dolly Varden Mine
II	Main dump, Dolly Varden Mine
III	"Slinging" out of Kitsault
IV	The "Royal" campsite



A. INTRODUCTION

On September 10, 1980, a field crew employed by Cochrane Consultants Ltd., mobilized to Kitsault B. C., to conduct geophysical work on the Royal Group of mineral claims on behalf of Consolidated Silver Butte Mines Ltd. The crew mobilized to the property by helicopter and with equipment, provisions and a complete field camp. They established camp and conducted several types of geophysical tests over the old Dolly Varden Mine, adjacent to the north of the Royal Claims. Orientation work included a self potential survey, an electromagnetic test, a magnetometer test and an induced polarization (IP) resistivity test. This work was conducted under the direction of Mr. Bill Chase and ultimately indicated that IP work (with resistivity and self potential) gave excellent response and consequently IP work was completed over the Royal Group of claims adjacent and to the south of the Dolly Varden.



Excellent co-operation and assistance was given by Mr. Lou Manning of Dolly Varden Minerals Inc.

This report describes the work done, results obtained, and contains recommendations as to further work. It is based on the author's review of the data and personal visit to the property on September 25 and 26, 1980. The author's certificate is appended.



B. SUMMARY AND CONCLUSIONS

B-1. Cochrane Consultants Ltd. were retained by Consolidated Silver Butte Mines to conduct geophysical test work on the Royal Group of mineral claims situated adjacent and to the south of the Dolly Varden Mine. The claims are located in a most spectacular area of the Coast Range of British Columbia, and some 16 air miles (26 km) north of tidewater at Alice Arm (Kitsault).

B-2. A total of four mines in the Kitsault area have produced 388,000 tons averaging 18.4 ounces of silver per ton; and significant amounts of lead and zinc. (to 1951)

To the author's knowledge very little exploration work has been done on the Royal Group except prospecting in the early days and geological mapping by Mr. N. C. Carter of the B. C. Department of Mines in the 1960's.



B-3. A geophysical test line was run across the old Dolly Varden glory hole area (with the kind permission of Dolly Varden Minerals) and self potential, magnetometer, time domain IP and resistivity surveys were deployed. The test line results showed that IP (apparent chargeability) response is most diagnostic and IP response ranged from a background of near 10 milliseconds to a high of 25 milliseconds on the dump adjacent to the upper Dolly Varden portal.

B-4. In view of the results of the test line, a ground control grid was layed out on the Royal Group with a north directed base line, and west directed cross lines spaced 100 metres (328 feet) apart. The Hewitt pulse type IP unit was deployed in a Wenner array with an "a" spacing of 100 metres. A total of 11.6 line kilometres of grid was layed out (including the base line and test line).

B-5. The apparent chargeability (IP) results outlined two anomalous areas, both within an above average response zone centered at the south



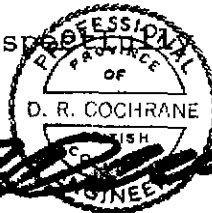
end of the Royal Group. A third anomalous area was outlined by the metal factor result.

B-6. Geochemical soil test lines were run across anomalies No. 1 and No. 2 and the samples analyzed for lead, zinc, copper, silver and gold. A significant lead (65 ppm) and coincident gold (95 ppb) anomaly is located midway between IP anomalies No. 1 and No. 2.

B-7. Induced polarization surveys and geochemical soil sampling surveys appear to be excellent exploration tools on the Royal Group, and indirect methods such as these are warranted due to the extensive overburden cover.

B-8. The author recommends additional geochemical work over the geophysical anomalies outlined.

Respectfully submitted



D. R. Cochrane, P. Eng.
November 10, 1980,
Delta, B. C.



C. LOCATION AND ACCESS

The Royal Group is located on the south end of Dolly Varden Mountain between Evindsen Creek and the Kitsault River, some 16 air miles (25 3/4 air km) north of Alice Arm, in central western British Columbia. Normal access is via air, north from Vancouver, to Prince Rupert, then via Trans Provincial (T.P.A.) to Kitsault (Alice Arm). From this point, Vancouver Island Helicopters is available to transport parties to the property. Normally at least two (2) days must be allowed for transportation to the property, and supplies and provisions must be acquired in Prince Rupert, British Columbia. There is a mining/logging road proceeding northerly up the Kitsault River, however this road is, at present, only passible to within a few miles (km) of the claims under consideration.

The N.T.S. code for the area is 103P/12E.



D. CLAIMS AND OWNERSHIP

The Royal Group of mineral claims consists of crown granted claims Royal No. 1 through No. 5; No. 7 and No. 8, located in the Prince Rupert assessment district, Cassiar land district, Skeena Mining Division. Claim details are listed below in Table A.

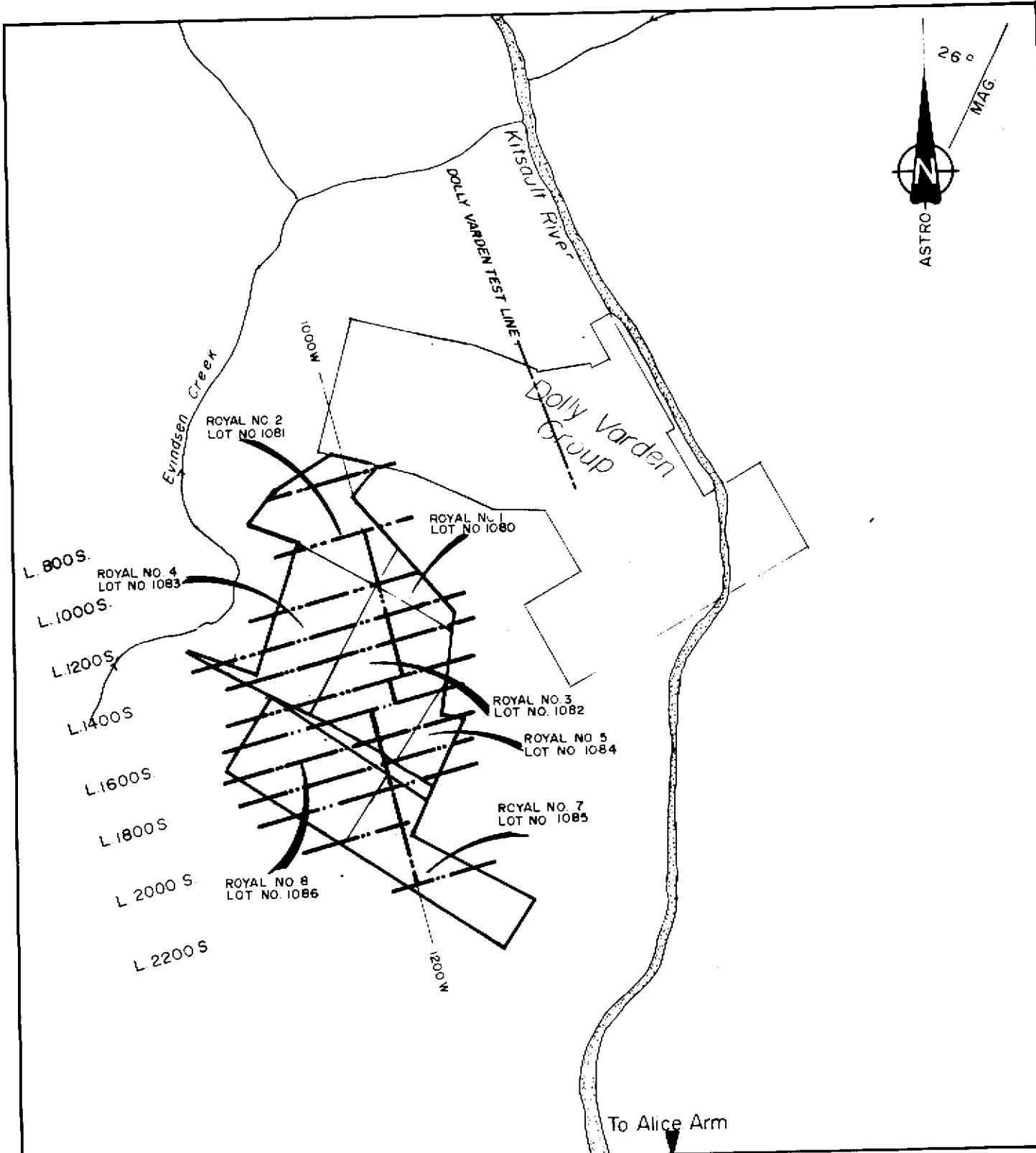
TABLE A

CLAIM NAME	LOT NO.	NO. of ACRES
Royal No. 1	1080	6.00
Royal No. 2	1081	25.02
Royal No. 3	1082	38.45
Royal No. 4	1083	29.27
Royal No. 5	1084	5.71
Royal No. 7	1085	22.15
Royal No. 8	1086	32.45
		159.03 acres (64.34 hectares)



These claims are owned by Consolidated Silver Butte Mines Ltd., of 705-850 West Hastings Street, Vancouver, B. C., and are shown on Mineral Titles Map 103P/12E.



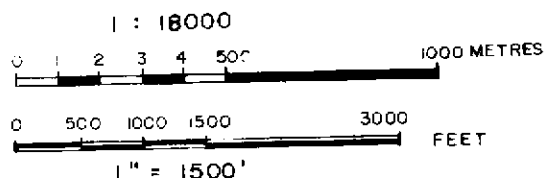


Consolidated Silver Butte Mines Ltd.

Royal Group Kitsault River Area
 Skeena Mining Division

Figure 2
Claims Map

N.T.S. 103P/12E



L.D.L. NOVEMBER /80



Cochrane Consultants Limited
 4822 Oulu St., Delta, B.C. V4C 1T8 445-8221

E. GENERAL SETTING

The Royal Group of mineral claims are set in a most spectacular area of the Pacific Northwest, complete with scenic coastal fiords, permanent snowfields and mountain glaciers set in the rugged Coast Mountain Range of British Columbia. The area is adjacent and to the north-east of historic Anyox smelter and townsite, which at one time was the largest coastal population centre north of Vancouver, B. C. The smelter was operated between 1914 and 1935 by the Granby Consolidated Mining Smelting and Power Co.

The region is a rugged upland surface situated east of the Alaskan Panhandle and just south of the extensive Cambria Icefield. The elevation of the claims ranges from about 1500 feet (457 m) to just over 2200 feet (670 m) above sea level. The claims area is well forested and, in places, quite steep.



J. M. Black, in the Minister of Mines Report for 1951, has an excellent account of the history and geology of the Kitsault Valley area, and portions of his report are reproduced below:

" History: Prospecting started in upper Kitsault Valley early in the century, and by 1913 many claims had been located, including those of the Dolly Varden property. Exploration of this property in the next few years was successful in indicating a considerable tonnage of ore, and a railway was built from Alice Arm to the property. The railway reached the Dolly Varden in 1919, but the cost of construction was so much in excess of the estimated cost that the property was turned over to the railway construction company, who operated the mine from 1919 until 1921, when it was closed."

"During the period the railway was being built the Dolly Varden was being operated, much exploratory work was done on other prospects, but following a decline in the price of silver in 1921 interest in the area waned and exploration was curtailed. However, exploration of the Toric property continued, and a mill to concentrate the ore was built in 1928. The property was acquired in 1929 by Britannia Mining and Smelting Co. Limited, and a programme of exploratory diamond drilling was started, but because of the fall in price of silver in 1930, the property was closed."



"From 1930 until 1946 little work was done in the area, but in 1946 a new company controlled by Mining Corporation of Canada, acquired the Toric and started to build the motor-road up the valley; a new mill was built and production started early in 1949. Two prospects were being explored in 1951 - the Galena by diamond drilling and the Vanguard by underground development."

"The gross contents of ore and concentrates from the properties in the area to the end of 1951 are set forth in the following table:-

Property	Tons	Gold (oz)	Silver (oz)	Lead (lbs)	Zinc (lbs)	Copper (lbs)
Dolly Varden	36,854	1	1,364,847	2,047	-----	420
Homestake	9	36	52	140	668	1,320
North Star	112	--	2,838	-----	-----	-----
Torbit	351,651	47	5,821,393	2,181,778	344,164	-----
Totals	388,626	84	7,189,130	2,183,965	344,832	1,740

An excellent summary of Mr. Black's geology was prepared by Mr. N.C. Carter in 'Geology, Exploration and Mining in British Columbia 1970 (pg 82) and this is reproduced in full on the following page:



"The area is underlain by argillaceous sedimentary rocks and fragmental volcanic rocks which Black divided into four formations, including two sedimentary and two volcanic formations. These rocks have been folded into a broad, northwest-plunging synclinal structure and have been intruded by feldspar porphyries mainly in the area west of the Kitsault River. The intrusive rocks, which appear to be subvolcanic in nature, occur in a northwest-trending belt extending from Evindsen Creek on the south to the Cambria Icefield on the north. The intrusive belt is up to 5,000 feet wide and includes two varieties, relatively unaltered type in which the original porphyritic texture is preserved and which occurs mainly along the western part of the intrusive belt, and an intensely silicified, pyritized, "Copper Belt" variety which occurs along the eastern contact of the belt between Evindsen Creek and the west fork of the Kitsault River. Most of the copper showings occur in "Copper Belt" intrusive rocks."

The local geology of the Dolly Varden property is well described by Dr. A.C. Skerl in a report to Dolly Varden Mines dated January 10, 1963. Skerl reports the mine was developed on a moderately (north) dipping westerly striking vein, and in the glory holes the vein contains about 30% pyrite with occasional patches of galena. The previously shipped high grade material was said to consist mainly of galena with subsidiary



tetrahedrite, argentite, native and ruby silver. The vein ranges in width from a few feet to as much as 30 feet (9 metres) wide, and the host rock is pyritic altered grey, green and purple agglomerates and tuffs.

The bedrock geology of the Royal Group of mineral claims, as described by Mr. N.C. Carter (1970) is as follows:

"The north half of the claim group is underlain by red and green crystal-lithic tuffs and breccias which commonly contain greenish 2 to 3 inch angular fragments of porphyritic volcanic rocks in a fine-grained red hematitic crystal tuff matrix. These rocks are massive to crudely stratified and are relatively unaltered. A belt of schistose light-grey crystal tuffs, paralleling the northwesterly Homestead Creek fault zone, underlies the southern half of the property. These rocks contain abundant fine-grained disseminated pyrite and exhibit a cataclastic texture in thin-section. Carbonate-sericite alteration is widespread and a directional fabric is imparted by parallel arrangement of the original feldspar crystal fragments and streaks of sericite in the matrix."

"Disseminated pyrite is widespread in the grey schistose crystal tuffs in the southern half of the property."



F. FIELD EQUIPMENT AND PROCEDURES

The four (4) man field crew was equipped with the following gear:

1. A Hewitt-200 Induced Polarization unit, complete with electrodes, wires, generator, tools and spare parts;
2. A Scintrex MF-2 fluxgate magnetometer;
3. A self potential unit;
4. A Sharpe SE-300 electromagnetic unit;
5. A complete fly camp and provisions.

After erection of the camp on the Royal Group the field crew flew by helicopter to the glory hole area of the old Dolly Varden Mine, several miles north of camp. A northerly directed test line was run over the old workings as shown on the accompanying sketch. Magnetometer, EM, IP (and resistivity) and gradient self potential



surveys were completed. Vertical field fluxgate magnetometer readings were taken at 25 metre intervals, and the IP unit was deployed in a Wenner array with an "a" spacing and transit interval at 50 metres. Instrument specifications and a description of the IP field procedures is contained in appendices at the back of the report.

The Hewitt 200 is a time domain (pulse type) IP unit with a variable current on, off and integrating time. On this survey the 2 second integrating time was used. The unit is a battery powered integrated circuit, automatic reverse polarity unit and normally two to four pulses are used at any one station.



G. DISCUSSION OF RESULTS

DOLLY VARDEN TEST LINE

G.-1 Magnetometer Results (MAG)

The relative vertical field fluxgate magnetometer results ranged in amplitude from 1320 gammas to a high of 2240 gammas. There was no apparent significant variation across the Dolly Varden vein to be of geophysical importance and the change in magnetic values is believed to be caused by variation in magnetic susceptibility of rock types and therefore not directly attributable to mineralization.

G-2 Self Potential (SP)

Self potential results ranged from a low of -4 millivolts (m.v.) to a high of +73 m.v. There is a small "relative" low over the dump-adit zone, however the response is not considered major or particularly diagnostic.



DOLLY VARDEN TEST LINE (cont'd)

G-3 Apparent Resistivity Results

The apparent resistivity results ranged from a low of just over 1900 ohm-metres to a high of just over 6000 ohm-metres. The Dolly Varden Zone is represented by a very small resistivity low.

G-4 Apparent Chargeability (IP Response)

Apparent chargeability results over the Dolly Varden Zone ranged from a low of 10.8 milliseconds (m.s.) to a peak value of 25 m.s. on the dump adjacent to the upper portal. This change in response is considered significant since it represents a several fold increase in total sulphides at a 50 metre "a" spacing interval.



DOLLY VARDEN TEST LINE (cont'd)

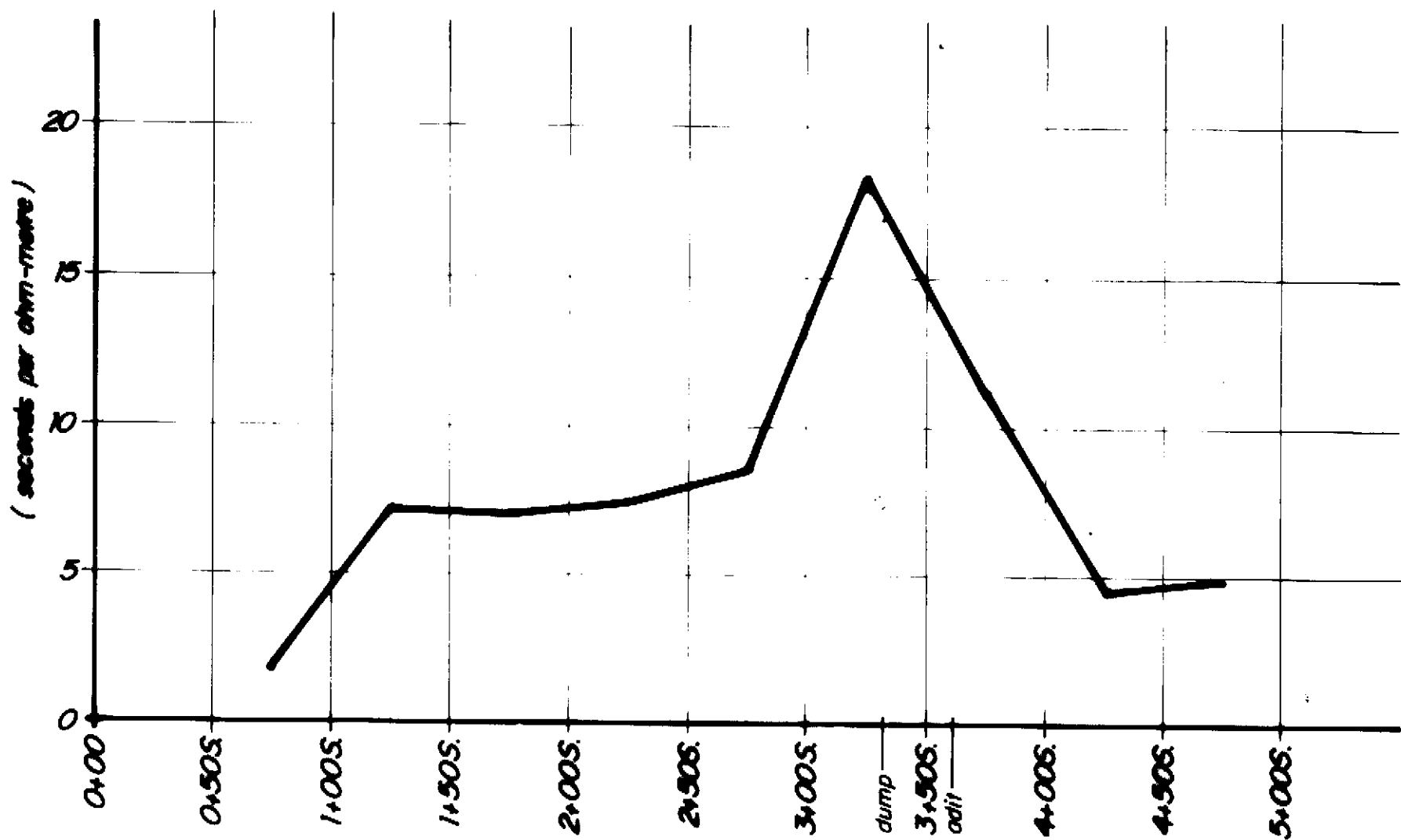
G-5 Test Line Conclusions

Apparent resistivity and, especially apparent chargeability response over the old Dolly Varden workings was significant and diagnostic. The combination of these two geophysical parameters, that is the metal factor, appears to be even more conclusive. (Note: in this case metal factor (MF) is herein defined as the apparent chargeability (in milliseconds) divided by the apparent resistivity (in ohm-metres) multiplied by 1000.)

MF response ranged from a low of 1.78 seconds per ohm-metre, to a high of 18.30 seconds per ohm-metre over the Dolly Varden Zone. Therefore, an induced polarization survey was initiated over the Royal Group, with an "a" spacing of 100 metres and with east-west cross lines spaced 100 metres (328 feet) apart.

Due to the rather rugged topography, a base line was cut, and slope corrected from north to south down the center of the claim group, and cross lines flagged at 100 metre intervals perpendicular to this base line (see accompanying maps).





Consolidated Silver Lake Mines Ltd

Royal Group Project Kitault River Area
N.T.S. 103P / 12E Sheena Mining Division

SCALE 1:2,500
0 10 20 30 40 50 60 70 80 90 100 150 200 metres

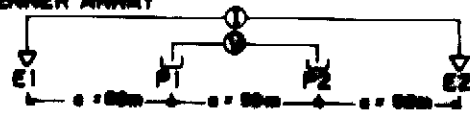
METAL FACTOR —
(seconds per ohm - metre) —
Dolly Varden Test Line

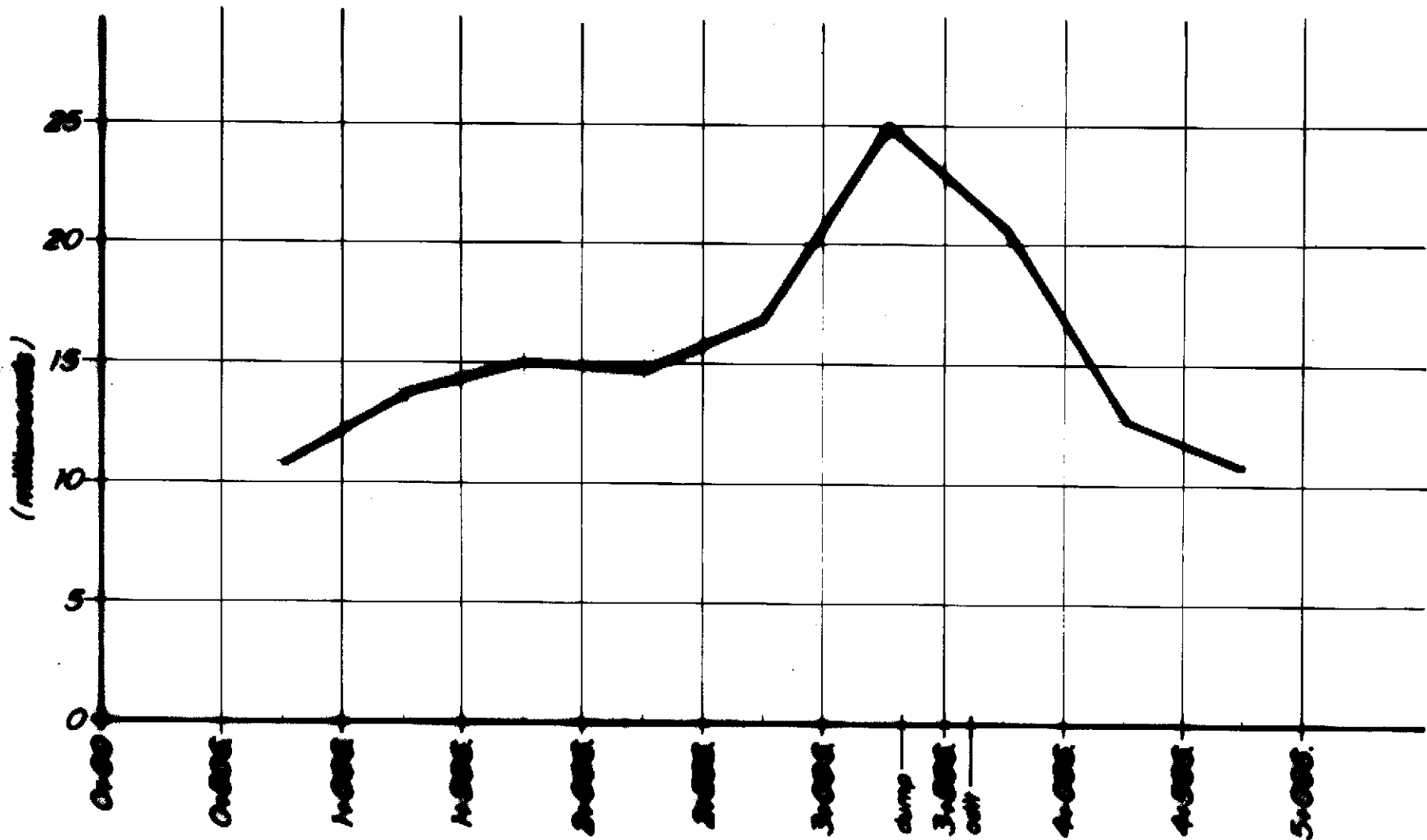
Figure 3F



NOTE:

TIME CONSTANTS — HEW 200
2.0 seconds CURRENT ON
0.4 seconds DELAY
1.2 seconds INFORMATION TIME
WENNER ARRAY





APPARENT CHARGEABILITY

HEW 200
 N.T.S. 100P / SE

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

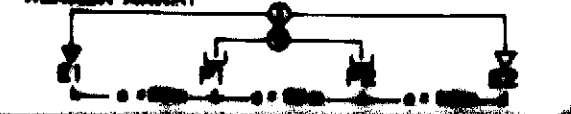
APPARENT CHARGEABILITY —

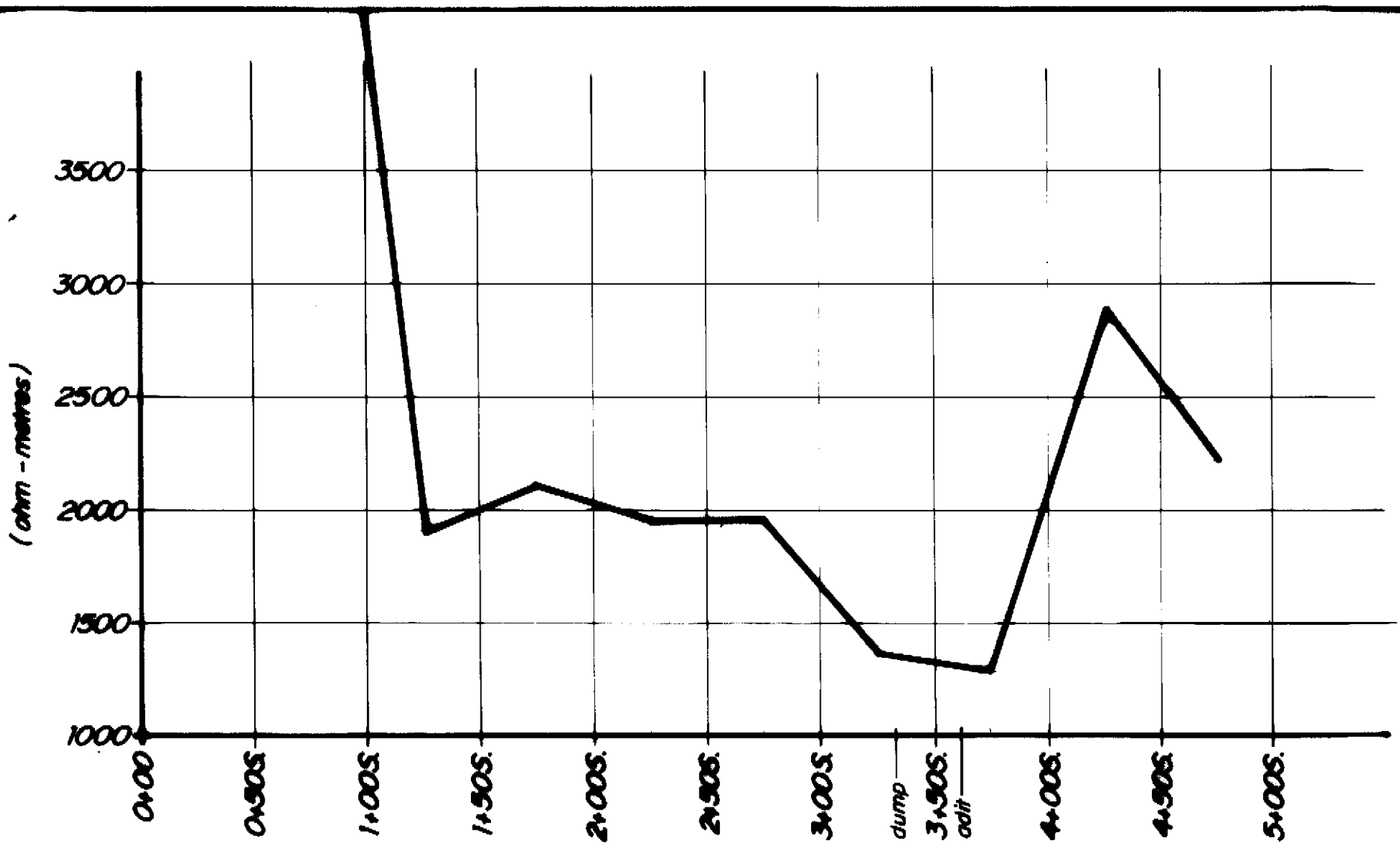
(microseconds) —
 Daily Voltage Test Log

Figure 2E

NOTE:

TIME CONSTANT — HEW 200
 0.5 μs
 0.4 μs
 1.8 μs
 WARM UP





Geophysical Services Ltd.

Royal Group Project Klondike River Area
N.T.S. 108P / 10E Skeena Mining Division



APPARENT RESISTIVITY —
(ohm - metres) —
Dolly Varden Test Line

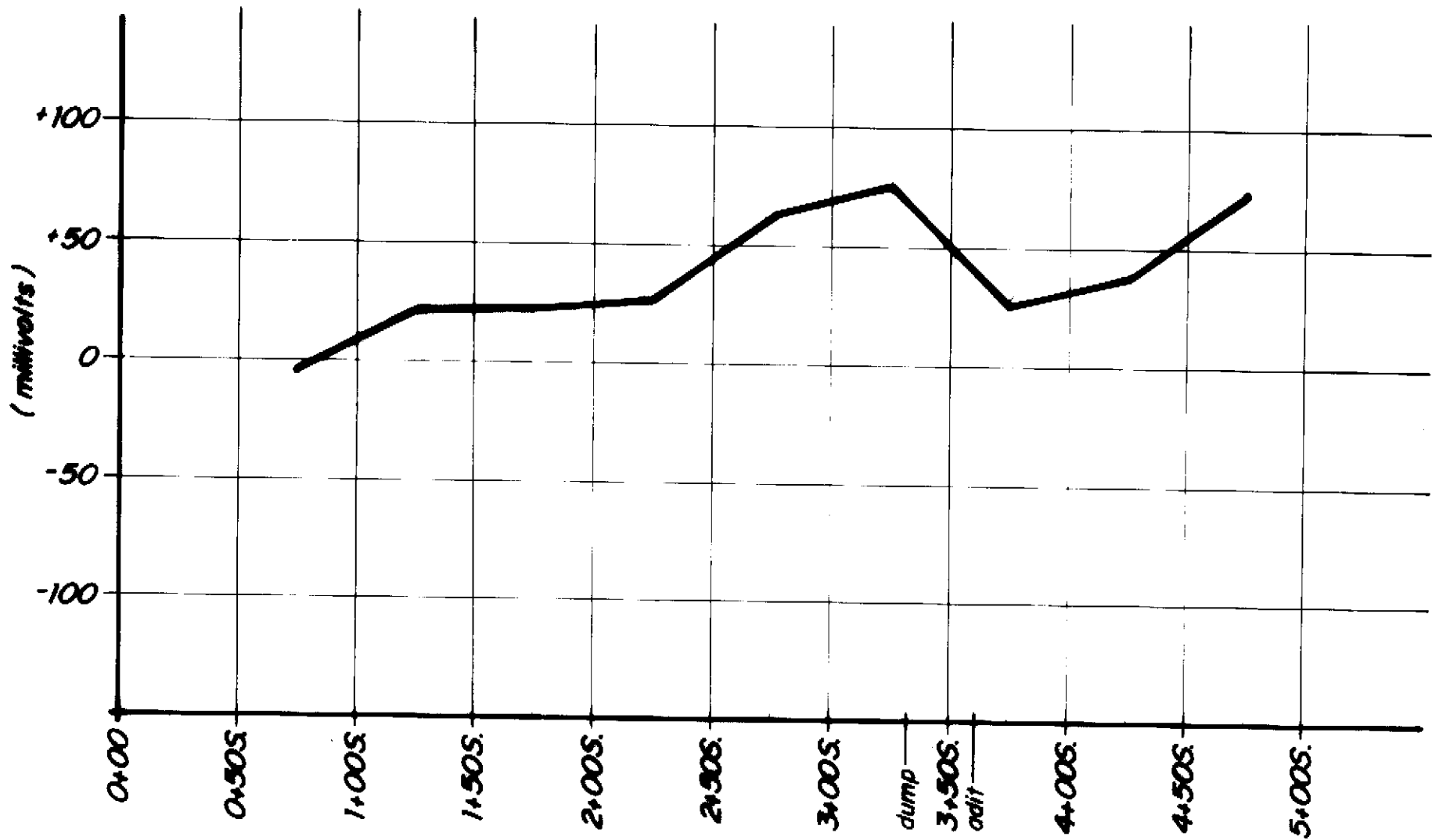
Figure 30



NOTE:

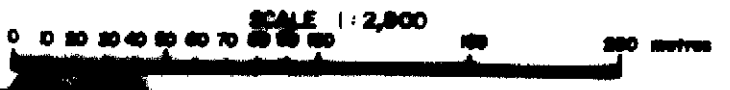
- TIME CONSTANTS — HEW 200
- 2.0 SECONDS ON
- 0.6 SECONDS OFF
- 1.2 SECONDS REGENERATION TIME
- WEISSER ARRAY





Consolidated Silver and Gold Mines Ltd

Royal Group Project **Kitsault River Area**
 N.T.S. 103P/12E **Starna Mining Division**

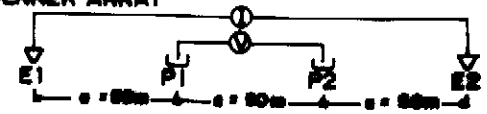


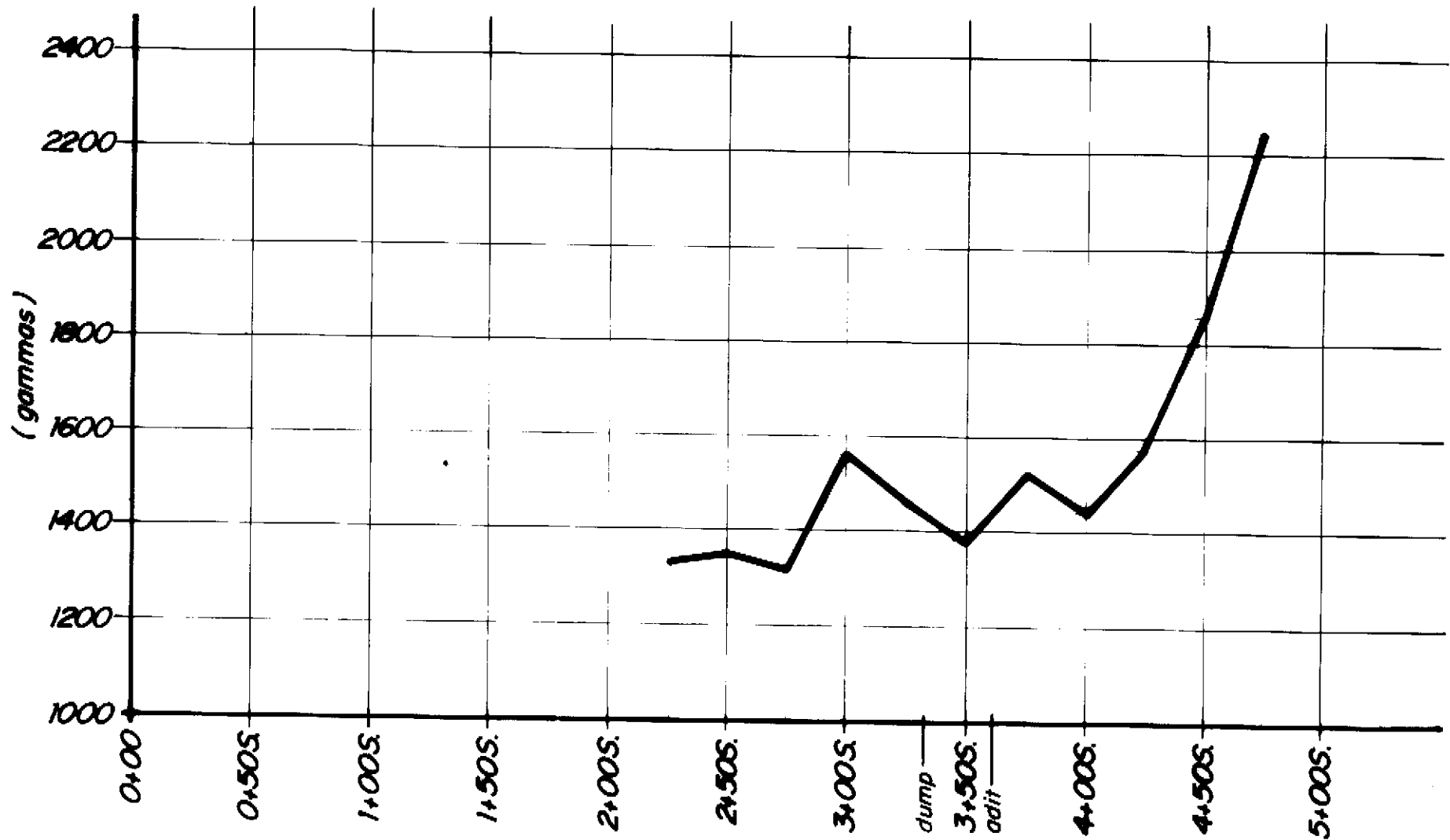
GRADIENT SELF POTENTIAL —
 (millivolts) —
 Dolly Varden Test Line

Figure 3C



NOTE:
 TIME CONSTANTS — HEW 200
 200 ohms CURRENT ON
 200 ohms DELAY
 1.2 seconds INTEGRATION TIME
 WENNER ARRAY





~~Canadian Silver & Gold Mines Ltd~~

Royal Group Project Kitsoot River Area
 N.T.S. 103P / 12E Skeena Mining Division

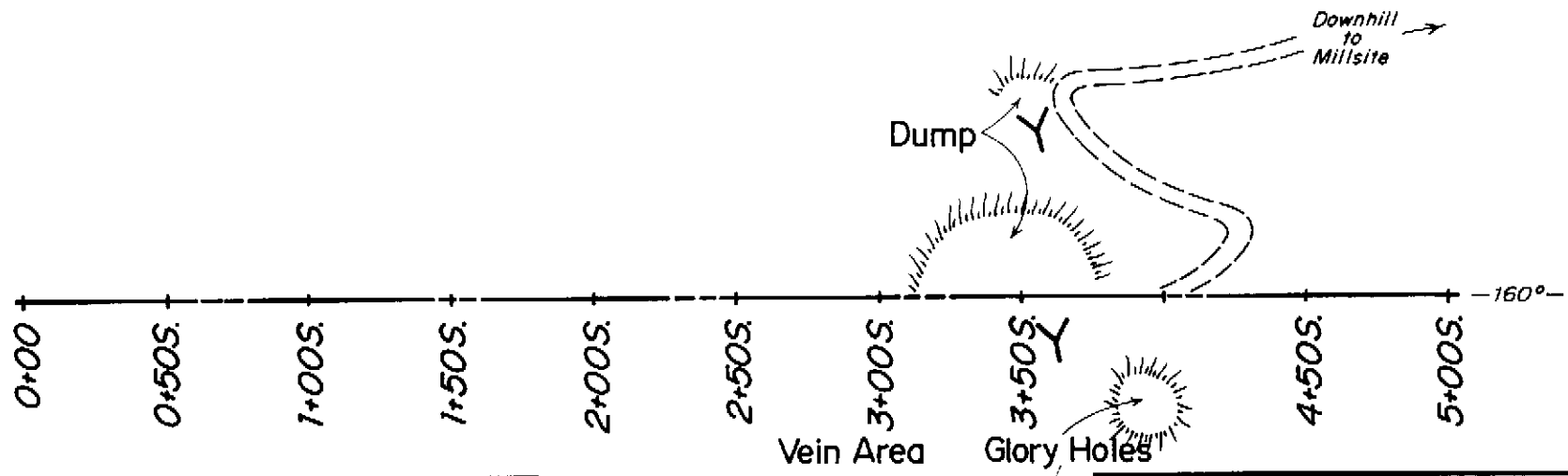
MAGNETOMETER —
 (gammas) —
 Dolly Varden Test Line

NOTE:
 SCINTREX MF-2 FLUXGATE MAGNETOMETER

SCALE 1:2,500
 0 10 20 30 40 50 60 70 80 90 100 150 200 metres

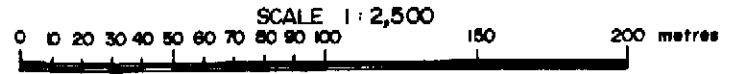
Figure 38





Consolidated Silver Butte Mines Ltd.

Royal Group Project Kitsault River Area
 N.T.S. 103P / 12E Skeena Mining Division



R.K.C. Nov. 80

Dolly Varden Test Line (Plan)

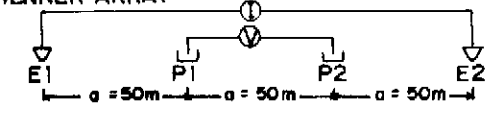
Figure 3 A


 Cochrane Consultants Limited
 462 Duffin St., Delta, B.C. V4K 2T6 904-9221

NOTE:

TIME CONSTANTS — HEW 200
 2.0 seconds CURRENT ON
 0.4 seconds DELAY
 1.2 seconds INTEGRATION TIME

WENNER ARRAY



ROYAL GROUP GRID

G-6 Gradient self potential (SP) results ranged from lows of zero and a few millivolts (m.v.) per 100 metres to a high of 163 m.v. per 100 metres (1.63 m.v. per metre). SP response in excess of 50 m.v. per 100 metres are herein considered anomalous and these occur in six (6) areas within the survey area as shown on the accompanying gradient self potential plan. (Fig. 4) The most significant SP change is on line 1600 S., west of the base line where a -63 m.v. reading was recorded adjacent to the east of a 16.8 apparent chargeability high (between anomaly No. 1 and anomaly No. 2).

G-7 Apparent resistivity results ranged from a low of 132 ohm-metres to a high of 12886 ohm-metres. The mode (most frequent values obtained) lies in the 1000 to 1500 ohm-metre range. (Fig. 5)

The most important apparent resistivity feature is a north-northwest trending low (less



ROYAL GROUP GRID (cont'd)

than 1250 ohm-metres) which extends from line 1800S, to 1300S, and centred principally on the Royal No. 3 claim. This low coincides well with a fault zone mapped by Mr. N. C. Carter, and may represent shattered and altered bedrock.

G-8 Apparent chargeability (or induced polarization (IP)) response on the Royal Group ranged from a low of 3.1 to a high of 20.0 milliseconds (m.s.). The most frequent range of values (mode) lies in the 5 to 10 m.s. range and the arithmetic mean of 72 readings is 10.0 m.s. Thus the 10.0 iso-apparent chargeability contour line naturally separates below average IP response from above average. Figure 6 shows the above average apparent chargeability response area is located almost exclusively on the south portion of the grid and centers on the Royal No. 7 and Royal No. 8 claims. This coincides well with the zone of altered and slightly pyritic grey crystal tuffs as mapped by Mr. N. Carter.



ROYAL GROUP GRID (cont'd)

Two apparent chargeability anomalies were defined within the above average zone, and these are designated anomaly No. 1 centered on the base line between 1800 and 1900 S.; and anomaly No. 2 at 1450 W., on line 1600 S.

The author visited both anomalous areas, and anomaly No. 1 is in relatively moderate to steep ground but with widespread overburden, and well forested with hemlock and fir.

There are a few scattered outcrops in the general area of anomaly No. 1 all containing pyrite, both disseminated and in north trending fractures.

Anomaly No. 2 lies on a very steep west sloping side hill which is also well forested and contains scattered outcrops. Most of the outcrops contain fine pyrite.

Two geochemical (soil) test lines were run across the anomalies and the results are discussed in a later section.



ROYAL GROUP GRID (cont'd)

G-9 The metal factor (MF) is herein defined as the apparent chargeability divided by the apparent resistivity times 1000. MF is therefore a hybrid geophysical parameter but often has value in combining the two most important pure IP parameters into one.

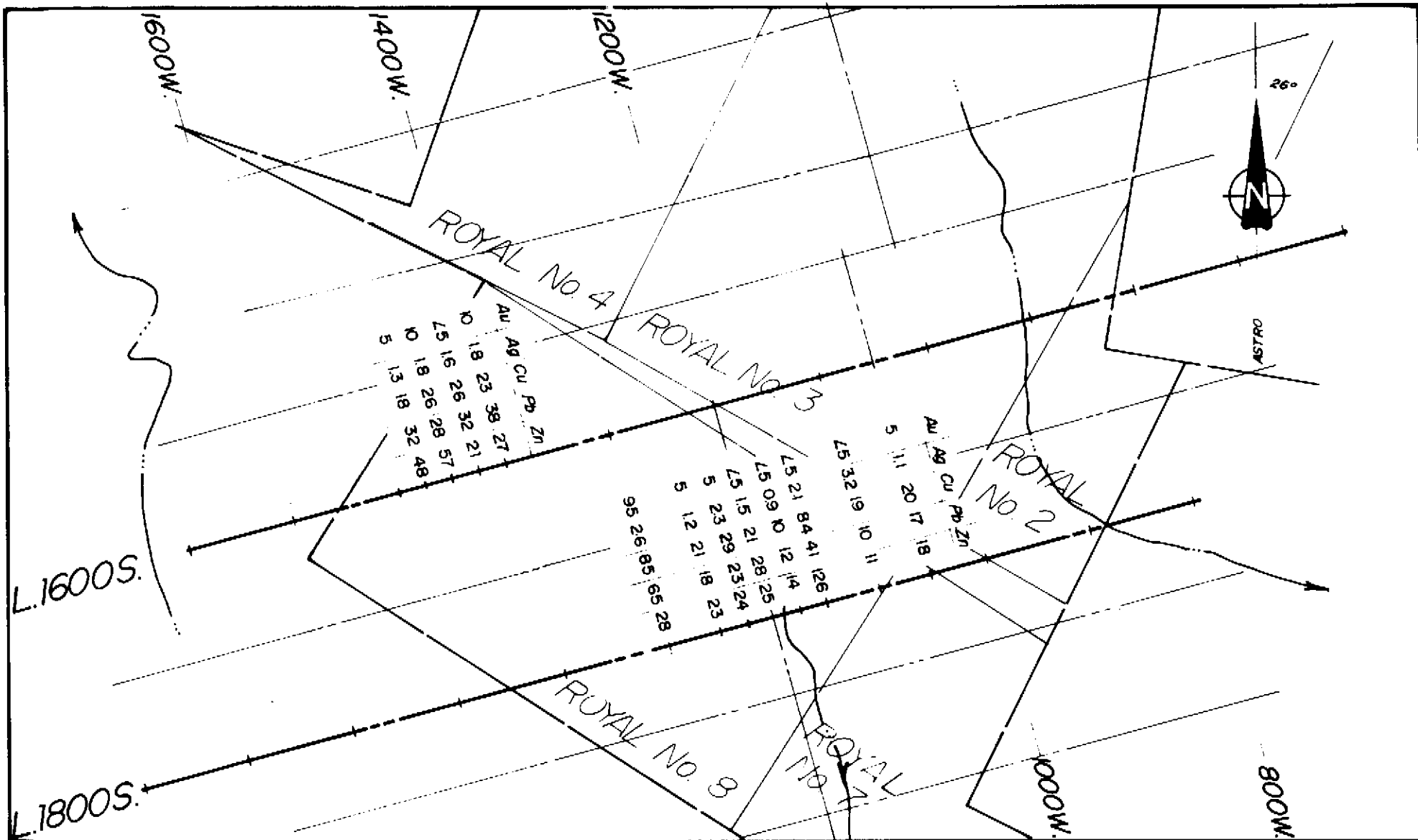
The metal factor results are shown in contoured plan in Figure No. 7 and has outlined a third anomaly, centered at 1000 W., line 1700 S.

G-10 Geochemical Test

A total of twelve (12) upper B horizon soil samples were collected across IP anomalies No. 1 and No. 2 and analyzed for lead (Pb), zinc (Zn), copper (Cu), silver (Ag) and gold (Au) by Min-En labs in Vancouver, B. C.

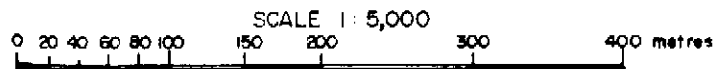
The lead content of the upper B horizon soils ranged in value from a low of 10 to a high of 65 parts per million (ppm). The zinc content ranged from a low of 11 to a high of 126 ppm; copper from 10 to 85 ppm; silver from 0.9 to 3.2 ppm;





Consolidated Silver Butte Mines Ltd.

Royal Group Project Kitsault River Area
N.T.S. 103P/12E Skeena Mining Division



GEOCHEMICAL DATA —
Au/ppb, Ag/ppm, Cu/ppm,
Pb/ppm, Zn/ppm

Figure 8



Cochrane Consultants Limited
4822 Delta St. Delta B.C. V4L 2T5 246-0221

ROYAL GROUP GRID (cont'd)

and gold from less than 5 to 95 ppb. The most obvious anomaly is a coincident 65 ppm lead value and 95 ppb gold value obtained at 1800 S., 1300 W. between IP anomalies No. 1 and No. 2. (Fig. 8)

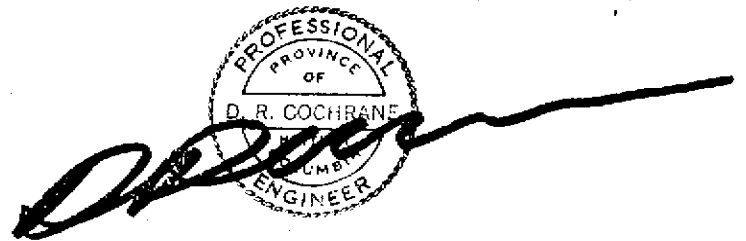


APPENDIX I

CERTIFICATE

I, Donald Robert Cochrane of the Municipality of Delta, British Columbia, do hereby certify that:

1. I am a consulting geological engineer with an office at 4882 Delta Street, Delta, B. C.
2. I am a graduate of the University of Toronto (1962) with a degree in Applied Geology (B.A.Sc.) and a graduate of Queen's University (1965) with a Master of Science Degree in Geological Sciences (Engineering).
3. I have practiced my profession continuously since graduation while being employed by such companies as Noranda Exploration Co. Ltd., Quebec Cartier Mines, and Meridian Explorations Syndicate. I have been in private independent practice since 1969.
4. I have no interest, either direct or indirect in the properties or securities of Consolidated Silver Butte Mines Ltd., nor do I expect to acquire any such interest.
5. I am a member in good standing of the Association of Professional Engineers (A.P.E.) of the Province of British Columbia, and also a member of the A.P.E. in the province of Ontario, Saskatchewan, Alberta and the Yukon Territories.

A circular professional seal for the Province of British Columbia, featuring the text "PROFESSIONAL ENGINEER" around the perimeter and "D. R. COCHRANE" in the center. A handwritten signature in black ink is written over the seal.

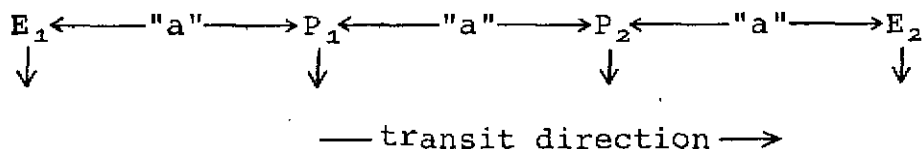
D. R. Cochrane, P. Eng.,
November 10, 1980,
Delta, B. C.



APPENDIX II

IP FIELD PROCEDURE

A standard Wenner Array with an "a" spacing of 100 metres was used for the IP survey of the Royal Group. For this array, the distance between pots and electrodes is equal, as illustrated below:



Four men were employed; the front stake man at position E_2 also compassed and flagged the line, the instrument operator was at position P_1 .

At each station a small hole was dug beneath the humus and cleared of rocks in order to seat the pots (positions P_1 and P_2). In dry soil, a small amount of salt water was added to improve electrical contact. The stakemen (positions E_1 and E_2) cleared a strip of ground (roughly 1 foot square) of moss, leaves and rocks, spread aluminum foil over the cleared part and buried the foil.



Salt water was poured into the foil to assure good ground contact. If contact was still sub-normal, two more stakes were set out some 6 feet to either side of the foil.

First, at each station, the self potential of the ground between front (P_2) and rear (P_1) pots was balanced and recorded in millivolts. Secondly, a 2 second current pulse was then initiated during which the transmitter current and impressed EMF between the pots was noted. On cessation of the current pulse, an integrated value of the residual decay voltage is automatically registered on the receiver galvanometer. This value was recorded along with position of instrument, output and voltage of the transmitter, notes on terrain and steadiness of SP, on standard pre-printed forms.

Finally the order was then given to move on, 100 metres, to the next station.





Cochrane Consultants Limited
4882 Delta St., Delta, B.C. V4K 2T8 946-9221
Geotechnical Consulting / Exploration Services

geology
geophysics
geochemistry

February 10, 1981.

Stikine Silver Ltd.,
c/o 705-850 W. Hastings,
Vancouver, B. C.

Re: Kitsault Property

INVOICE

Personnel

D. R. Cochrane, P. Eng. Sept. 24-27, 3 days at \$275/day	\$ 825.00
B. Chase, May-Sept. 29 22 1/2 days at \$120/day	2,700.00
P. Willson, Sept. 16-27, 10 days at \$120/day	1,200.00
R. Williams, Sept 10-27, 16 days at \$120/day	1,920.00
S. Weir, Sept. 10-27, 16 days at \$120/day	1,920.00
Sub-total	<u>\$ 8,565.00</u>

cont'd....

Balance forward \$ 8,565.00

Field Expenses

Food and Accomodation	\$ 1,464.21	
Air fare and shipping chgs.	2,998.74	
Helicopter	3,738.08	
Radio	469.72	
Field supplies	878.98	
Ferries, taxi, parking	159.61	
4 x 4 rental, 2 days at \$27.50/day	55.00	
100 miles at \$0.30/mile	30.00	
Equipment rental		
MF-1, 16 days at \$20/day	320.00	
SP , 16 days at \$6.25/day	100.00	
Misc.	50.00	10,264.34

Office Expenses

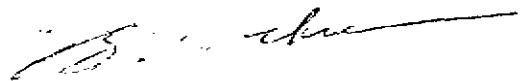
Drafting, 74 hrs. at \$17.50/hr.	1,295.00	
Office, 28 hrs at \$12/hr.	336.00	
Office Supplies	52.48	
Reproduction	90.00	
Delivery	12.00	
Phone	75.04	1,860.52

Total \$ 20,689.86

Less advance 10,000.00

Total owing \$ 10,689.86

Thank You



B. A. Cochrane

Consolidated Silver Butte Mines Ltd.

Royal Group Project Kitsault River Area
N.T.S. 103P / 12E Skeena Mining Division

0 50 100 150 200 300 400 600 800metres

To accompany a report by D.R. COCHRANE, P.Eng., on the ROYAL GROUP Project dated November 10, 1980. P.K.C.

GRADIENT SELF POTENTIAL Figure 4 (millivolts)

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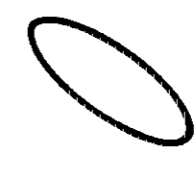
NOTE:

TIME CONSTANTS — HEW 200

2.0 seconds CURRENT ON

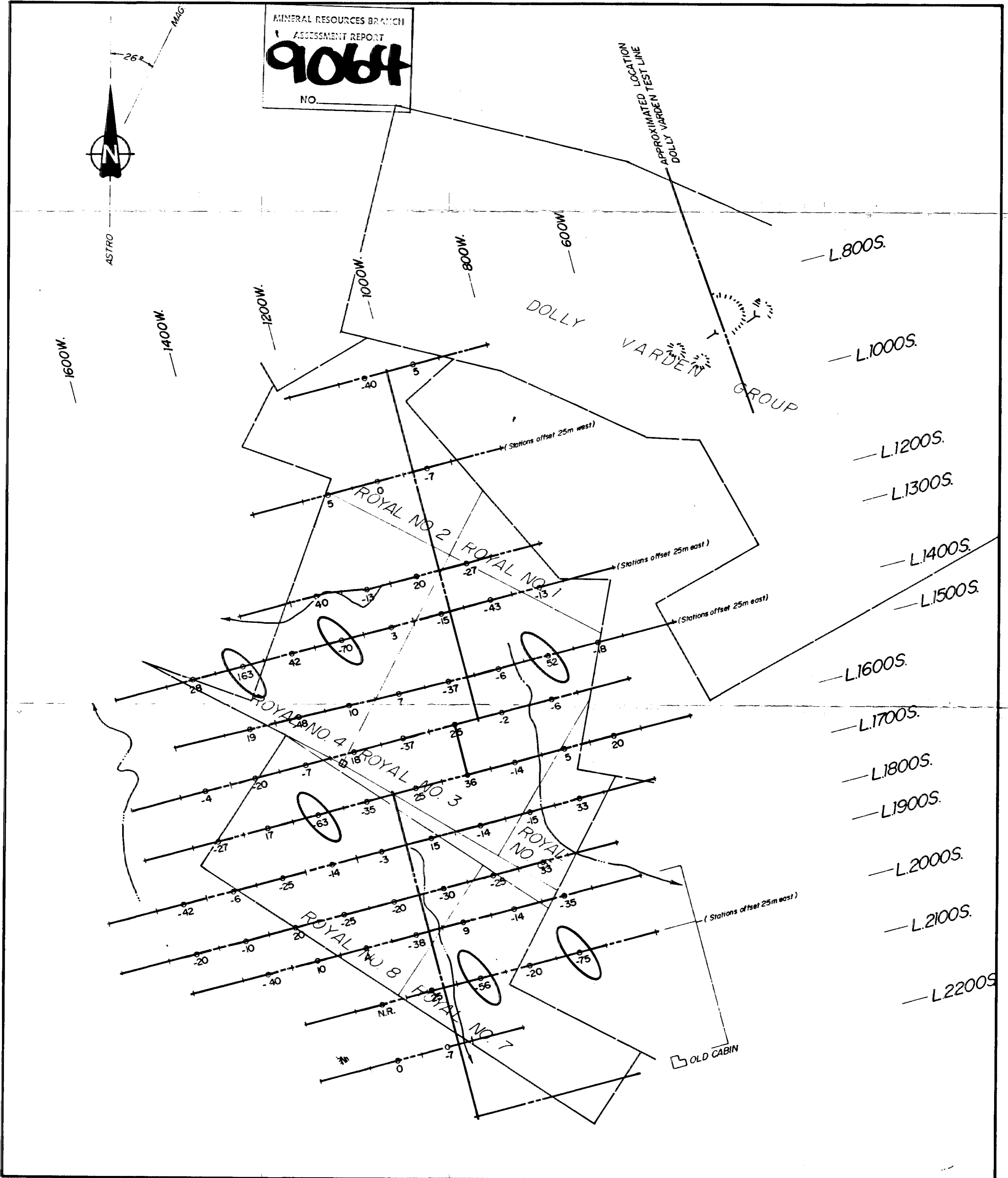
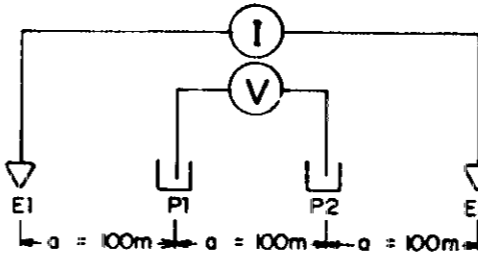
0.4 seconds DELAY

1.2 seconds INTEGRATION TIME



Self Potential Gradient in excess of
50 millivolts per 100 metres
(1/2 m.v. per metre).

WENNER ARRAY



Consolidated Silver Butte Mines Ltd.

Royal Group Project Kitsault River Area
N.T.S. 103P / 12E Skeena Mining Division

0 50 100 150 200 300 400 600 800metres

To accompany a report by D.R. COCHRANE, P.Eng., on the ROYAL GROUP Project dated November 10, 1980.

P.K.C.

APPARENT RESISTIVITY
(ohm-metres)

Figure 5

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NOTE:

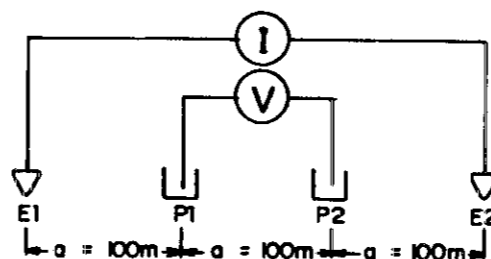
TIME CONSTANTS — HEW 200

2.0 seconds CURRENT ON

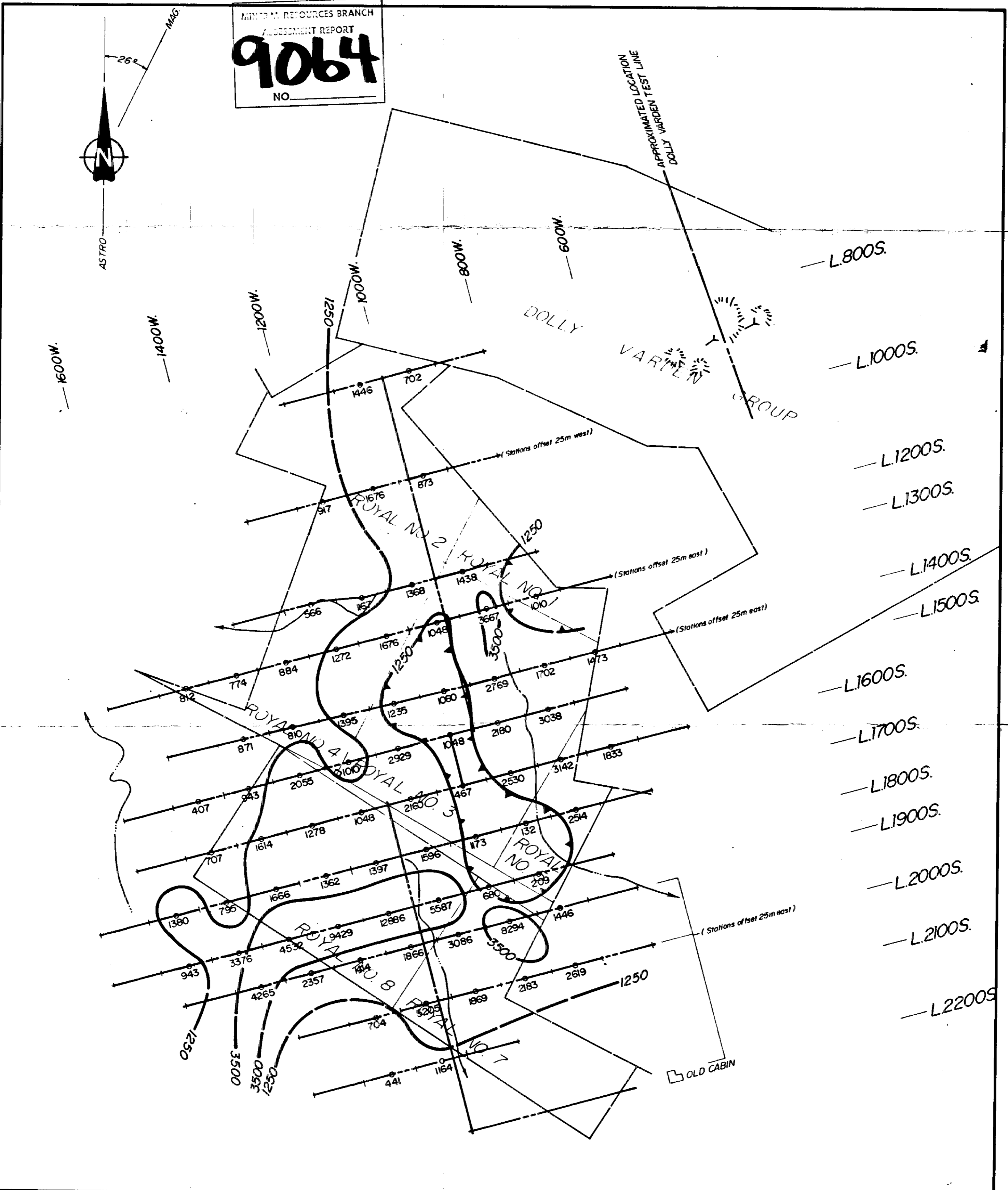
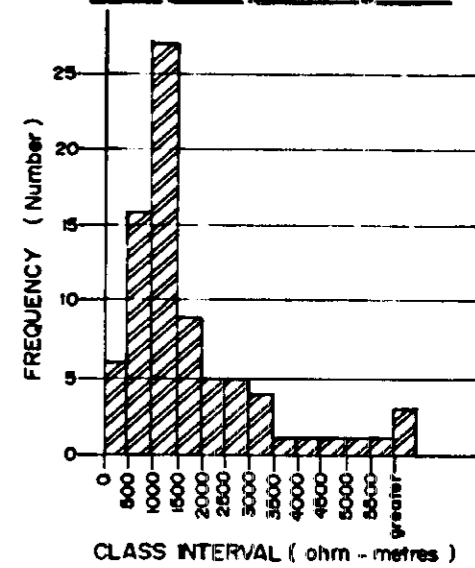
0.4 seconds DELAY

1.2 seconds INTEGRATION TIME

WENNER ARRAY



Frequency Histogram



Consolidated Silver Butte Mines Ltd.

Royal Group Project Kitsault River Area
N.T.S. 103P / 12E Skeena Mining Division

0 50 100 150 200 300 400 600 800metres

To accompany a report by D.R. COCHRANE, P. Eng., on the ROYAL GROUP Project dated November 10, 1980. P.K.C.
Original sketch by B. Chase.

PROSPECTING MAP

Figure 9

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4882 Delta St., Delta, B.C. V4K 2T8 948-8221

LEGEND

- APPROXIMATE CLAIM BOUNDARY
- ☼ SWAMP
- ▬ CLIFF
- ▬▬▬ RIDGE
- RS# ROCK SAMPLE
- LINEAR (fault, trench, trough, gulch etc.)
- ⊕ CLAIM POST
- REDA VOLCANIC
ANDESITIC ? TUFF WITH PYRITE
SOMETIMES SCHIST.
VOLCANIC BRECCIA—
RED AND GREEN.
TWO-TONE GREEN ROCK
WITH MAGNETITE.
WEATHERED MINERALIZED ROCK
(gossan limonite ? coated)

NOTE 1

Anomaly 1 Area:

Gentle to moderately steep topography — well forested — a few small scattered outcrops, mainly on flanks of lineal gullies — exposed bedrock is grey highly silicified fragmental volcanic containing disseminated and fracture filled pyrite — up to approximately 10% by volume — no other sulphides observed — traces of narrow barren bull quartz veinlets.

NOTE 2

Anomaly 2 Area:

Near change in slope from very steep (30-40%) to quite flat — (East to west) — well forested — scattered small outcrops — exposing granitoid with disseminated and fracture filled pyrite.

