

4766

93A/6W

GEOPHYSICAL REPORT
EXPLORAM MINERALS LTD.

HS 1 - 46 mineral claims some 7 miles south
of Horsefly, B.C., Cariboo Mining Division.

Lat. $52^{\circ}16'N$ Long. $121^{\circ}22'W$ N.T.S. 92 A/6

AUTHOR: Glen E. White, B.Sc., Geophysicist

P. ENG: E. D. Cruz

DATE OF WORK: October 3-14, 1973

DATE OF REPORT: November 8, 1973

93A/6W

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|-------------------------------|-----------|
| Department of | |
| Mines and Petroleum Resources | |
| ASSESSMENT REPORT | |
| NO. 4766 | MAP |

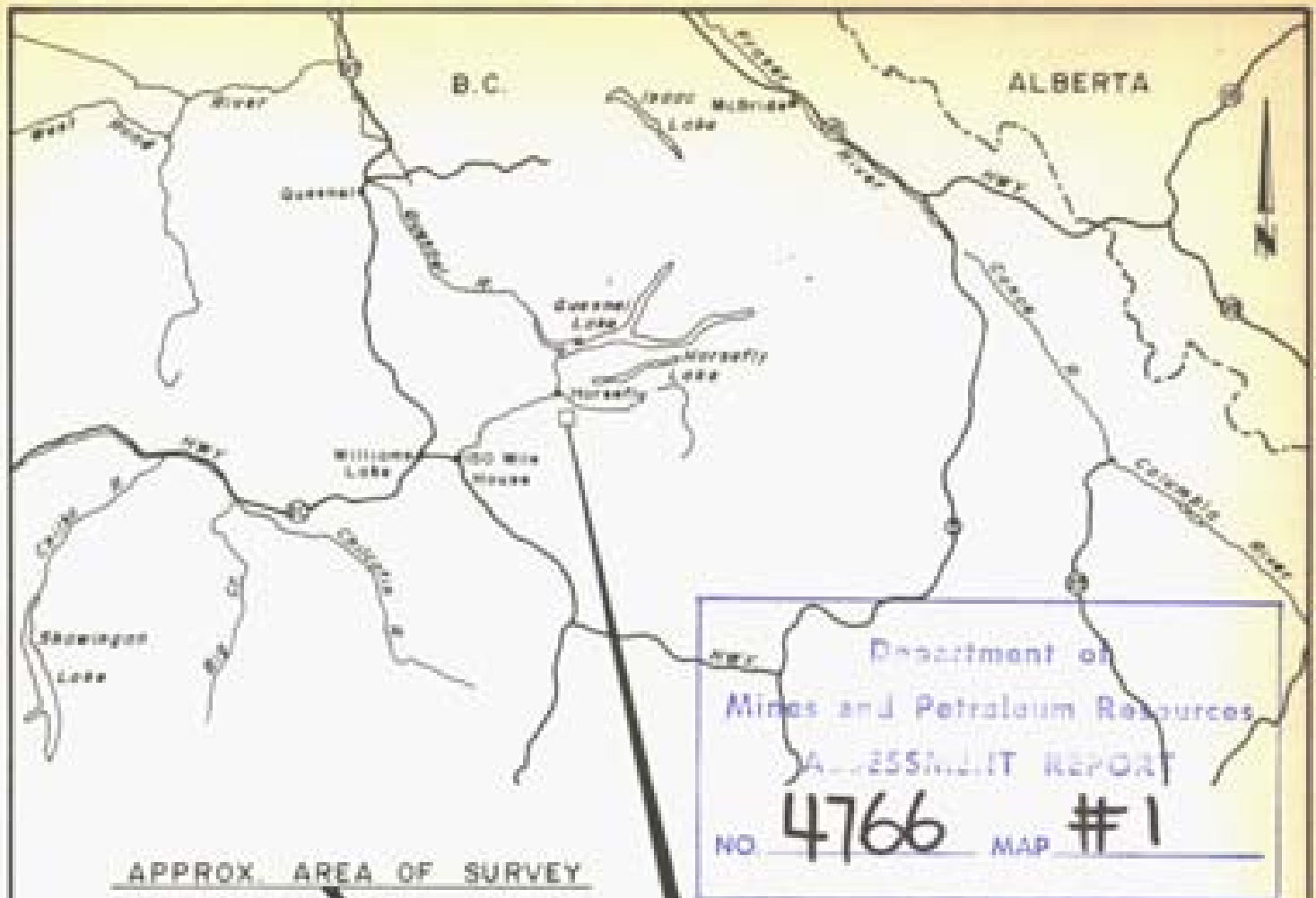
C O N T E N T S

PAGE

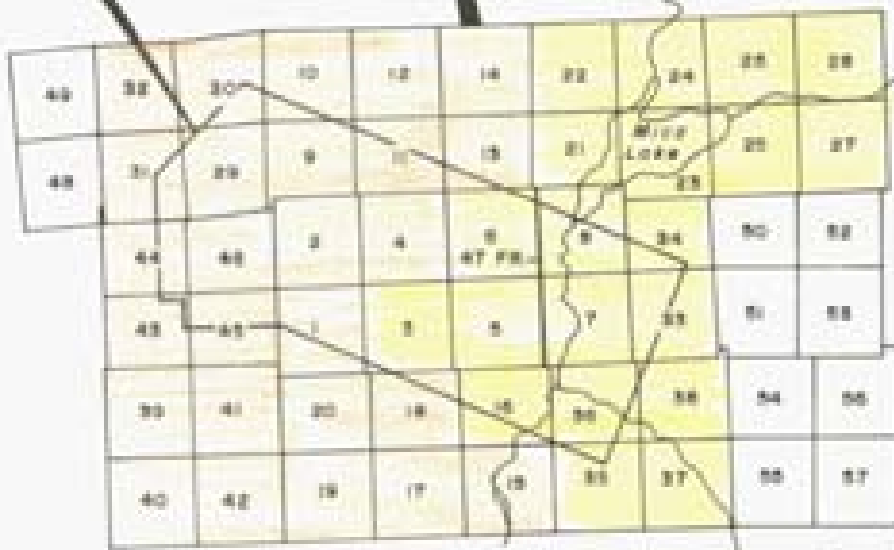
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APPROX. AREA OF SURVEY



EXPLORAM MINERALS LTD.
 HS CLAIMS
 LOCATION AND CLAIMS MAP

SCALE - LOCATION MAP - 1" = 40 MILES APPROX.

CLAIMS MAP 1/2" = 1000 APPROX.

Geo. H. White
 geophysical consulting
 Vancouver, B.C.

INTRODUCTION

During the period October 3-14, 1973, Glen E. White Geophysical Consulting and Services Ltd. conducted a program of magnetometer and induced polarization surveying over a portion of the HS mineral claims near Horsefly B.C. on behalf of Exploram Minerals Ltd.

PROPERTY

The property consists of some 46 contiguous mineral claims numbered HS 1-46. The survey covered only a portion of these claims as illustrated in Figure 1.

LOCATION AND ACCESS

The HS mineral claims are located near Mica Lake some 7 miles south of the little village of Horsefly, B.C., Quesnel Lake area, Cariboo Mining Division. Latitude $52^{\circ}16'N$, Longitude $121^{\circ}22'W$, N.T.S. 92 A/6.

Access to the northwestern corner of the claims area is by unimproved bush road from the sports camp on Starlike Lake.

GENERAL GEOLOGY

The general geology of the survey area as described by Geological Map 3-1961, Quesnel Lake, consists of various compositions of granodiorite, monzonite and syenite intrusive systems of Jurassic and/or Cretaceous or earlier age. The area is largely covered by glacial deposits and recent alluvium with very little outcrop exposure.

SURVEY SPECIFICATIONS

Survey Grid

The survey grid consists of a WNW-ESE baseline with cross lines turned off every 400 feet in a $N25^{\circ}E$ direction. The lines extend 1000 feet north, and 3000 feet south of the baseline and have been picketed and numbered at 100 foot intervals. Some 12.5 line miles of survey grid were established and surveyed. 11.3 line miles of magnetometer and 7 line miles of induced polarization surveying were conducted.

Electrode Array

The data was obtained using the "three electrode" array. This array consists of one current (C_1) and two potential electrodes (P_1 and P_2) which are moved together along the survey line at a fixed distance apart, which is known as the "a" spacing. The second current electrode (C_2) is placed at "infinity". For this survey an electrode spacing $a = 300$ feet, $n = 1$ was used for reconnaissance surveying. Detailing was completed with $a = 200$, $n = 1$ and $a = 400$, $n = 1$.

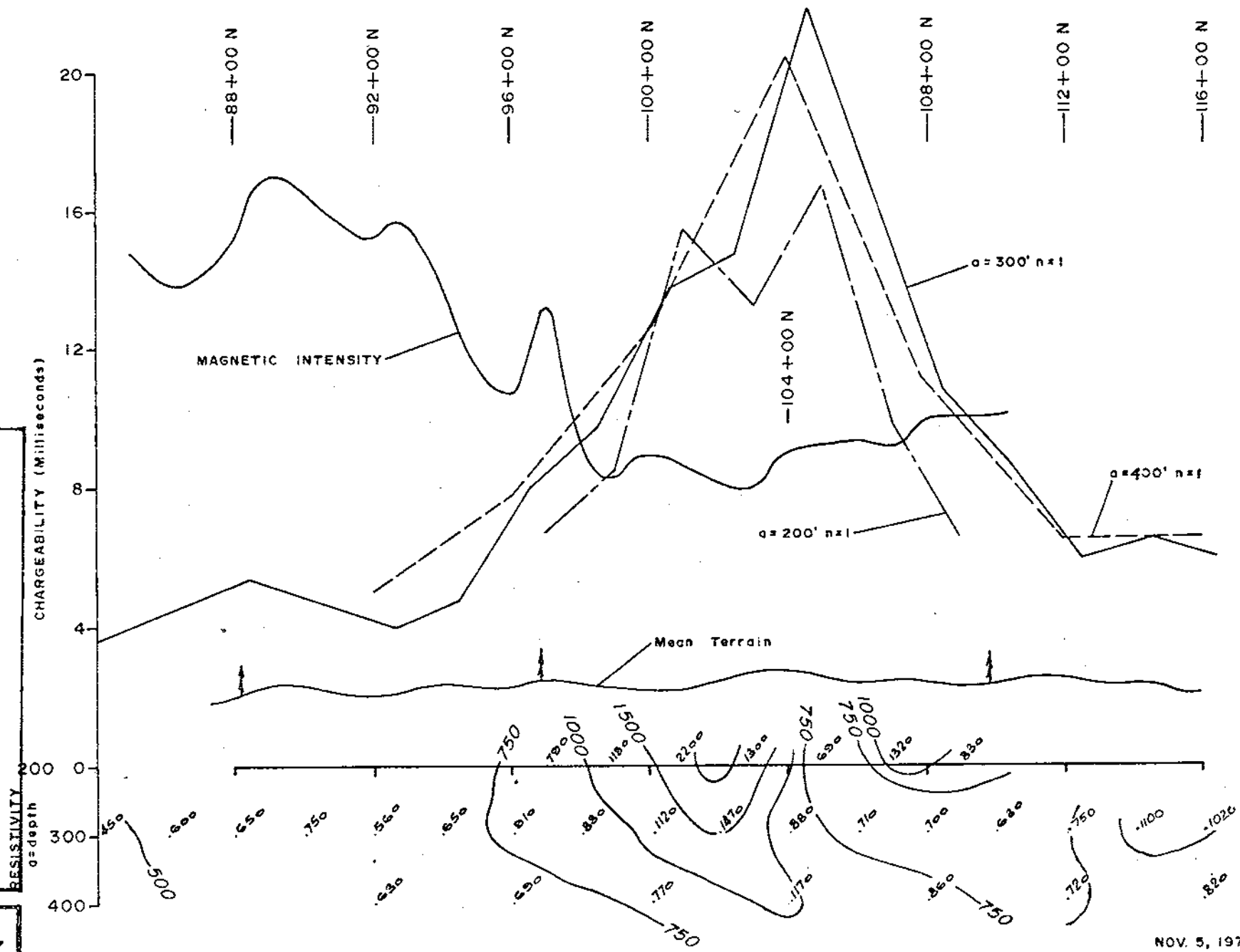
Induced Polarization System

The equipment used on this survey was the Huntec pulse-type unit. Power was obtained from a JLO 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 cycling rate is 1.5 seconds "current on" and 0.5 seconds "current off", the pulses reversing continuously in polarity. Power was transmitted to the ground through two current electrodes C_1 and C_2 , and measurements taken across two potential electrodes, P_1 and P_2 .

The data recorded in the field consist of careful measurements of the current (I) in amperes flowing through electrodes C_1 and C_2 , the primary voltage (V_p) appearing between electrodes P_1 and P_2 during the "current on" part of the cycle, and the secondary voltage (V_s) appearing between electrodes P_1 and P_2 during the "current off" part of the cycle.

The apparent chargeability (M_a), in milliseconds, is calculated by dividing the secondary voltage by the primary voltage and multiplying by 400, which is the sampling time in milliseconds of the receiver unit. The apparent resistivity, in ohm-feet, is proportional to the ratio of the primary voltage to the measured current, the proportionality factor depending on the geometry of the electrode array used. The chargeability and resistivity obtained are called "apparent" as they are values which that portion of the earth sampled by the array would have if it were homogeneous. As the earth sampled is usually inhomogeneous, the calculated apparent chargeability and apparent resistivity are functions of the actual chargeabilities and resistivities of the rocks sampled and of the geometry of these rocks.

LINE 120+00 E



Department of
 Mines and Petroleum Resources
 LICENSING AND REGULATION REPORT
 No. 4766 MAP #5

Glen C. White
 geophysical consulting
 1111 11th St. N.E.
 Calgary, Alberta, Canada

Scale: 1" = 400'

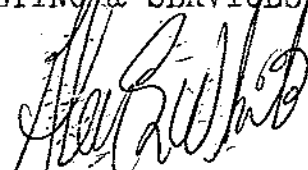
CONCLUSIONS AND RECOMMENDATIONS

During the month of October, 1973, a program of magnetometer and induced polarization surveying was completed over a portion of the HS 1-46 mineral claims, Horsefly area, B.C.

The survey located a zone of higher magnetic intensity in the eastern half of the survey area along the flank of which was delineated a well defined NE trending chargeability feature which gave a high of 22.2 milliseconds.

It is recommended that this feature be tested by a program of diamond drilling.

Respectfully submitted,
GLEN E. WHITE GEOPHYSICAL
CONSULTING & SERVICES, LTD.



Glen E. White - B.Sc.
Geophysicist

STATEMENT OF QUALIFICATIONS

Name: WHITE, Glen E.

Profession: Geophysicist

Education: B.Sc. Geophysics - Geology
University of British Columbia

Professional Associations: Associate member of Society of Exploration Geophysicists.
Active member B.C. Society of Mining Geophysicists.

Experience: Pre-Graduate experience in Geology - Geochemistry - Geophysics with Anaconda American Brass.

Two years Mining Geophysicist with Sulmac Explorations 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.

Two years Consulting Geophysicist.

Active experience in all Geologic provinces of Canada.

A P P E N D I X

Instrument Specifications

INDUCED POLARIZATION SYSTEM

A. Instruments

- (a) Type - Pulse
- (b) Make - Hunttec
- (c) Serial No. - transmitter #107 - receiver #207

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 by JLO motor, 5.2 H.P. @ 3,600 R.P.M.
- (e) Timing - electronic, remote and direct.
- (f) Readings - (i) amps (ii) volts primary and secondary
- (g) Calculate (i) Resistivity - 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 C₁ and P₁.

D. Presentation

- Contour Maps (i) Chargeability - milliseconds
(ii) Resistivity - ohm-feet

A P P E N D I X

Instrument Specifications

MAGNETOMETER

A. Instrument

- (a) Type - Fluxgate
- (b) Make - Sharpe MF-1

B. Specifications

- (a) Measurement - Vertical Magnetic Field
- (b) Range - ± 100 K gammas in 5 ranges
- (c) Sensitivity - Maximum 20 gammas per scale division
- (d) Accuracy - ± 10 gammas

C. Survey Procedures

- (a) Method - One and one half hour loops
- (b) Corrections - (i) Base
(ii) Diurnal
- (c) Station relationship - each station read for intensity of vertical magnetic field.


C E R T I F I C A T E

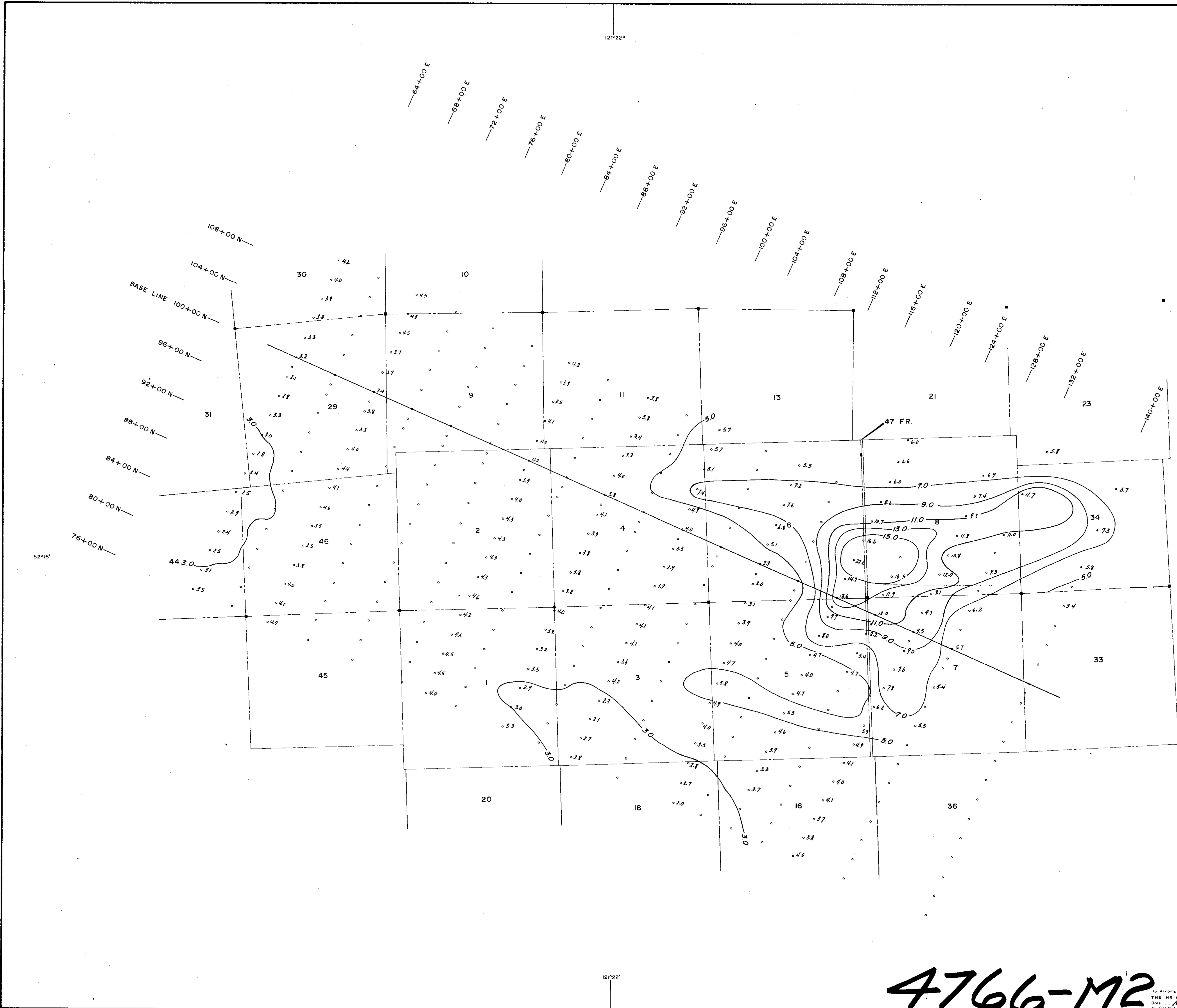
I, Ernesto D. Cruz, DO HEREBY CERTIFY AS FOLLOWS:

- (1) That I am a Consulting Mining Engineer and reside at 8596 Terrace Dr., Delta, B.C.
- (2) That I am a Graduate of Mapua Institute of Technology Phillipines (B.A.Sc.) and University of Washington (M.A.Sc.) in the Faculty of Mining Engineering.
- (3) That I am a registered P. ENG in the Association of Professional Engineers in the province of British Columbia.
- (4) That I have practised geological engineering for ten (10) years.
- (5) That I have reviewed a report dated November 8, 1973 based on work conducted by Glen E. White Geophysical Consulting and Services Ltd. under the supervision of Glen E. White, B.Sc., Geophysicist, and concur with the findings therein.
- (6) That this report consists of 8 typewritten pages and three maps.
- (7) That I have no interest directly or indirectly in the HS mineral claims or the securities of Exploram Minerals Ltd. nor do I expect to acquire or receive any.

DATED at Vancouver, British Columbia, this 8th day of November, 1973.

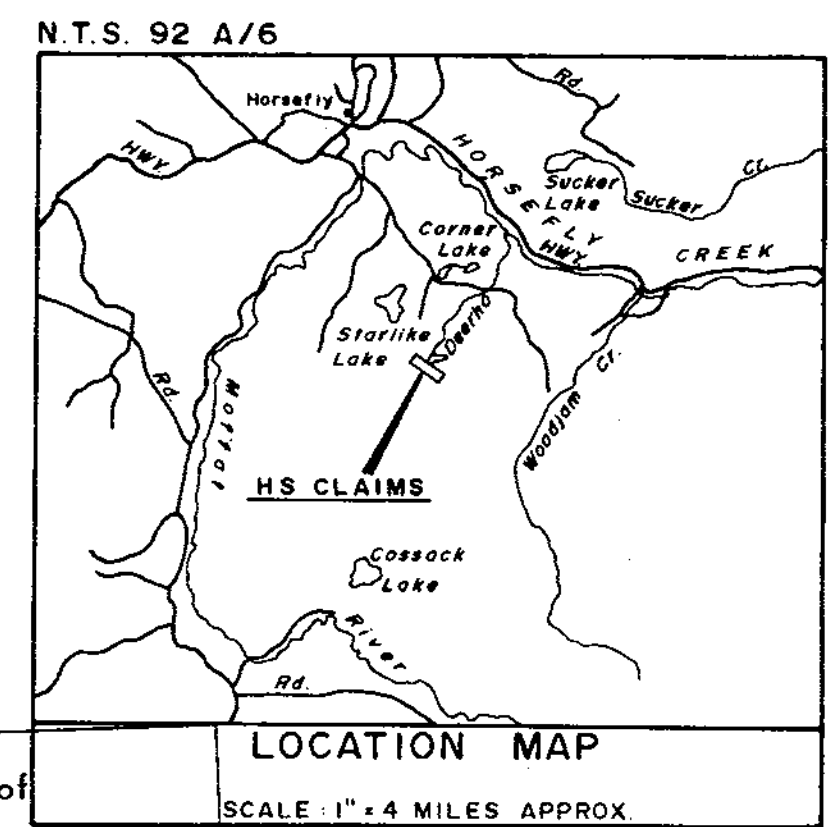
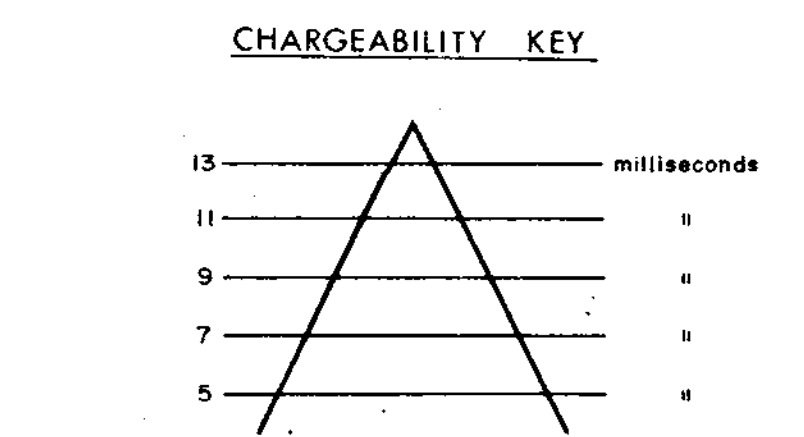
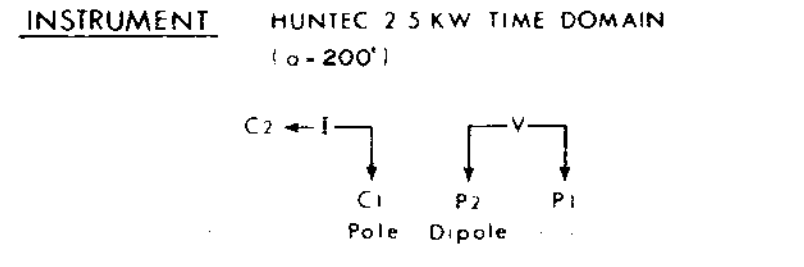
ERNESTO D. CRUZ, P. ENG


Ernesto D. Cruz
Ernesto D. Cruz, P. ENG



LEGEND

- Contour Line Contour Interval: 3, 5, 7, 9, 11, 13, 15 milliseconds
- Stations
- Outline of Claims
- Claim Posts
- == Unpaved Roads



Department of
Mines and Petroleum Resources

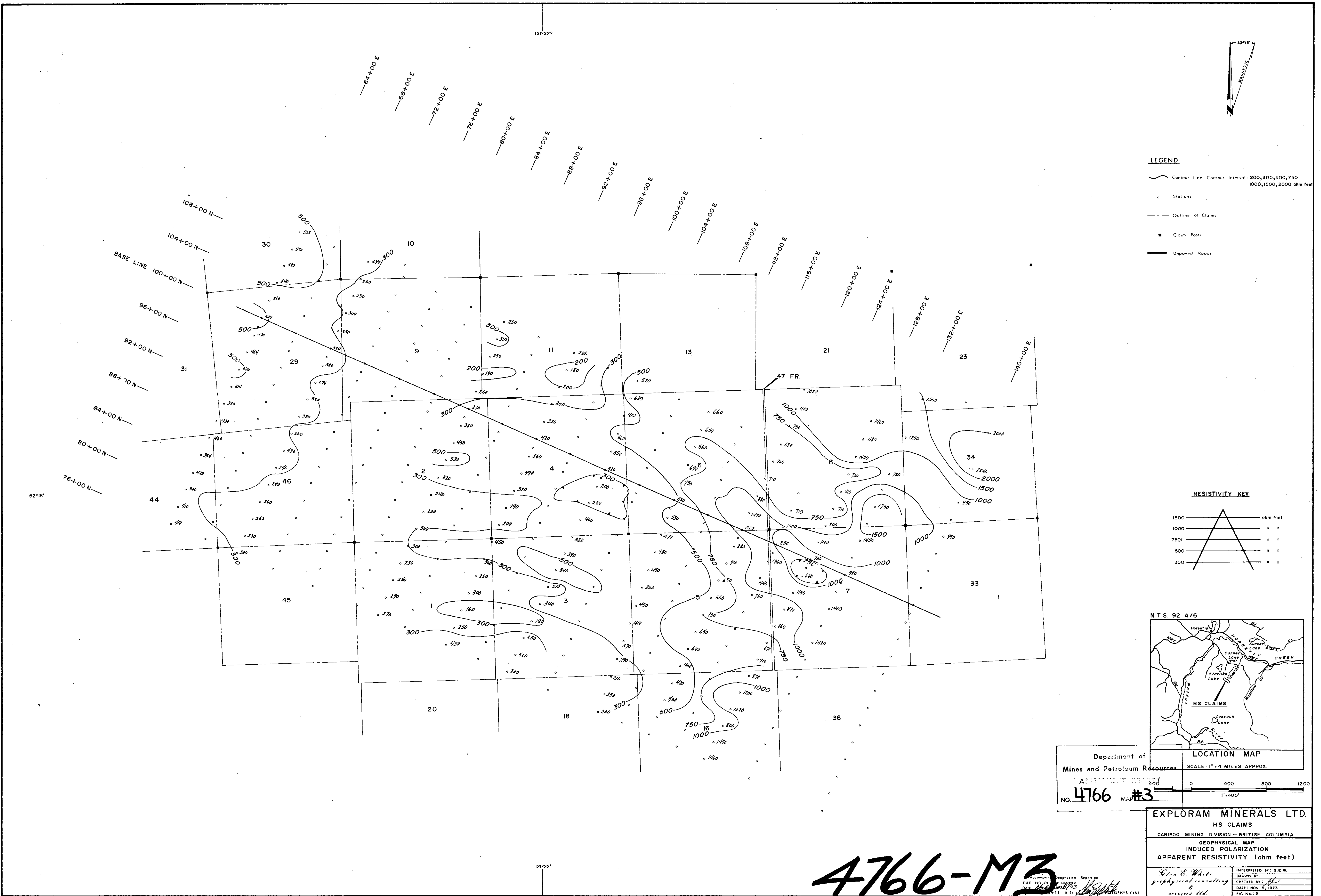
ASSESSMENT REPORT
NO. **4766** #2

EXPLORAM MINERALS LTD.
HS CLAIMS
CARIBOO MINING DIVISION - BRITISH COLUMBIA
GEOPHYSICAL MAP
INDUCED POLARIZATION
PERCENT CHARGEABILITY (milliseconds)

INTERPRETED BY: G.E.W.
DRAWN BY:
CHECKED BY:
DATE: NOV. 5, 1973
FIG. No. 2

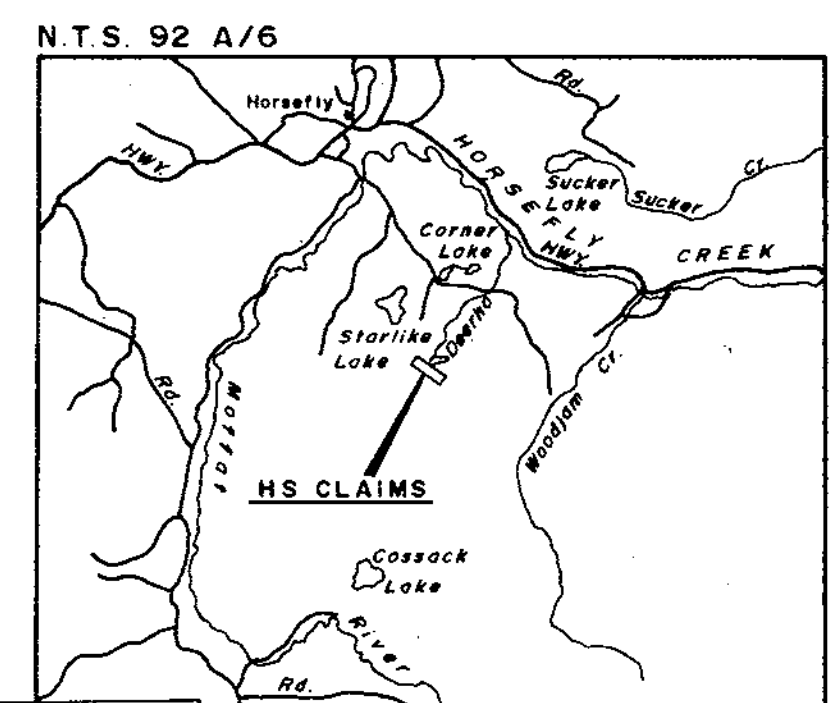
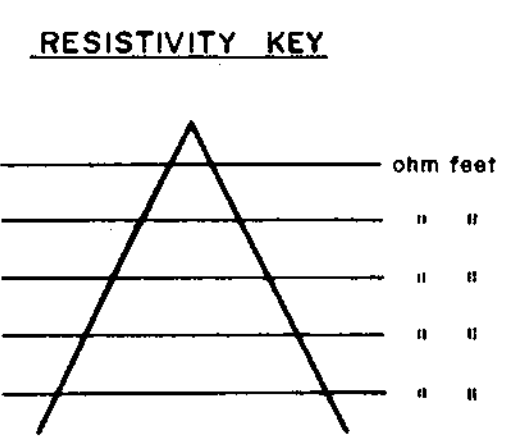
4766-M2

To Accompany Geophysical Report on
THE HS CLAIM GROUP
Date: Nov 5, 1973
By: GLEN E. WHITE, G.E.W. GEOPHYSICIST



LEGEND

- Contour Line Contour Interval: 200, 300, 500, 750, 1000, 1500, 2000 ohm feet
- o Stations
- - - Outline of Claims
- Claim Posts
- == Unpaved Roads



Department of
Mines and Petroleum Resources
ADDITIONAL REPORT
NO. **4766** MAP #3

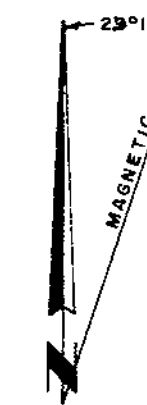
LOCATION MAP
SCALE 1" = 4 MILES APPROX.
0 400 800 1200
1" = 400'

EXPLORAM MINERALS LTD.
HS CLAIMS
CARIBOO MINING DIVISION - BRITISH COLUMBIA
GEOPHYSICAL MAP
INDUCED POLARIZATION
APPARENT RESISTIVITY (ohm feet)

Drawn by: *G.E.W.*
Checked by: *G.E.W.*
Date: *NOV 5, 1973*
Interpreted by: *G.E.W.*
Checked by: *G.E.W.*
Date: *NOV 5, 1973*
FIG No.: 3

4766-M3

121°22'

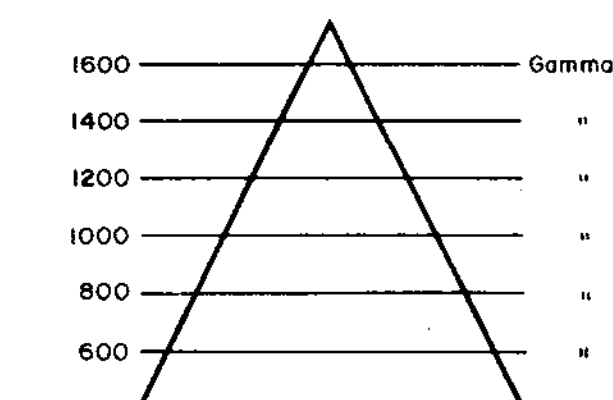


LEGEND

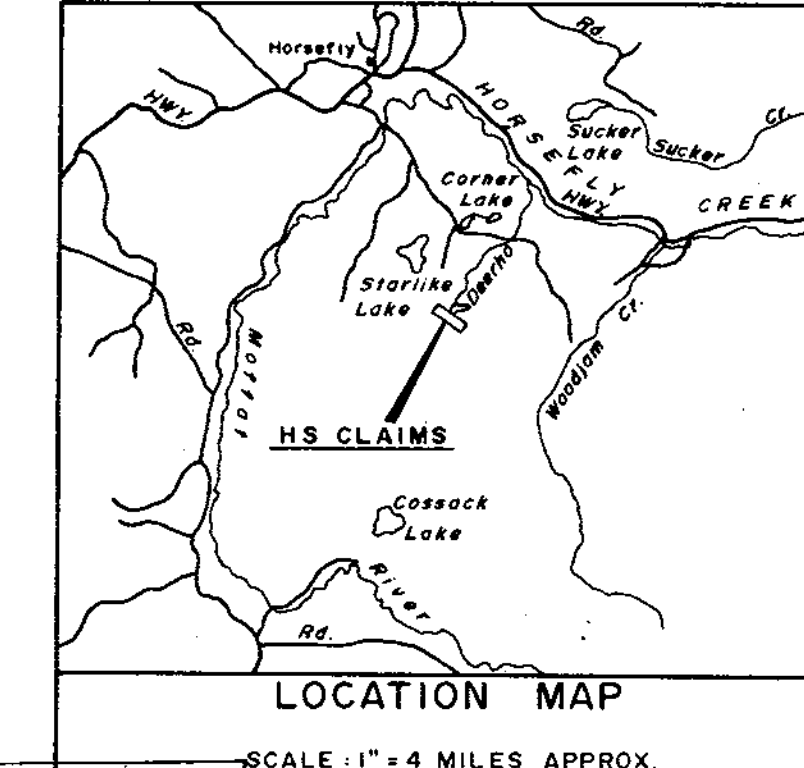
- Contour Line Contour Interval: 400,600,800,1000
1200,1400,1600,1800 Gammas
- o Stations
- - - Outline of Claims
- Claim Posts
- == Unpaved Roads

INSTRUMENT: SCINTREX MF-1 FLUXGATE

INTENSITY KEY



N.T.S. 92 A/6



400 0 400 800 1200
1" = 400'

ASSESSMENT REPORT
#4766

EXPLORAM MINERALS LTD.
HS CLAIMS
CARIBOO MINING DIVISION - BRITISH COLUMBIA
GEOPHYSICAL MAP
VERTICAL MAGNETIC INTENSITY
(Gammas)

INTERPRETED BY: G.E.W.
DRAWN BY: G.E.W.
CHECKED BY: G.E.W.
DATE: NOV. 8, 1975
FIG. NO. 4

4766-17A

121°22'

DOMINION OF CANADA:
PROVINCE OF BRITISH COLUMBIA.

In the Matter of Linecutting, Magnetometer,

To Wit:

Induced Polarization Surveying
Department of
HS Mineral Claims
Mines and Petroleum Resources

ASSESSMENT REPORT
NO. **4766** MAP

I, Glen E. White

of Glen E. White Geophysical Consulting and Services Ltd.

in the Province of British Columbia, do solemnly declare that the costs for the above surveys were as follows:

| <u>PERSONNEL</u> | <u>DATE</u> | <u>WAGES</u> | <u>TOTAL</u> |
|---|-------------------------|---------------|--------------|
| T. Ashworth..... | October 3-14, 1973..... | \$65/day..... | \$780.00 |
| A. Poile..... | "....." | 45/day..... | 540.00 |
| P. McKenzie..... | "....." | 47/day..... | 564.00 |
| M. Bell..... | "....." | 65/day..... | 780.00 |
| T. Baldry..... | "....." | 45/day..... | 540.00 |
| Meals and Accomodations @ \$15/day/man..... | | | 900.00 |
| Instrument Lease - I. P..... | | | 600.00 |
| - Magnetometer..... | | | 180.00 |
| Materials..... | | | 50.00 |
| Vehicle 4x4 including gas..... | | | 294.00 |
| Geophysical Interpretation, Maps and Reports..... | | | 850.00 |
| Total..... | | | \$6078.00 |

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 *City*
of *Vancouver*, in the
Province of British Columbia, this *9th*
day of *November*, 1973, A.D.



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

Sub : mining Recorder