GEOPHYSICAL REPORT on the INDUCED POLARIZATION SURVEY on the STAN GROUPS of MINERAL CLAIMS, EHOLT AREA, GREENWOOD MINING DIVISION, BRITISH COLUMBIA.

(Grand Forks one degree quadrilateral, S W quadrant, 49° - 118°, Sheet 82 E/SE, 10 miles NW of Grand Forks, Lat. 49° 10', Long. 118° 34')

82 E/2E

by

GEOFAX SURVEYS LIMITED

Calgary, Alberta

Work completed for KING RESOURCES LIMITED, Calgary, Alberta, Owners, during the period of October 10th to November 9th, 1966.

688

889

TABLE OF CONTENTS

Item	Page
INTRODUCTION	1
CONCLUSIONS AND RECOMMENDATIONS	1
RECOMMENDATIONS	3
PROPERTY LOCATION AND ACCESS	3
METHOD OF SURVEY AND INSTRUMENT DATA	4
I.P Instrument	
I.P. Electrode Array	
I.P. Data	
DISCUSSION OF RESULTS	6
APPENDIX	
Personnel List	

ILLUSTRATIONS

Figure No.	Title	Page
1 #1	Location Plan	In Pocket
2 #2	Location and Plan of STAN GROUPS of Mineral Claims	In Pocket
3 #2A, #3A	Chargeability & Resistivity Profiles (2 maps)	In Pocket
4 #5	Maximum Chargeability Contour Map	In Pocket

Please Note - Additional copies of Figs. 3 & 4 showing claim outlines are included in Pocket.

#2, #3

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REPORT ON THE STAN GROUPS

of

MINERAL CLAIMS

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
S. A. MOURITSEN

Expiry Date: August 4, 1968

S. A. Mouritsen

November 14, 1966.

GEOFAX SURVEYS LTD.

G. A. Mouritsen

G. A. Mouritsen,
Senior Geophysicist

INTRODUCTION

During the dates of October 10 to November 9th, 1966 an induced polarization survey was carried out on the property of King Resources Limited, Stan Group of Claims, Eholt Area, 10 miles N. W. of Grand Forks in the Greenwood Mining Division of British Columbia. Line cutting for the survey commenced on October 10, 1966 and the Induced Polarization survey, carried out by Geofax Surveys Ltd. of Calgary, Alberta, began on October 17, 1966. The crew was quartered in Grand Forks, B. C. and the Party Chief was P. L. Brooks. During the survey, a total of 23 lines were cut and surveyed, plus two base lines which had to be cut. The lines were located by a chain and compass survey. All cut lines surveyed have a bearing of N 14° E.

The purpose of the survey was to attempt to locate the granite-sedimentary contacts, to locate any existing sulphide mineralization, and to prove the worth of the induced polarization method as an exploration tool on this particular property. The survey is considered at the present stage to be one of reconnaissance only. The method is believed to be highly successful for the above purposes.

CONCLUSIONS AND RECOMMENDATIONS

Please see the chargeability contour map and the chargeability and Resistivity Profile plots.

The Induced Polarization survey revealed:

1. The granite-sedimentary contact to be located as indicated by the heavy dashed line plus granite symbols as shown on the Chargeability Contour Map.

2. Three Primary Zones of disseminated sulphide mineralization in order of importance as follows:

   a) The highest chargeability encountered lying at the intersection of Lines B and S (B-00 station and S 2400 W station). This interesting anomaly is part of a WNW - ESE trend of secondary zones roughly 6000 feet in length and a maximum of 400 feet wide, generally following the north side of the granite-sedimentary contact.

   b) The second highest chargeability in the area located at the 00 station on Line D. This anomaly appears to be part of a WNW - ESE trend of secondary zones approximately 5500 feet in length, roughly following the south side of the granite-sedimentary contact.

   c) A poorly defined anomaly of relatively high chargeability beneath the 1200 N station on Line H.

3. Numerous Secondary Zones as part of the trends mentioned in a and b above, lying along the north and south contacts between the granite and sediments. A more isolated secondary zone trending west through lines N, M, P and Q.

RECOMMENDATIONS

The Primary and Secondary zones and trends mentioned above require detailing to outline the aerial extent, depth of burial, and direction of dips. The areas where chargeabilities occur which are greater than background but less than 12.0 milliseconds (Secondary) should be explored with semi-reconnaissance control.

Close detailing of the prime zones of interest should be carried out along lines 250 feet apart, using 400 foot electrode spacings but taking readings every 50 feet. This gives high density control along each line and doesn't slow production too greatly. Where necessary spacings should be reduced to 200 feet. Where dip-off occurs the spacings should be expanded to 600 feet. Semi-reconnaissance lines should be placed 500 feet apart using the same electrode spacing (400 foot special 3-array) as was used in this survey.

The purposes of the survey were successfully fulfilled by the I.P. method of exploration. If further exploration is required beyond the present control, the I.P. method is recommended.

PROPERTY LOCATION & ACCESS

The Stan Group of Claims (please see Figs. 1 & 2) owned by King Resources Ltd. of Calgary, Alberta, are located in the Eholt Area, Greenwood Mining Division, B.C. (Penticton - 1° quadrilateral, 10 miles N W of Grand Forks, Se/4 49°-119, Sheet 82-ESE). Access was via paved highway from Grand Forks, 10 miles N W and then via trail and old mining railway road beds to the east end of the property. The west end of the property was also cut by the paved highway and from there the usual mountain access trails were used to get to secondary

base camps. Beyond the access trails, the portable instruments were transported on foot. A Jeep Wagoneer belonging to Geofax Surveys was used to transport the crewmen and instruments to and from the property.

METHOD OF SURVEY AND INSTRUMENT DATA

I.P. INSTRUMENT

The instrument used was a new Huntec pulse-type system capable of delivering 2500 watts to the ground. The system is composed of 3 subsystems, a generator, a transmitter and a receiver. The generator provides the source of prime power for the transmitter which produces a rectangular current pulse to the ground. The cycling rate is 1.5 seconds 'current on' and 0.5 seconds 'current off'; succeeding pulses are of opposite polarity. The receiver operates remotely and is triggered by the decay of the transmitter current. The readings for the primary potential Vp and secondary potential Vs. are taken by the null balance method, with the input signal balanced over a period of time to reduce noise effects. The main advantages of the pulse type system over the variable frequency type system are 1. Any electrode spacing may be used, whereas the spacings used on the variable frequency systems are restricted due to inductive coupling between transmitter and receiver circuits.

2. Less time is required to take each reading as no average is required.

I.P. Electrode Array

Please see the legend accompanying the Chargeability and Resistivity Profiles.

The bulk of the lines were surveyed using the special 400 ft.

3 electrode spacing., 200 ft. normal and special 3 arrays were used on lines G, portions of H, all of J, K, L & M.

The array consists of one current electrode (C_1) and two potential electrodes (P_1 & P_2) which are moved together down the line. The fourth electrode (C_2) is placed at an "infinite" distance from the other three electrodes (where "infinity" = 7 to 10a).

The electrode spacings are as follows:

Normal 3-Array - 200 ft. spacing - C_1 to P_1 = a = 200 ft.
P_1 to P_2 = 200 ft.

Special 3-Array - 200 ft. spacing - C_1 to P_1 = a = 200 ft.
P_1 to P_2 = 100 ft.

Special 400 ft.
3-Array: C_1 to P_1 = 400 feet, P_1 to P_2 = 200 feet.

As the survey was considered to be reconnaissance only, the 400 ft. special-array was selected for optimum coverage and penetration.

I.P. Data

The Chargeability and Resistivity profiles were plotted on a scale of 1 inch = 2-- feet. The Chargeability Contour Map is on a scale of 1 inch = 500 feet. Where 400 ft. electrode spacings were not run, the chargeabilities were used from the 200 ft. spacings on the latter map.

The following definitions are clarified as follows:

Prime Zone of Interest (see Legend) - where chargeabilities occur which are 3 times, or greater, than the average background chargeability.

Secondary Zone: Where chargeabilities occur which are twice, or greater, but less than three times the background.

Background - An average of the general chargeabilities of the area believed to represent barren rock. The average background for the Stan Group of Claims is approximately 6 milliseconds or less, so that a Primary Zone of disseminated sulphide mineralization would be represented by chargeabilities of 18.0 milliseconds or greater. A Secondary Zone would be represented by chargeabilities of 12 to 17.9 milliseconds. Both zones should be corroborated by a rapid decrease in the resistivity values. The secondary zones should be considered as secondary targets, at present, but detailing may prove them to be Prime Zones at a greater depth or indications of Prime Zones which are more remote from the control line. In these cases greater electrode spacings would penetrate deeper to prove or disprove these indicated anomalies. The depth of penetration of the system is directly proportioned to the electrode spacing (C_1 to P_1) used. Therefore, generally, in this survey, the chargeabilities and resistivities shown, represent conditions to a burial depth of 400 feet below surface.

DISCUSSION OF RESULTS:

The approximate granite-sedimentary contact is outlined on the chargeability contour map and needs no further description.

Three Primary Zones representing very good disseminated sulphide mineralization were revealed. The best one of the three lies at the intersection of Line S and Line B and shows a maximum chargeability of 32.7 milliseconds. This excellent anomaly is possibly part of the secondary anomalies trending west-northwest through lines V, W, X and Y and east through line A where it curves south to follow Line S to

S to the 400 N station. This trend could represent near-contact type mineralization in the sediments. A second Primary Zone occurred at the 00 to 200 S stations on Line D. Here a maximum chargeability of 31.8 milliseconds at 00 and 18.7 milliseconds at the 200 south station could form part of the Secondary Zones trending west - northwest and through Line G along the south contact of the granite and sedimentary formations. This anomaly could also represent contact metamorphic type sulphide mineralization in the sediments.

A third Primary Zone occurred at the 1200 N station on Line H. This anomaly definitely requires further corroboration I. P. detail as it tends to lie north of the trend and separated from it. For this reason, the granite-sedimentary interface was curved northward to include this anomaly, but the data is rather sparse and indications somewhat inconclusive.

Numerous Secondary Zones were revealed by the survey, the majority of which form trends set up by the Primary Zones described above. One more isolated Secondary Zone sets up a westerly trend through the middle of lines M, N, P and Q, indicative of a north and west contact between the granite and sediments. The contact here is rather tentatively drawn but should be corroborated by further I. P. detail or possibly by surface geology. The Secondary Zones are encompassed by the 12.0 millisecond contour.

It should be remembered that the contoured chargeabilities represent values at a depth of 400 feet, except where 200 foot electrode spacings were used on Lines J, K, L and M and the values represent penetration depths of 200 feet.

The granite appears to have a generally low chargeability varying from a minimum of 0.8 (station 700 S, Line G) to a maximum of approximately 8.0 near the contact. Intermediate chargeabilities falling between the background of 6.0 and the Secondary Zone value of 12.0 occur frequently and probably represent low-grade type sulphide mineralization. However, if detailing is carried out at a later date, the lines should extend into these areas. Since the contouring is based on reconnaissance control, detailing will probably break up the larger trends into series of smaller and more pronounced anomalies. But this is to be expected and anticipated as detailing serves to pinpoint anomalies of greatest interest and aids in the location of drilling sites for later exploration. During the detailing process, varied electrode spacings should be used so that the dips of interesting anomalies may be determined along with depth of burial for economic analysis.

Respectfully submitted,

G. A. Mouritsen

G. A. Mouritsen
Senior Geophysicist

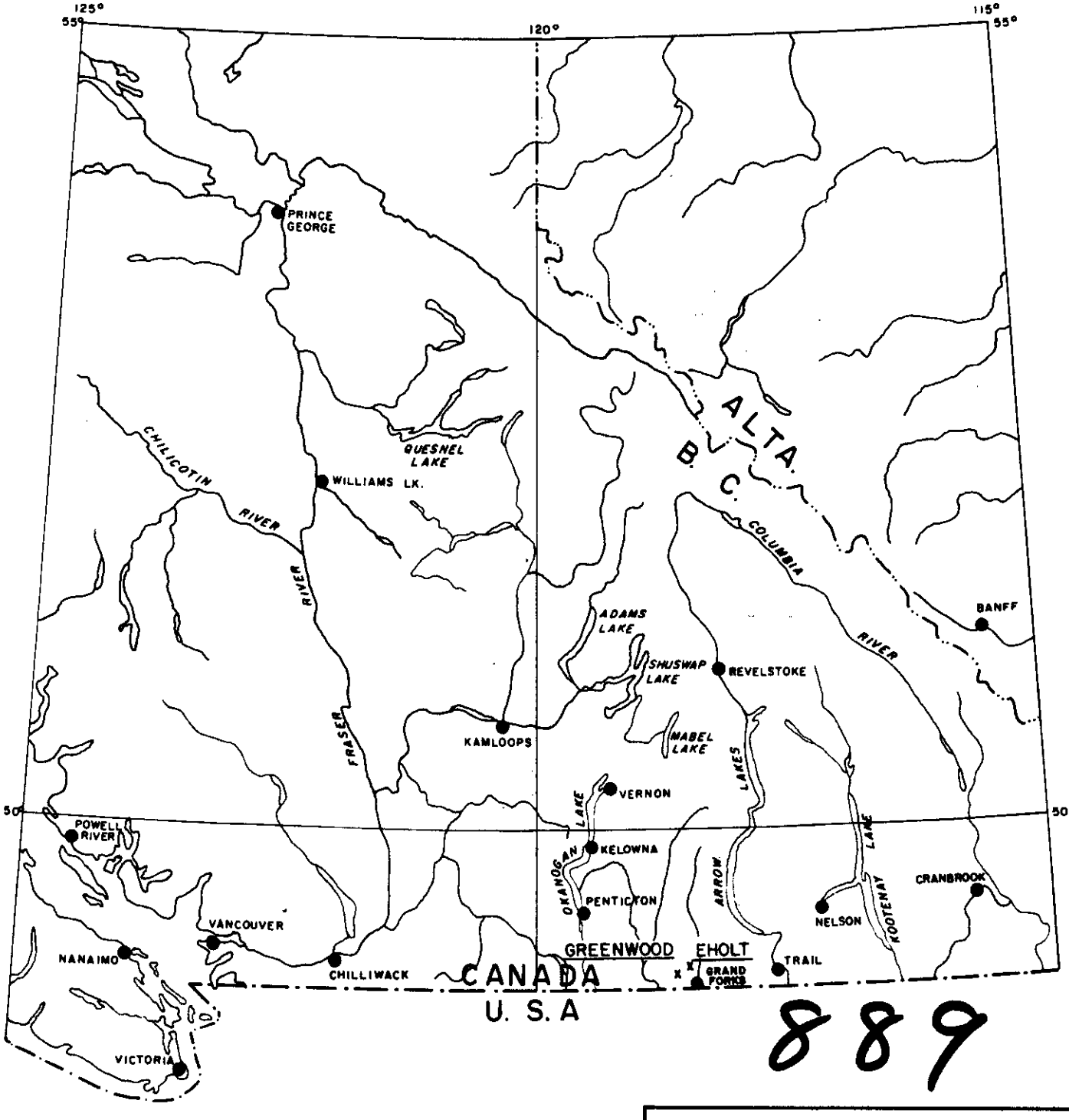
PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
S. A. MOURITSEN
Expiry Date: August 4, 1967

S A Mouritsen

APPENDIX

The following personnel were used on the Induced Polarization survey:

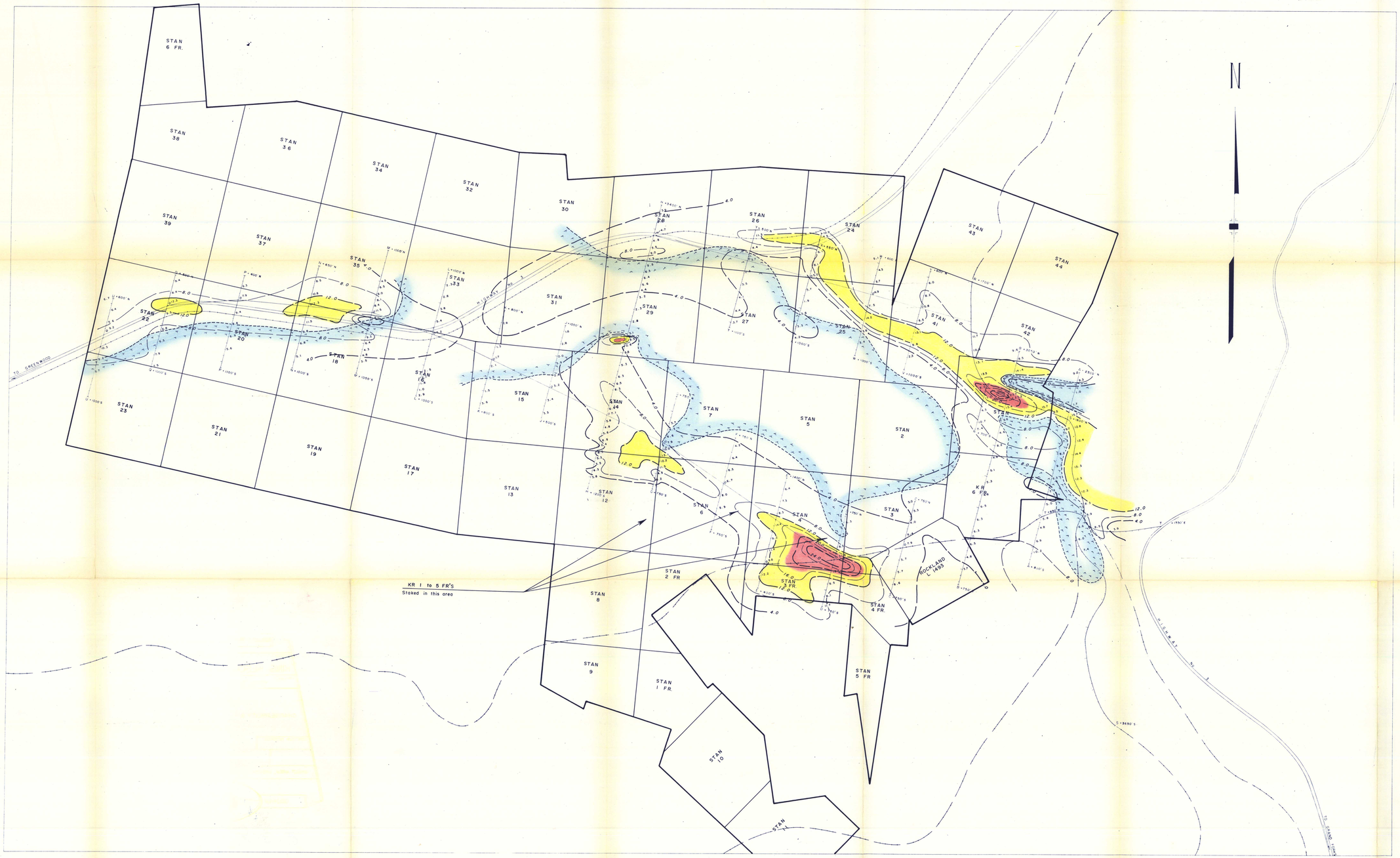
G. A. Mouritsen	Senior Geophysicist
P. L. Brooks	Party Chief and Chief Operator
W. J. Callahan	Assistant Operator
J. Langevin	Assistant Operator
P. Davidoff	Helper



889

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 889 MAP #1

KING RESOURCES LIMITED		
LOCATION PLAN EHOLT AREA GREENWOOD MINING DIVISION BRITISH COLUMBIA		
DRAWN BY CENTRAL DRAFTING SERVICE	GEOLOGY BY DR. M.C. ROBINSON	
DATE	SCALE	FIGURE No.
SEPT. 1965	1" = 64 MILES	ONE



MAXIMUM CHARGEABILITY VALUES

CONTOUR INTERVAL — .004 SEC.

DATE OF SURVEY - Oct. 17 - Nov. 9, 1966

NOTE This map prepared from maps by Dr M C Robinson & chain compass survey of Oct 1966.

All cut lines have a bearing of N 14° E

TO ACCOMPANY REPORT BY G.A. MOURITSEN, B.Sc., FOR KING RESOURCES COMPANY, STAN GROUP OF CLAIMS EHOLT AREA, GREENWOOD MINING DIVISION, B.C. DATED NOV. 14, 1966

KING RESOURCES LIMITED

LAYOUT PLAN OF

IP SURVEY LINES

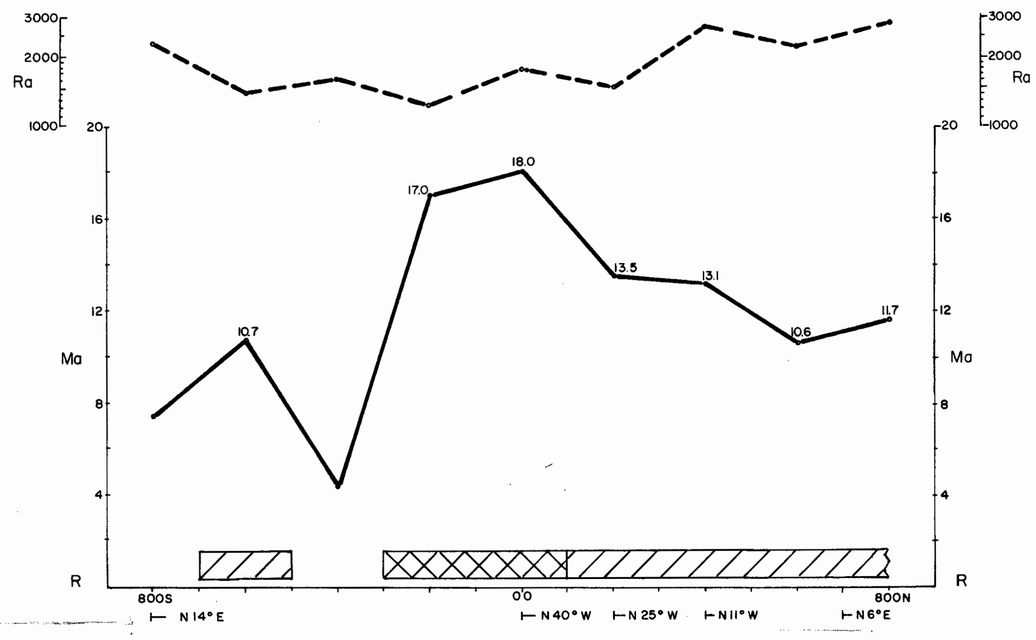
ON

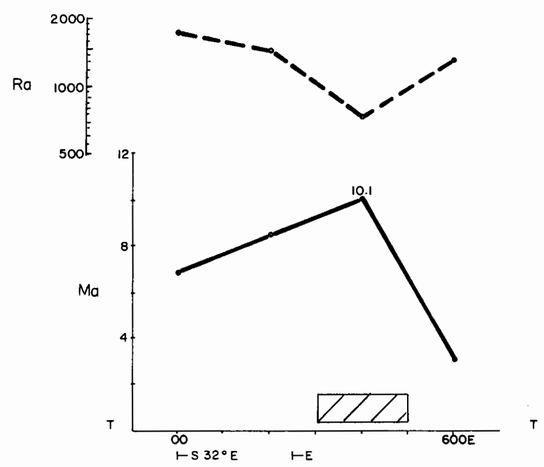
STAN GROUP OF CLAIMS

EHOLT AREA

GREENWOOD MINING DIVISION, B.C.

PREPARED BY	GEOLOGY BY	GEOPHYSICAL BY
Cantrol Drafting Services Ltd	Dr M C Robinson	Geofax Surveys Ltd
SCALE	DATE	DRAWING No
1 INCH = 500 FT	OCT 12, 1966	KRC - 100





Rg = Resistivity in Ohm-meters

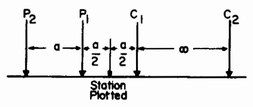
Ma = Chargeability in Milliseconds

To Accompany Report by G.A. Mouritsen, B.Sc., for King Resources Ltd., Stan Group of Claims, Eholt Area, Greenwood Mining Division, B.C., Dated November 14, 1966.

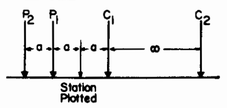
LEGEND

ELECTRODE SPACING—3-ARRAY

NORMAL



SPECIAL



FREQUENCY USED = 1.5 CYCLES/SECOND ∞ = 7 to 10·a

PLOTTING SYMBOLS

CHARGEABILITY (Ma) — RESISTIVITY (Ra)

a = 200 FT.

a = 300 FT.

a = 400 FT.

ANOMALOUS ZONES

PRIMARY ZONE (Chargeabilities ≧ 3×Background)

SECONDARY ZONE (Chargeabilities ≧ 2×Background)

FIG. 3

INDUCED POLARIZATION SURVEY

CLIENT

KING RESOURCES LIMITED

PROJECT

STAN CLAIMS GROUP

CHARGEABILITY & RESISTIVITY PROFILES

CONTOUR INTERVAL

SCALE
1 INCH = 200 FEET

DATES OF SURVEY
OCT. 17 to NOV. 9, 1966.

EHOLT AREA, GREENWOOD MINING DIVISION, BRITISH COLUMBIA

GEOFAX SURVEYS

889

FIG. 3

PAVED HIGHWAY

RAILROAD

ABANDONED RAILWAY

CUT LINES MARKED OUT

INDUCED POLARIZATION SURVEY

CLIENT

KING RESOURCES LIMITED

PROJECT

STAN CLAIMS GROUP

RESISTIVITY CONTOURS

CONTOUR INTERVAL	SCALE
400 OHM-METERS	1 INCH = 500 FEET

DATES OF SURVEY

OCT. 17 to NOV. 9, 1966.

EHOLT AREA, GREENWOOD MINING DIVISION, BRITISH COLUMBIA.

GEOFAX G SURVEYS

NOTE This map prepared from maps by Dr M C Robinson & chain compass survey of Oct 1966.

All cut lines have a bearing of N 14° E

889

KING RESOURCES LIMITED

LAYOUT PLAN OF

IP SURVEY LINES

ON

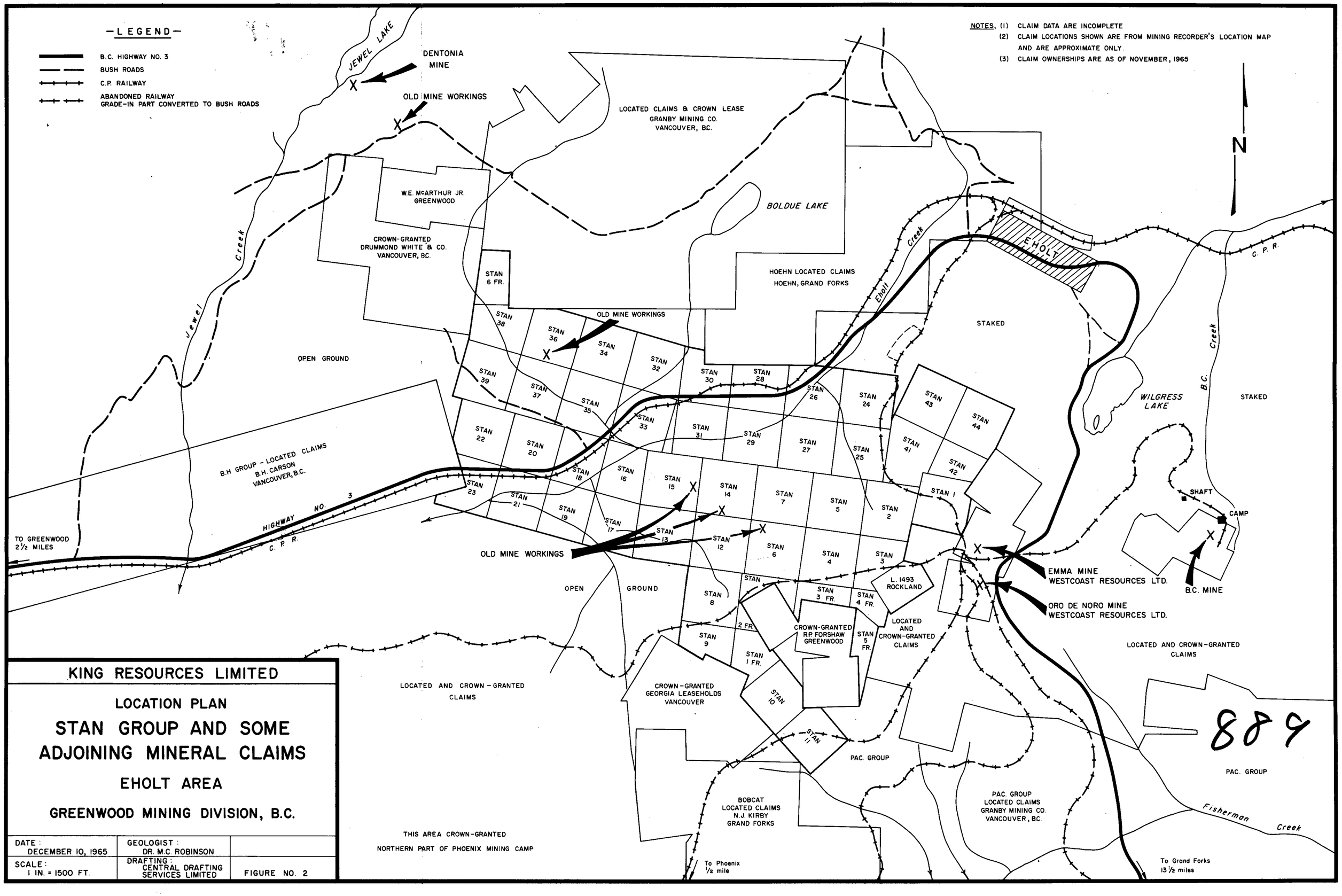
STAN GROUP OF CLAIMS

EHOLT AREA

GREENWOOD MINING DIVISION, B.C.

PREPARED BY	GEOLOGY BY	GEOPHYSICAL BY
Central Drafting Services Ltd	Dr. M. C. Robinson	Geofax Surveys Ltd
SCALE	DATE	DRAWING No
1 INCH = 500 FT	OCT 12, 1966	KRC – 100

N
LEGEND
ELECTRODE SPACING - 3-ARRAY
NORMAL
SPECIAL
FREQUENCIES USED (1.5 CYCLES/SECOND)
PLOTTING SYMBOLS
CHARGEABILITY (ms)
RESISTIVITY (Ωm)
a=1000 FT
a=500 FT
a=400 FT
ANOMALOUS ZONES
PRIMARY ZONE (Chargeability ≥ 3×background)
SECONDARY ZONE (Chargeability ≥ 2×background)
LINE 1
LINE 2
LINE 3
LINE 4
LINE 5
LINE 6
LINE 7
LINE 8
LINE 9
LINE 10
LINE 11
LINE 12
LINE 13
LINE 14
LINE 15
LINE 16
LINE 17
LINE 18
LINE 19
LINE 20
LINE



KING RESOURCES LIMITED

LOCATION PLAN

STAN GROUP AND SOME ADJOINING MINERAL CLAIMS

EHOLT AREA

GREENWOOD MINING DIVISION, B.C.

DATE: DECEMBER 10, 1965	GEOLOGIST: DR. M.C. ROBINSON	
SCALE: 1 IN. = 1500 FT.	DRAFTING: CENTRAL DRAFTING SERVICES LIMITED	FIGURE NO. 2

PAVED HIGHWAY

RAILROAD

ABANDONED RAILWAY

CUT LINES MARKED OUT

INDUCED POLARIZATION SURVEY

CLIENT
KING RESOURCES LIMITED

PROJECT
STAN CLAIMS GROUP

MAXIMUM CHARGEABILITY CONTOURS

CONTOUR INTERVAL
.004 SECOND

SCALE
1 INCH = 500 FEET

DATES OF SURVEY
OCT. 17 to NOV. 9, 1966

EHOLT AREA, GREENWOOD MINING DIVISION, BRITISH COLUMBIA

PROFESSIONAL ENGINEER
PROVINCE OF
G. A. MOURITSEN

Expiry Date August 4, 1967

NOTE: This map prepared from maps by Dr. M.C. Robinson & Chain compass survey of Oct 1966.

All cut lines have a bearing of N 14° E

TO ACCOMPANY REPORT BY G.A. MOURITSEN B.SC. FOR KING RESOURCES LTD., STAN GROUP OF CLAIMS, EHOLT AREA, GREENWOOD M.D., B.C. DATED NOV. 14, 1966

889

KING RESOURCES LIMITED

LAYOUT PLAN OF

IP SURVEY LINES

ON

STAN GROUP OF CLAIMS

EHOLT AREA

GREENWOOD MINING DIVISION, B.C.

PREPARED BY	GEOLOGY BY	GEOPHYSICAL BY
Central Drafting Services Ltd	Dr. M. C Robinson	Geofox Surveys Ltd.
SCALE	DATE	DRAWING No.
1 INCH = 500 FT.	OCT. 12, 1966	KRC – 100

FIG. 4