#### ARIS SUMMARY SHEET

District Geologist, Kamloops

Off Confidential: 94.11.26

ASSESSMENT REPORT 23242

MINING DIVISION: Clinton

PROPERTY:

Cone Hill

LOCATION:

51 31 00 LAT

123 38 00 LONG

UTM

10 5707254 456053

NTS 092012W

CAMP:

035 Taseko - Blackdome Area

CLAIM(S):

JRG 1-4

OPERATOR(S):

Valerie Gold Res.

AUTHOR(S):

Walcott, P.A. 1994, 18 Pages

REPORT YEAR: COMMODITIES

SEARCHED FOR: Copper, Gold

**KEYWORDS:** 

Cretaceous, Conglomerates, Siltstones, Diorites

WORK

DONE:

Geophysical, Geochemical, Physical

IPOL 11.5 km

Map(s) - 6; Scale(s) - 1:5000, 1:10 000

LINE

11.5 km

SOIL 130 sample(s);ME

Map(s) - 2; Scale(s) - 1:10 000

RELATED

REPORTS:

22831,23008

| LOG NO: JAN 3 1 1994  | RD. |
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FILE NO:

#### A GEOPHYSICAL REPORT

<u>ON</u>

#### AN INDUCED POLARIZATION SURVEY

Taseko Lake Area, B.C. 51° 31' N, 123° 38' W N.T.S. 92 O/12

SECEIVED 3AN 24 1996

Gold Commission Claims surveyed: VANCOUVER, S.C.

JRG 1 to 4

Survey Dates:

Sept. 9th - 19th, 1993

Owner:

SULTAN MINERALS INC.

Vancouver, B.C.

VALERIE GOLD RESOURCES LTD.

Vancouver, B.C.

Operator:

VALERIE GOLD RESOURCES LTD.

Vancouver, B.C.

BY



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PETER E. WALCOTT & ASSOCIATES LIMITED

Vancouver, B.C.

JANUARY 1994

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#### INTRODUCTION.

Between September 9th and 19th, 1993, Peter E. Walcott & Associates Limited undertook a small induced polarization survey over part of the Cone Hill property, located in the Taseko Lake area of British Columbia, for Valerie Gold Resources Ltd.

The property is centred around the northern end of the granitic intrusive that hosts the Fish Lake deposit of Taseko Mines Limited five kilometres to the south where advanced stage definition drilling has reportedly confirmed preliminary reserves of 1.2 billion tonnes of 0.52% copper equivalent - 0.23% copper and 0.012 ounces of gold per tonne.

The survey was a continuation of the I.P. survey carried out in the previous year and was conducted on five flagged "chain and compass" lines that were established from either the previously cut north-south baseline or in case of the two extensions from the easterly ends of the 1992 flagged lines.

In addition the geophysical crew also collected soil samples at 100 metre intervals on the above lines and completed the pertinent coverage on the 1992 grid. The samples were subsequently sent to Chemex Laboratories for 32 element ICP and gold AA analyses.

Measurements (first to fourth separation) of apparent chargeability (the I.P. response parameter) and resistivity were made every 50 metres along the lines using the pole-dipole method of surveying with a 50 metre dipole.

The I.P. data were merged where applicable with last year's data and presented in contour form on individual pseudosections bound in this report. In addition the final merged third separation chargeability and resistivity readings were contoured and plotted on plan maps of the line grid - Maps W-505-7 and 8 - at a scale of 1:10,000 that accompany this report.

Similar treatment was afforded the copper and gold soil results which are displayed on Maps W-505-3 and 4 that also accompany this report.

#### PROPERTY, LOCATION & ACCESS.

The property is located in the Clinton Mining Division of British Columbia and consists of the following claims:

| Claim Name | Record No. | No. of Units | Anniversary |
|------------|------------|--------------|-------------|
| BOOT 1     | 209404     | 20           | May 5th     |
| BOOT 2     | 209405     | 20           | May 6th     |
| JRG 1      | 311541     | 20           | July 22nd   |
| JRG 2      | 311542     | 20           | July 23rd   |
| JRG 3 - 7  | 311543-47  | 1            | July 23rd   |

The claims are situated on the western extreme of the Chilcotin Plateau on and around Cone Hill, some 130 kilometres southwest of the city of Williams Lake, British Columbia.

Access was obtained from Williams Lake by paved highway (90 kilometres) to the settlement of Hanceville, then by good all weather gravel road - Taseko Lake - Nemaiah Valley road - for some 70 kilometres to the Davidson Bridge, where the exploration camp was pitched, and thence south along the east side of the river on the Fish Lake access road - grid east of this road.

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#### PURPOSE.

The purpose of this survey was to continue to test the potential of the property to host porphyry style copper mineralization such as at Fish Lake some 5 kilometres to the south by filling in and extending the grid to the east where the 1992 programme failed to define the limit of either the chargeability anomalies or gold-copper soil anomalies.

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#### PREVIOUS WORK.

Previous work on the property has consisted of airborne magnetic and VLF electromagnetic surveying, prospecting and geological mapping, and reconnaissance geochemical surveying in addition to the 1992 geological mapping, soil geochemistry and induced polarization programme.

For further detail the reader is referred to reports written by the staff of Brinco and Placer Dome, as well as to reports on the 1992 programme by A.G. Troup, P.Eng. and Peter E. Walcott, P.Eng., held by Valerie Gold Resources Ltd.

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#### GEOLOGY.

The reader is referred to the many published and unpublished reports on the Fish Lake deposit, the previously mentioned reports of Brinco and Placer Dome, and to the 1992 engineering report on the property by A.G. Troup of Archean Engineering Ltd.

Generally the area is underlain by a northwesterly trending Cretaceous volcanic and associated clastic sequence intruded by porphyries and diorites of probable Tertiary age. In some places flat-lying younger Tertiary mafic volcanic flows and tuffs cover the earlier sequences.

Mapping by Tipper (1978) shows the northern extent of the pluton that hosts the Fish Lake deposit to underlie the southern central portion of the property, with conglomerates and siltstones of the Kingsvale Group to the west. Outcrop on the property is minimal, probably in the order of one to two percent.

Mineralization found on the property to date has been limited to minor pyrite in local alteration in the intrusive.

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#### SURVEY SPECIFICATIONS.

The induced polarization (I.P.) survey was conducted using a pulse type system, the principal components of which are manufactured by Huntec Limited of Metropolitan Toronto, Ontario, and BRGM Instruments of Orleans, France.

The system consists basically of three units, a receiver (BRGM), a transmitter and a motor generator (Huntec). The transmitter, which provided a maximum of 2.5kw d.c. to the ground, obtains its power from a 2.5 kw 400 c.p.s. three phase alternator driven by a gasoline engine. The cycling rate of the transmitter is 2 seconds "current-on" and 2 seconds "current-off" with the pulses reversing continuously in polarity. The data recorded in the field consists of careful measurements of the current (I) in amperes flowing through the current electrodes  $C_1$  and  $C_2$ , the primary voltages (V) appearing between any two potential electrodes,  $P_1$  through  $P_7$ , during the "current-on" part of the cycle, and the apparent chargeability,  $(M_a)$  presented as a direct readout in millivolts per volt using a 200 millisecond delay and a 1000 millisecond sample window by the receiver, a digital receiver controlled by a micro-processor - the sample window is actually the total of ten individual windows of 100 millisecond widths.

The apparent resistivity ( $\int_a$ ) in ohm metres is proportional to the ratio of the primary voltage and the measured current, the proportionality factor depending on the geometry of the array used. The chargeability and resistivity are called apparent as they are values wich that portion of the earth sampled would have if it were homogeneous. As the earth sampled is usually inhomogeneous the calculated apparent chargeability and resistivity are functions of the actual chargeability and resistivity of the rocks.

The survey was carried out using the "pole-dipole" method of surveying. In this method the current electrode,  $C_1$ , and the potential electrodes,  $P_1$  through  $P_7$ , are moved in unison along the survey lines at a spacing of "a" (the dipole) apart, while the second current electrode,  $C_2$ , is kept constant at "infinity". The distance, "na" between  $C_1$  and the nearest potential electrode generally controls the the depth to be explored by the particular separation, "n", traverse.

On this survey a 50 metre dipole was employed and first to fourth separation readings were obtained.

In all some 11.5 kilometres of line were established, and some 11.5 kilometres of I.P. traversing were completed using the above method.

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#### SURVEY SPECIFICATIONS cont'd

On the geochemical survey samples were taken at 100 metre intervals along the lines from the "B" soil horizon and placed in numbered kraft envelopes, that were subsequently dried out and sent to Chemex Laboratories in North Vancouver for analysis.

In the laboratory the samples were oven dried and analysed for gold by atomic absorption and for additional 32 elements - Ag, Al, As, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, Hg, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Sc, Sr, Ti, Tl, U, V, W, Zn - by induction coupled plasma.

In all some 130 samples from 12.5 kilometres of line grid were collected and processed using the above method.

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#### DISCUSSION OF RESULTS.

The 1993 I.P. survey, which was limited in scope by financial considerations, defined the eastern limit of anomalous chargeability readings in the southeastern portion of the property as evidenced by the low chargeability background - 5 to 7 millivolts/volt - obtained on the eastern extremities of Lines 1500S, 1900S and 2500S respectively (see 1992 report).

Above the background another complex area of higher chargeability, located between 2700E and 3700E and undefined to the north and south, can be seen striking northwards across the grid as evidenced on the respective pseudosections and on Map W-505-7, the contour plan of the third separation data.

The existence of this zone was indicated by the results from the lone 1992 long eastward traverse at 1500S and formed the eastern arm of the suggestive halo as per 1992 report.

The western and central areas of the overall 1992 anomalous chargeability zone was better defined by the fill-in lines, Lines 1700S, 2100S and 2500S respectively. Unfortunately these lines were of insufficient length to properly outline the eastern anomalous zone.

Gold and copper soil anomalies as outlined by the 10 p.p.b and 30 p.p.m contours on Maps W-505-3 and 4 respectively are fairly coincident with and downslope from the eastern chargeability zone.

The western chargeability anomaly zone remains fairly coincidental with an extensive gold soil anomaly although the fill in samples on the latter has made its contour pattern more patchy.

The resistivity survey results - Maps W-505-8 - as before mostly reflected the topography with higher values over outcrop and suboutcrop although in general they seemed to show the sediments to exhibit lower resistivities than the intrusive and/or basalts.

#### SUMMARY, CONCLUSIONS & RECOMMENDATIONS.

Between September 9th and 19th, 1993 Peter E. Walcott and Associates Limited carried out a small induced polarization (I.P.) and soil sampling programme on the Cone Hill property, located some five kilometres north of the Fish Lake deposit in the Taseko Lake area of British Columbia, for Valerie Gold Resources Ltd.

The five traverses conducted further defined the western and middle areas of the complex chargeability zone discovered on the 1992 survey, and revealed the eastern extent and nature of the similar but slightly weaker eastern anomalous area still as yet undefined to the north.

These results confirmed the suggestive higher chargeability halo (greater than 20 millivolts/volt) around the central core (high teens), a pattern seen to the south over the Fish Lake deposit, and by inference the signature of a similar sulphide system.

As a result the writer recommends that additional work be carried out on the property to continue investigating this potential sulphide system. To this end he suggests that the 1992 recommendations be carried out in full.

Respectfully submitted,

PETER E. WALCOTT & ASSOCIATES LIMITED

Peter E. Walcott, P.Eng. Geophysicist

Vancouver, B.C.

January 1994

APPENDIX

- i -

#### COST OF SURVEY.

Peter E. Walcott & Associates Limited undertook the survey on a contract basis for a total cost of \$25,951.96 (GST included) broken as follows:

|    |   | \$25,951.96 |
|----|---|-------------|
| 4. | Reporting including map presentation            | \$3,881.96  |
| 3. | I.P. survey 11.5 km at \$1,190.00 per km        | \$13,685.00 |
| 2. | Line grid 11.5 km at \$490.00 per km            | \$5,635.00  |
| 1. | Geochemical sampling 12.5 km at \$220.00 per km | \$2,750.00  |

- ii -

#### PERSONNEL EMPLOYED ON SURVEY.

| FFE  | Name             | Occupation              | Address   | Dates  |
|--|------------------|-------------------------|---|--|
|  | Peter E. Walcott | Geophysicist            | Peter E. Walcott & Assoc.<br>605 Rutland Court,<br>Coquitlam, B.C.<br>V3J 3T8 | Sept.13 - 19,<br>Oct. 13 - 15,<br>Jan. 17 -19,<br>1994 |
|  | G. MacMillan     | Geophysical<br>Operator | <b>11</b>   | Sept. 9 - 19<br>1993                                   |
| THE STATE OF THE S | P. Charlie       | 17                      | 11  | 99   |
| Terms  | G. Karacunte     | 11                      | 11·   | 77   |
| atana  | C. Speropoulos   | 11:                     | Ħ   | 77   |
| <b>2</b> 749   | D. Wilson        | 11                      | Ħ   | 11   |
|  | A. Walcott       | 89 .                    | 11  | Nov. 20 - 24,<br>1993                                  |
|  | J. Walcott       | Typing                  | 11  | Jan. 22, 1994  |

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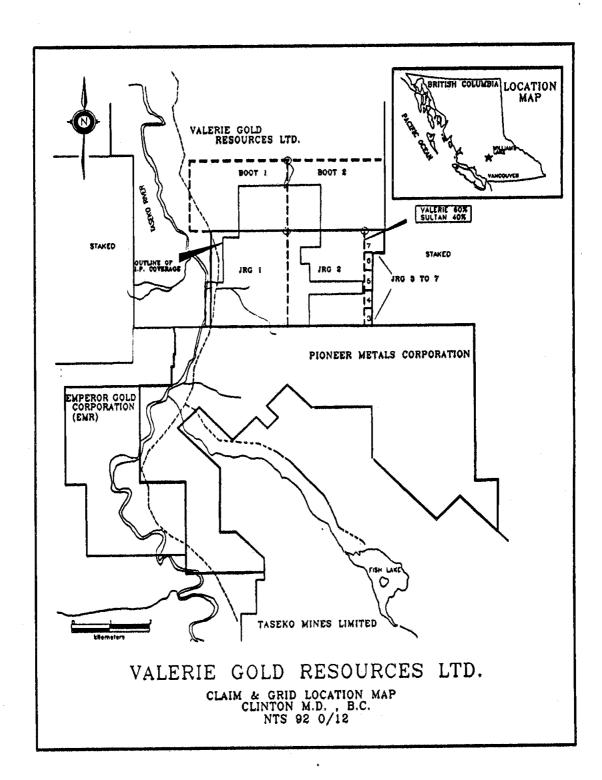
#### CERTIFICATION.

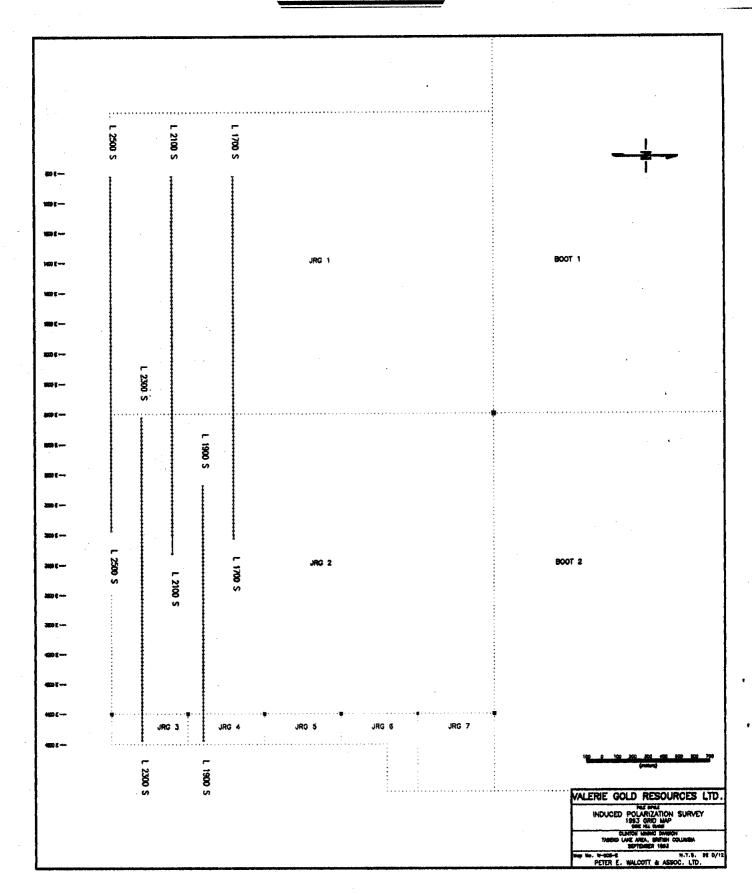
I, Peter E. Walcott, of the City of Coquitlam, British Columbia, hereby certify that:

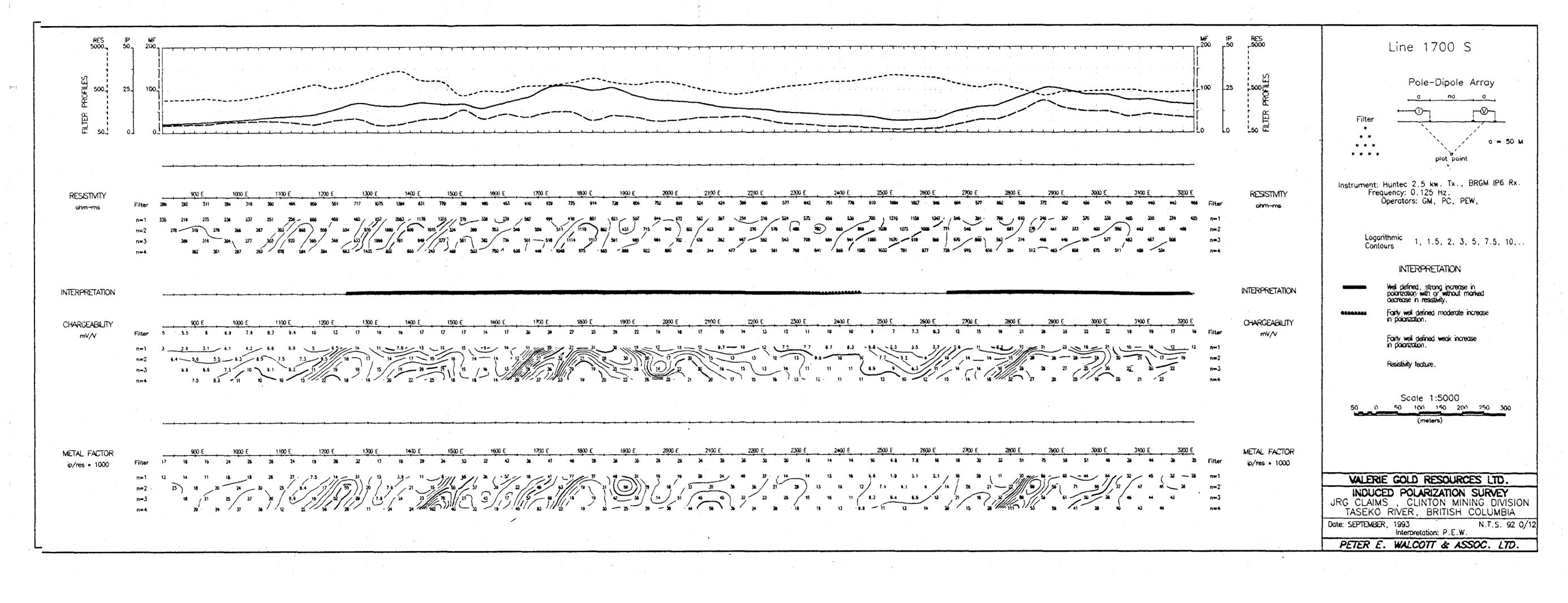
- 1. I am a graduate of the University of Toronto in 1962 with a B.A.Sc. in Engineering Physics, Geophysics Option.
- I have been practising my profession for the last thirty one years.
- I am member of the Association of Professional Engineers of British Columbia and Ontario.

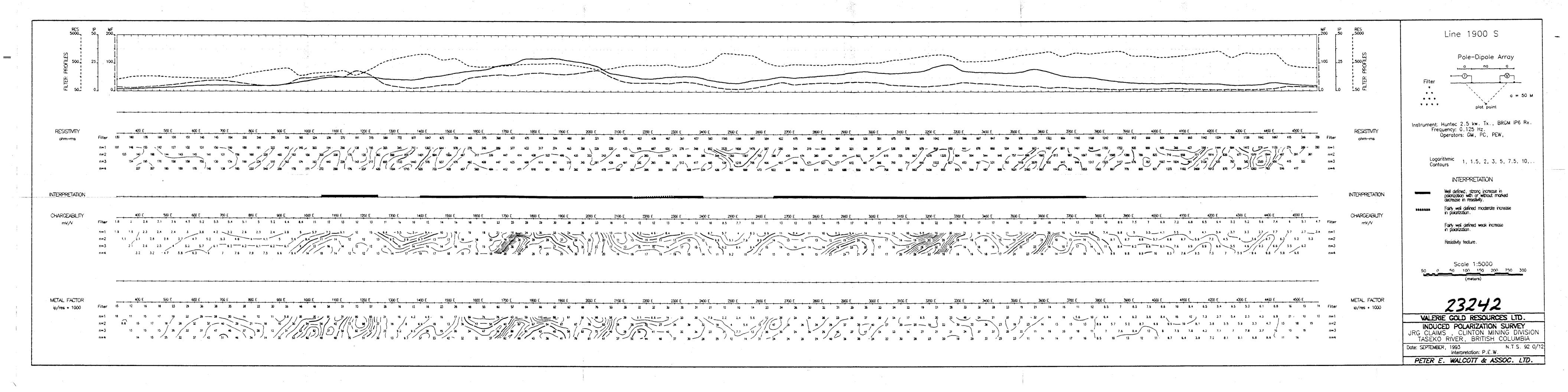
Peter E. Walcott, P.Eng.

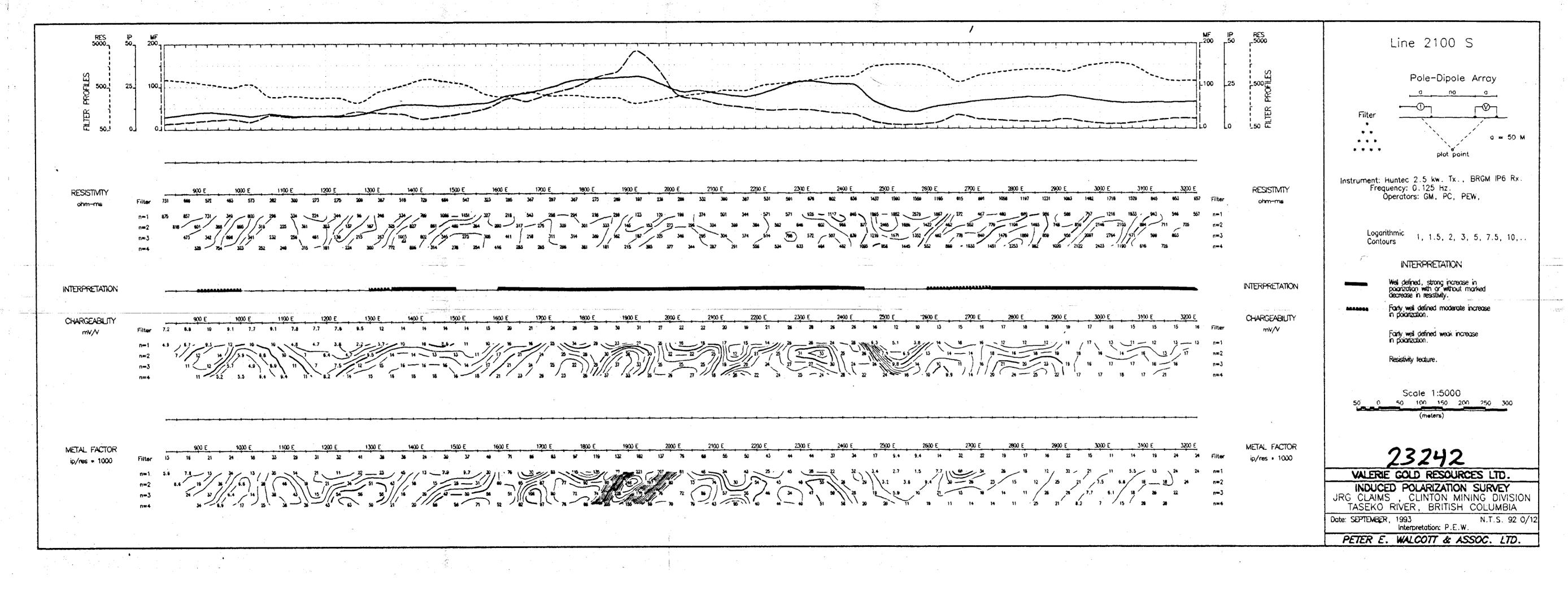
Vancouver, B.C. January 1994

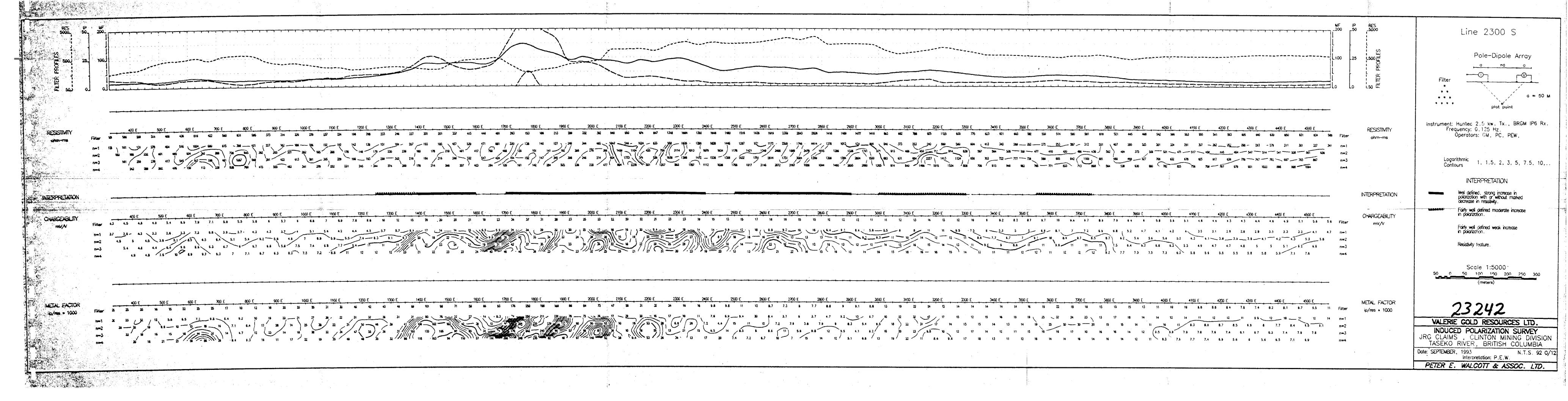


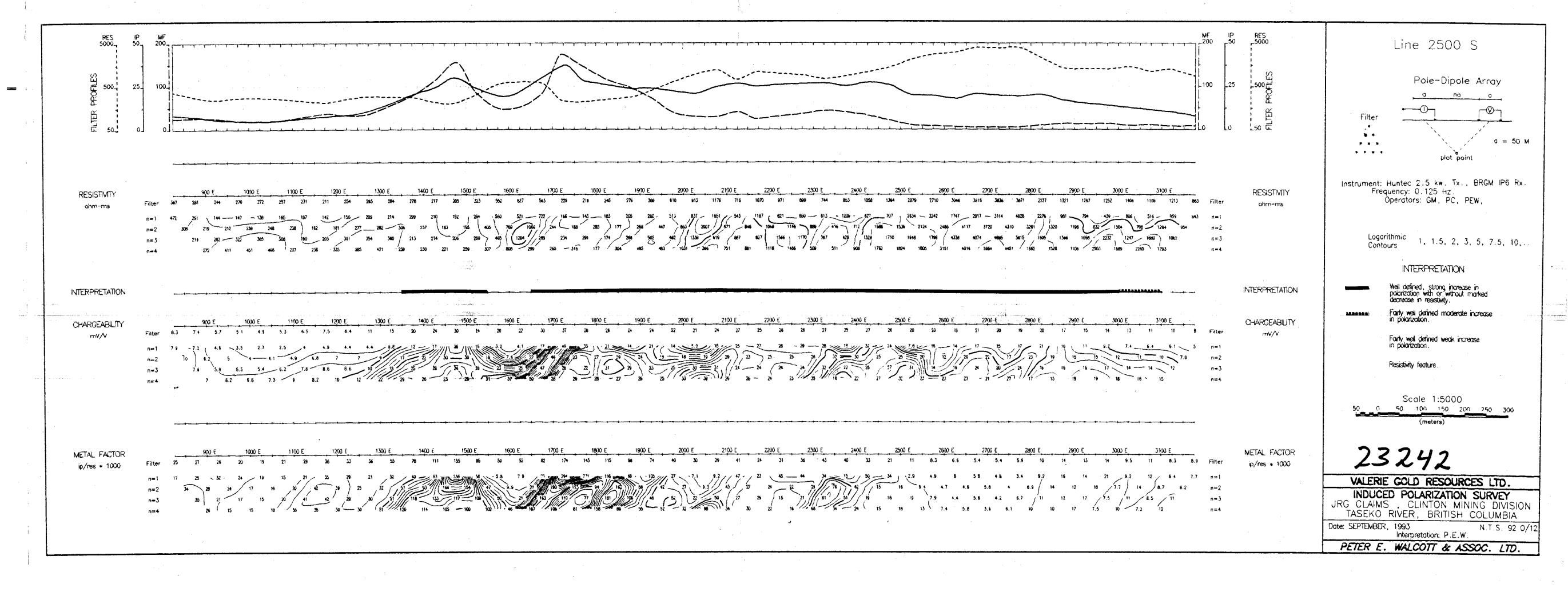


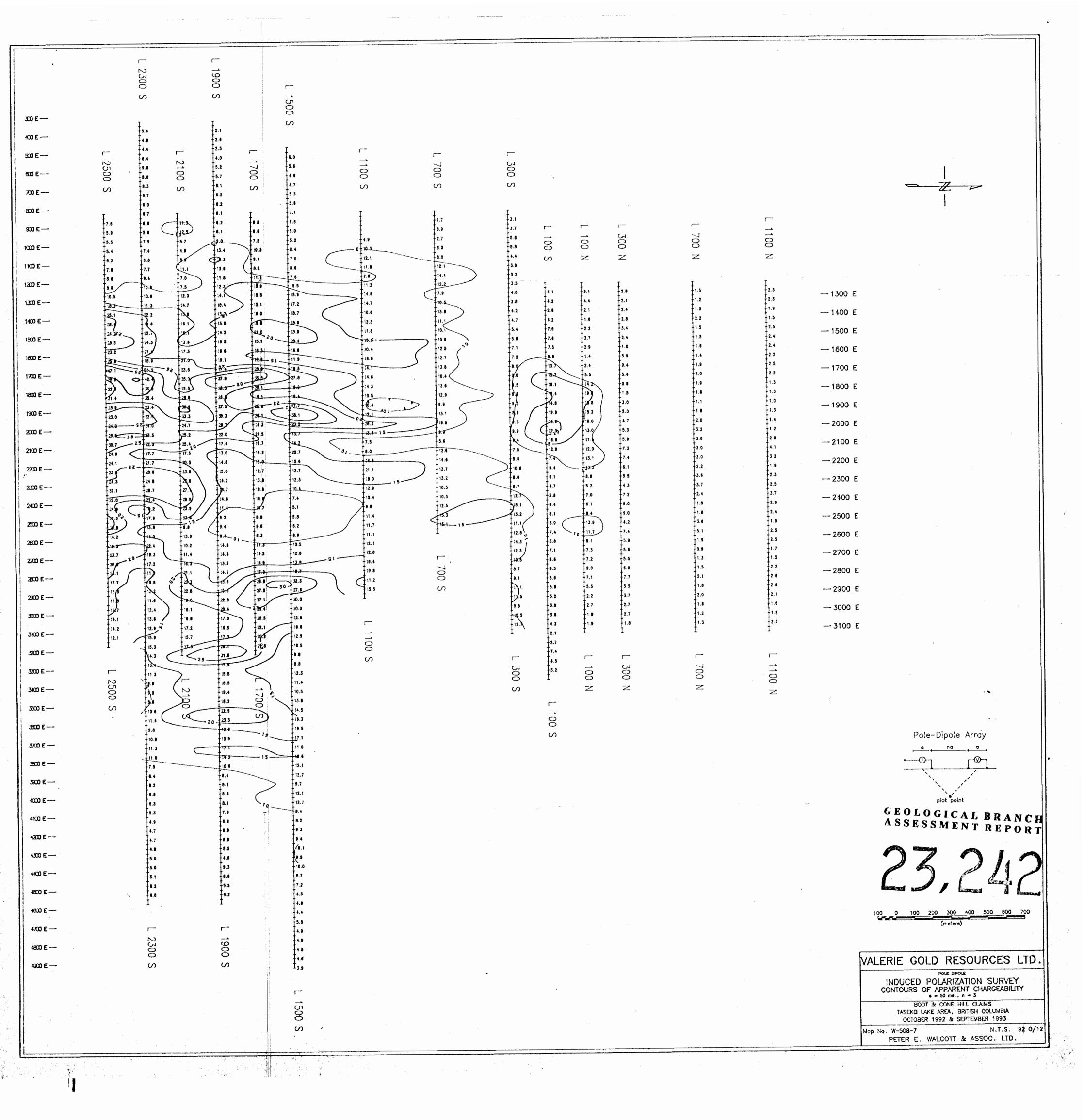


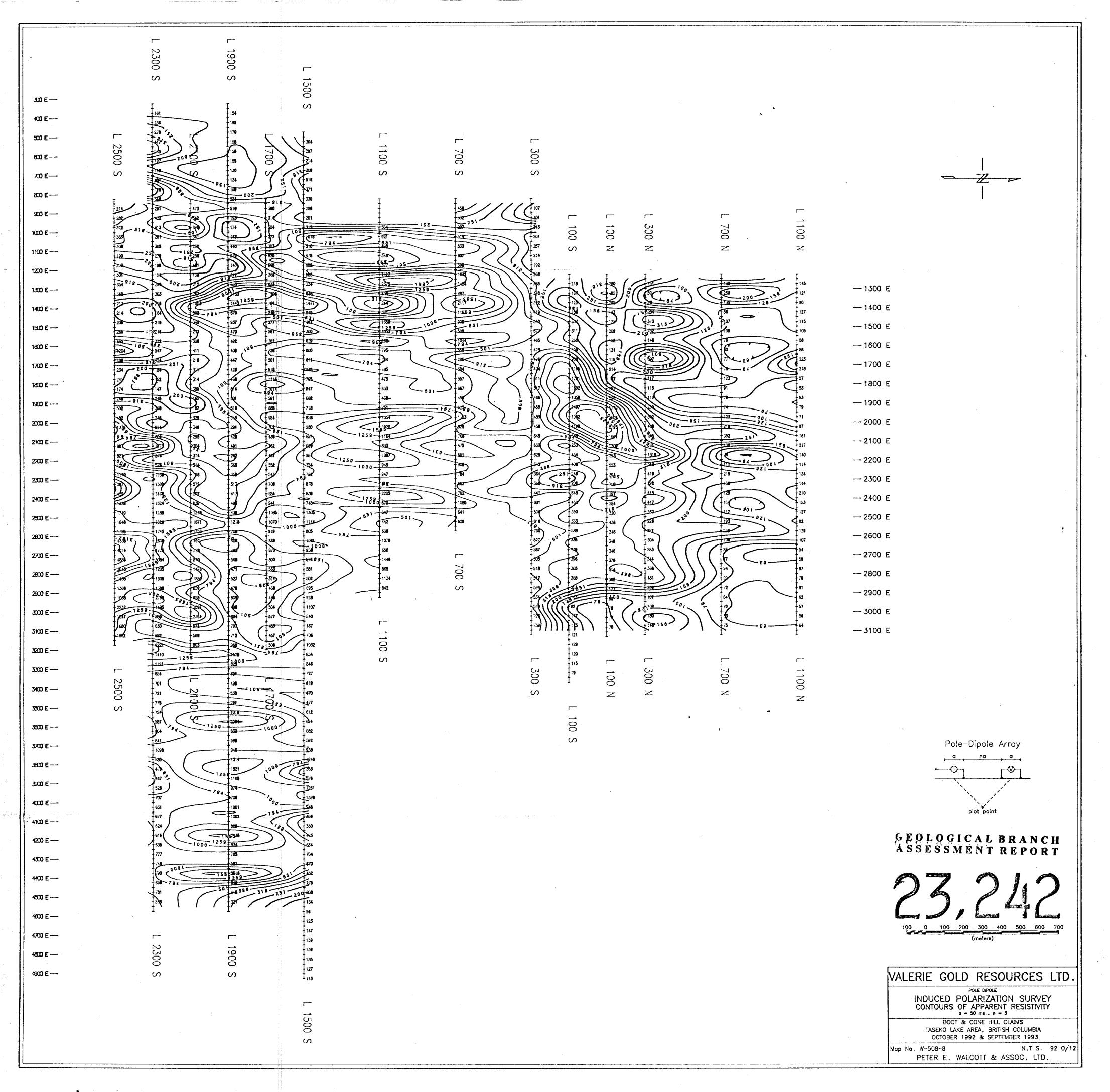


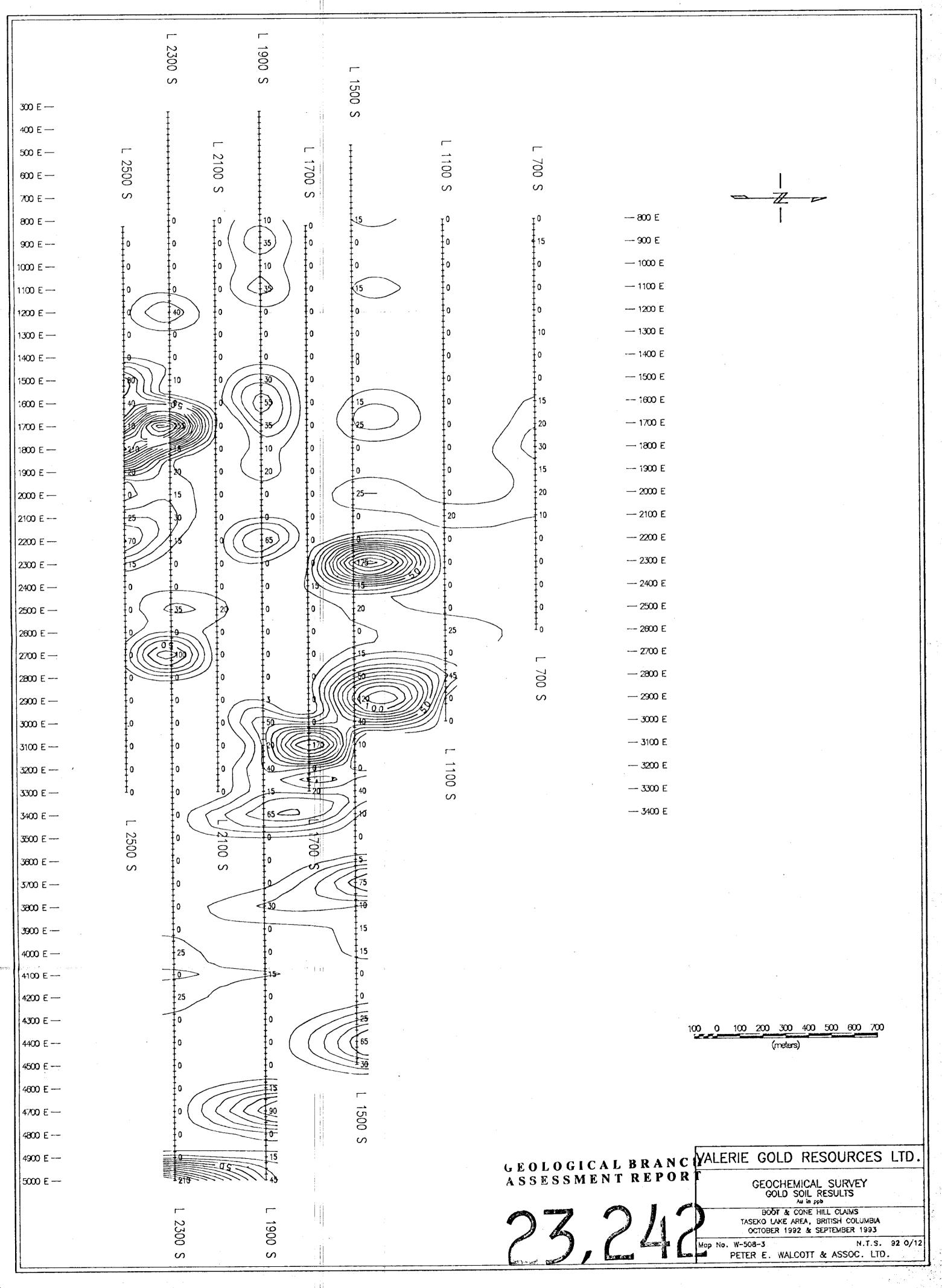












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