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Gold Commissioner's Office
VANCOUVER, B.C.

Dog Claim Group

Nelson M. D. , B. C.

Assessment Report Oct., 1999

By: M. A. Kaufman

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

26,049

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Maps and Sections of Peter E. Walcott
I. P. Survey

Property Location and Claim Map, 1: 20,000 Scale

Geophysics, Geochemistry Compilation Map, 1: 5000 Scale

INTRODUCTION

The described area is situated approximately 10 km NNW of Salmo, B. C. along the southern and central branches of Craigtown Creek. Access is via the Erie Creek Forestry Road to the Craigtown Creek bridge and then by the B. C. forestry - Erie Creek Forest Reserves Ltd. road which follows the southern branch of Craigtown Creek.

Extensive gold in soils anomalies are located on the Stewart Claim Group (Stewart multi unit claims #1 and 6 - 8) jointly owned by Eric and Jack Denny, and on the Dog Claim Group owned by M. A. Kaufman, which is contiguous on the west with the Stewart claims.

The first known exploration of this area was during the late 1970s and early '80s, when B. P. - Selco surveyed the whole Stewart Claim Group with an aerial Input EM and Mag survey. Neither these results nor their ground follow up inspired them to carry out further work here. Portions of these gold anomalies were first recognized by Minnova during the late '80s simultaneous with discovery of western portions of it by myself working as a contractor for Lacana/Corona. Reassaying of previously gathered government survey samples released by the B.C.D.E.M. in the early '90s also indicated significantly anomalous gold in the sediment of the south branch of Craigtown Creek. Minnova subsequently carried out soils geochemical surveys followed by an I.P./ mag. geophysical survey. This work delineated extensive areas of anomalous gold with coincident I.P. highs which were designated by Minnova as the "North" and "South" anomalies. Corona carried out a geological and sampling program west of the Stewart Property on the original Dog Claims. Corona found sporadically anomalous gold in widespread rock samples, and interpreted it to represent "porphyry" type mineralization. Before they were able to carry out systematic sampling, corporate problems forced them to drop their claims. Similarly, Minnova in the early '90s was forced to relinquish the Stewart Property before ever drilling any targets.

During the early '90s, the Stewart Claim Group was optioned by Cameco Corp. It drilled four core holes in the northern portion of Minnova's "North Anomaly", and carried out further sampling on the "South Anomaly". The holes cut significantly anomalous gold, but no meaningful ore intercepts, and Cameco pulled out. During this time I acquired the Dog Claims and expanded them. As some of the Minnova soils anomalies along with high I.P. responses appeared to be open to the west I was prompted to carry out soils sampling south of where Corona had previously sampled. These results proved encouraging. Based upon the facts that there were still promising drill targets on the Stewart portion of the anomaly and that the target appeared to be open to the west, Orvana Minerals Corp. optioned both the Stewart and Dog Claim Groups, and carried out comprehensive geological mapping, geochemical sampling and a VLF Em and Mag survey during 1996 and 1997. Orvana's work delineated additional gold anomalies on the Stewart claims, and large areas of anomalous gold on the Dog claims. These recently discovered anomalies cover an area at least as large as the original Minnova anomalies. Overall, the area of gold anomalies now appears to extend more than three km. in a NNE direction, and up to one km. across. Some of the recently discovered gold anomalies contain coincidental copper, and/or lead. One contains coincidental arsenic. Based upon its work, Orvana selected a number of drill targets. Because of the terrible market conditions in 1997 Orvana was reluctantly forced to relinquish its options on the claim groups without being able to undertake any drilling.

During 1998 I carried out an evaluation of all previous work. This involved systematic geological traverses over all of the geochemically anomalous areas, and preparation of

1:5000 scale maps which integrate the past I.P. data with all of the geochemical data. As well, I contracted Lloyd Geophysics Inc. to reevaluate its VLF/Mag data in areas where there is old I.P. coverage, and in light of Orvana's geochem. information. The purpose of this work was to evaluate Orvana's drill hole selections, possibly to select other drill sites, and to determine what other further exploration might be appropriate. The detailed results of this work are described in Assessment Report # 25702, and will not be repeated herein. Other assessment reports providing important information pertaining to the properties are 25388, 24789, 24123, 23537, 23092, 23018, and 22829.

One of the main conclusions of my previous studies of the properties was that some of the I. P. anomalies detected by Minnova appeared to be open to the west. Accordingly, an important step in expanding previous work was to extend the I. P. surveys westward from the Minnova coverage. It was hoped that this work might reveal the limits of these Minnova anomalies, and that it might determine whether there are any sulfide zones in proximity to the large gold soils anomalies found on the Dog Claims, never covered by Minnova's I. P. survey. A total budget of approximately \$10,000.00 was allotted to undertake an I. P. survey during 1999, and the survey was carried out by Peter E. Walcott & Associates Ltd. After the survey was completed, I made brief geological investigations of some of the newly detected anomalous areas.

The I. P. survey was successful both in meaningfully extending the Minnova "South" anomaly, and in detecting new sulfide zones coincident or in close proximity to soils geochemical anomalies on the Dog Claims. Because of the imposed budgetary restraint, I. P. coverage was not complete, and there are gaps in the coverage leaving several anomalies open.

After a brief geological summary excerpted from Assessment Report 25702, this report will describe the results of the 1999 work.

Geology Summary

Most of the Craigtown Creek gold anomalous area is situated on the south slopes of the ridge dividing the southern and central branches of the creek. But significant anomalous zones are also found on the north slope of this ridge, and on the north facing slope south of the south branch. The overall zone of gold anomalies is known to extend over a distance of three km. in a NNE direction, and is generally at least several hundred metres across. It is not one continuous anomaly, but some of the zones within it are more than one km. long. Perhaps the area's most distinguishing feature from the point of geological interpretation is its general lack of outcrop. Most geological interpretations made by past workers have been based upon float or upon widely scattered, very small outcrops.

In most general terms I would describe the area's geology as follows. The area is underlain by Elise volcanics, mostly intermediate to basic composition. Fragmental units are common within this volcanic section. A widespread rock type recognized by past workers is andesitic tuff. Bodies of augite porphyry and fine grained "diorite" found in the area might be coeval with the Elise. Possibly, other intrusions might also be related in time to the Elise. Large intrusions of acidic to intermediate composition located mostly in the western part of the claims and further west are thought to be Nelson Intrusions. Small, elongate felsic bodies and "plugs" recognized by Orvana could possibly be anything from Elise age to Coryell. Minnova cores show that there are probably some felsic tuff interbeds within the Elise section.

In my mapping I have found no discernible bedding features in the small outcrops that I have seen, nor have I seen any clear formational contacts, except for a few in the Minnova drill cores. Accordingly, I must say that structural interpretation is at best conjectural. Aerial photos show a WNW linear trend which likely represents a fracture system. This same pattern is seen at the Arlington Relief Mine located a few kilometres NW of this area. The general NNE trend of the geochemical anomalies might indicate some kind of structural or stratigraphic control. Patterns evident on all geophysical maps (VLF, Mag and I.P.) indicate general N - S trends which likely reflect overall formational strikes. A narrow NNE trending relative low saddle seen on the B. C. government areal magnetic map (# 8480G) roughly coincidental with our anomalous zones might be caused by structure or stratigraphy.

Orvana has noted several types of mineralization; widespread disseminated pyrite/pyrrhotite with minor chalcopyrite in all rock types except late dykes, magnetite stockwork associated mainly with felsic rocks, and vein-type (quartz-pyrite, and massive pyrite-pyrrhotite-chalcopyrite).

All of the past geological interpretations have emphasized the presence of an alkalic porphyry system. The widespread disseminated sulfides seen can be interpreted as being porphyry in style, but I believe that the mineral occurrence here is better explained by possible stratiform mineralization in the volcanics affected by contact metamorphism and/or metasomatism.

Geophysical Report

I. P. Line Coverage

Line 7900N; 5500E to 6000E* ----- .5km
Line 8000N; 5500E to approx. 6250E ----- .75km
Line 8100N; 5500E to 6400E ----- .9km
Line 8400N; 5700E to 6000E ----- .3km
Line 8500N; 5200E to 6400E -----1.2 km
Line 8600N; 5250E to 6400E -----1.15km

The I. P. results are self explanatory by reviewing the attached Walcott I. P. sections and maps along with my 1:5000 scale general compilation map. Below is a copy of brief comments by Peter Walcott, Principal of Peter E. Walcott & Associates, followed by a more detailed report by myself coordinating the I. P. data with geology and geochemistry of the area. A report on the I. P. instrumentation and methodology is enclosed in the appendix.

* Grid locations, unless designated as Minnova, refer to the Orvana Grid on accompanying maps.

Peter Walcott Comments

Mo,

I have looked at the IP results and would make the following observations:

It would seem to me that the intrusives should have a lower chargeability and higher resistivity background than the volcanic package. This does not fit so well with your volcanic breccia outcrop near 5920E,8500N as seen below.

The high level airborne mag shows a crescent moon shaped mag high trending thro' the Claire and southern Dog claims presumably defining the Nelson granodiorite. The ground expression of this can be seen on the mag work done for Orvana by Lloyd Geophysics.

The limited IP survey outlined 4 areas of anomalous chargeability response namely Zones A,B,C and D, all of which are undefined.

Zone A lies at the western ends of Lines 8500N & 8600N, Zone B in the middle of Lines 8400N, 8500N & 8600N, Zone C at the western ends of Lines 7900N, 8000N & 8100N, and Zone D at the eastern ends of Lines 8000N, 8100N, 8500N & 8600N.

Zone D is the western extent of the anomaly between Lines 1600S & 600S (Minnova) as defined by Scott Geophysics for Minnova Inc. Both this and Zone A appear to be located in underlying volcanic rocks, while Zones B & C appeared to be sourced in intrusives.

All zones appear to have general gold geochemical coincidence.

While it might not be prudent to entertain any drilling until the anomalies are fully or more better delineated Zone A could be tested by a vertical hole on L8500N to intersect 5350E at 50 metres below surface - gave this so you can angle hole if need be.

Zone B - consisting of two possible sources - could have its better source investigated by a hole on L8500N at 5837.5E to intersect source at 70 metres below surface. This anomaly is not as strong as the others but there is no ratio between Au and % sulphides and this to me appears to be in intrusive.

Anomaly C would appear to have two shallow causative sources on L8000N as seen by the pant leg effect, and is probably best investigated by an angle hole drilled westwards to intersect 5725E on L7900N at 40 metres below surface.

Anomaly D is the end of a previous Minnova anomaly and could be tested by a hole in the strongest part as it would appear to have a shallow causative source.

We do carry out property measurements on hand samples -fist size - so it might be appropriate to do some magnetic susceptibility and IP and resistivity tests on the volcanics and intrusives to determine their background signatures.

Feel free to carry on this discussion as I have not seen the area.

Peter

M. A. Kaufman Report on Integrating Geophysics,
Geochemistry and Geology

Minnova "South Anomaly"

The Walcott I. P. survey indicates that this anomaly extends from 100 metres to 300 metres further west from the ends of the old Minnova lines (Walcott Zone D). It appears to end rather abruptly at about grid location 6100 to 6200 E, forming a roughly N - S trending W margin. It was found on the east extremities of new lines 8000, 8100, 8500 and 8600N. Lines 7900 and 8400N did not go far enough east to reach it, and 8200 and 8300N were not covered by the I. P. So there are gaps in the coverage. The new work is interesting however, in that it does give us a west contact of this sulfide zone, and it indicates roughly that it might have an aerial extent of at least 800 metres N - S, and 600 metres E - W. Moreover, it might extend further N.

The Lloyd Geophysics mag survey indicates that roughly along the W contact of this sulfide zone, the magnetics increase further W and flatten out to the E. This might indicate a contact between predominantly intrusive rock to the west and volcanics to the east. The old Selco aerial mag survey indicates a broad, shallow magnetic low at the west extremities of the Minnova grid, extending from 500S to 800S. This appears to be coincident with the high I. P. values found by Minnova in this area, and with the extension indicated by Walcott's high I. P. anomaly found on the east of lines 8500 and 8600N. Sometimes, such magnetic low features can be indicative of rock alteration.

Only three outcrops are known within the "South Anomaly", a fairly large area of outcrop centered at 8200N, 6690E, some very small outcrops at approximately Minnova 1500S, 600W, and a small outcrop along the main forestry road at 8600N, 6420E. All of these outcrops appear to be andesitic rock containing strong disseminated pyrite and/or pyrrhotite. In the area around 8200N, 6690E, the andesite is agglomerate, and pyrite is also seen along fractures. Anomalous gold can be found in all of these outcrops, up to 8.6 ppm at Minnova 1500S, 600W. At approx. Minnova 1400S, 800W, Cameco found very high gold in soils. Some gossanous tuff boulders found here assayed up to 10.1 ppm Au. Nearby, Orvana found andesitic float assaying 660 ppb Au. In the area around 8550N to 8600N, 6150 to 6210E, Orvana found probably close-to-source float of felsic rock thought to be intrusive, some of it altered breccia. Anomalous gold up to 2.7 ppm was detected from this float.

Generally, there is anomalous gold in soils within this large I. P. anomaly. However, there are blank spots. Possibly, these can be explained by deeper overburden cover, particularly in the low part of the valley along the south branch of Craigtown Creek.

Walcott (Zone B)

These anomalies located on lines 8400, 8500 and 8600N just W of the Stewart - Dog Claim boundary, which are of moderate chargeability and high resistivity, likely represent lesser sulfide content than the other anomalies, but nevertheless could be significant in terms of gold content. The reason for the higher resistivities in this area might be simply a high resistivity bedrock, or possibly could be due to alteration (silicification). Only one small outcrop area has been found in this area. Around 8500N, 5920E, are two small exposures of coarse andesitic breccia in places mineralized and altered, which contain anomalous gold and copper. These I. P. anomalies are within or in close proximity to soils gold and copper anomalies. This I. P. anomalous zone is open and might extend further N of line 8600N and S of Line 8400N where there is no coverage.

Walcott (Zone A)

This anomaly, which was found at the W limits of the I. P. survey along lines 8500 and 8600N, is coincident with a gold in soils anomaly, which in places contains copper and lead. No outcrop was found in this area. Due to lack of coverage, this anomaly is open, and might extend further W of the W extremity of the surveyed lines, N of line 8600N and S of line 8500N.

Walcott (Zone C)

This anomaly which was found at the W limits of the I. P. survey along lines 7900, 8000 and 8100N, is coincident with a large soils gold anomaly which in places contains lead. Along line 8100N three areas of float probably close to outcrop source were found. Around 5820E there is barren looking dioritic intrusive, and from 5720 to 5760E there is similar intrusive, but also breccia which is slightly stained by iron oxides. Both of these areas are within a soils gold anomaly, but the only I. P. response is a moderate one across the latter locality. At 5640E there is andesite with quartz veins which contains anomalous gold. This sits within a soils gold anomaly, but there is no I. P. anomaly here. At 8100N, 5610E there is an outcrop of breccia, which appears to be comprised mostly of intrusive rock. The rock contains minor quartz with pyrite, chalcopyrite and copper oxide. Orvana assayed anomalous gold from this outcrop (236 ppb). This outcrop is located within a soils gold anomaly, and is about 30 metres E of the strong I. P. response detected by Walcott at the end of its survey on line 8100N. This high I. P. response is coincident with a soils gold anomaly.

On line 8000N at 5620 to 5640E there is float of dioritic(?) intrusive similar to what was found on line 8100N, 5720 to 5760E. But here, there appears to be some andesite, and much more breccia. On line 7900N at 5610 to 5640E there is considerable angular float of breccia. The breccia seen particularly on lines 8000N and 7900N appears different from other breccias found on the properties. It is a jumble of rectangular fragments up to several centimetres in length. It is not certain what the matrix material is, but two rock types are apparent, fine grained monzonite(?), and very fine grained rhyolite. There is some quartz veining with accompanying sulfides, but there is generally disseminated sulfide in both rock types, and on 7900N there is gossan which might be after sulfides which replace the matrix material. Because of oxidation to Fe/Ox with possibly some Mn oxide, positive mineral identification is not possible. An Orvana sample of this rock assayed 155 ppb Au and 480 ppm Cu. The high I. P. responses along lines 7900 and 8000N extend for +200 metres across strike, and might well in part be caused by this breccia formation. Possibly, areas of relatively low resistivity within the chargeability anomalies found on these lines might be related to the breccia, as might be a relative magnetic low detected by Lloyd Geophysics on Orvana's ground survey just east of line 8000N, 5600E (roughly coincident with the resistivity low here). Unfortunately, this ground mag survey did not cover line 8100N, nor did it extend south of line 8000N. Investigation south of line 7900 N along line 7800N encountered no obvious close-to-source float or bedrock. Orvana found some mineralized, anomalous andesite here. Possibly it is close to bedrock, but this is not certain, as the further south you go the deeper the overburden is likely to be.

Due to lack of coverage this anomaly is open, and might continue further W from the W end of the survey on lines 7900N and 8100N, further S from line 7900N, and further N from line 8100N.

Overall Interpretation and Conclusions

Stewart Claims

My last year's assessment report (# 25702) suggests several drill sites based on the old Minnova work within the Minnova "North" and "South" anomalies. The 1999 I. P. survey, by extending the "South Anomaly" westward has delineated other drill targets on the Stewart Property.

First, it should be stated that the "South Anomaly" now appears to be a very extensive sulfide zone, probably at least as large as the "North Anomaly", and it has not been drill tested at all. Because of scarce outcrop and float, one can only guess about the geology, but the magnetics suggest that it might represent a large zone of contact metamorphic /metasomatic sulfide related to an intrusive to the west and volcanics to the east. I am not generally impressed with the outcrop and float I have seen on the east portion of this anomaly, even though there is anomalous gold. But the central and western portions of the sulfide zone appear very favourable. Two areas appear to be of strong interest. One near Minnova line 1400S, 800W was discussed in last year's report. Walcott's I. P. anomaly found on the E ends of lines 8000 and 8100N suggest that the sulfide zone extends at least another 200 metres westerly from 1400S, 800W, approximately to the south branch of Craigtown Creek. And the very strong chargeabilities found along the E ends of lines 8500 and 8600N likely extend this target area at least 500 metres northward. Orvana's previous geological work has shown gold-anomalous felsic intrusive(?) (around 8550N to 8600N, 6150 to 6210E) at the west extremity of this I. P. anomaly. This might represent a particularly interesting portion of the postulated intrusive/volcanic contact area. Additional I. P. work is required to assure that the area between line 8100N and 8500N is underlain by a continuous strong sulfide zone. But even without this, there are good drill targets around Minnova 1400S, 800W (see assessment report # 25702), and 8500N to 8600N, 6300E, where steep angle holes to the W are suggested.

To thoroughly prospect The Stewart Claims for sulfide zones, I. P. surveys should be undertaken to fill in the gap from north of line 8600N to 9500N. Of strong interest is the area around line 9300N, 6250E where there is a known Au - As soils anomaly, and where Orvana's survey found a NE trending EM anomaly.

Dog Claims

The Walcott I. P. survey was successful in finding sulfide anomalies coincident or in close proximity to previously detected soils gold anomalies. As mentioned in Walcott's report, several drill holes could be recommended with present coverage, but I agree with Walcott that it would be best to better delineate the sulfide zones before drilling. The various anomalies are discussed in sufficient detail above, so I will add only a few more comments.

All of Walcott's designated anomalies are of interest for further exploration. The most critical step is to continue the I. P. work to test for possible extensions to the W, and to fill in the large N - S gaps. It is very probable that the anomalies are far more extensive, particularly N and S, than we can see with present coverage, and it is possible that some of them might join. We do not have enough outcrop exposure to map much geology, but the breccias seen on lines 7900N to 8100N deserve further study. Also the geochem. survey

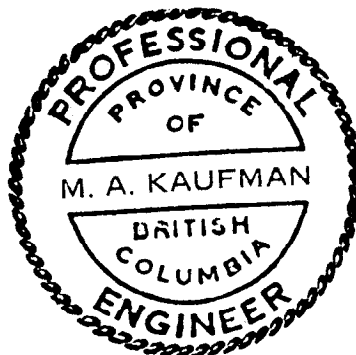
lines are spaced 100 metres apart and fill in lines within known anomalous areas might be useful in picking drill targets.

At this point, the most interesting area is Walcott's "Anomaly C" where the breccias have been found. It appears that the broad I. P. anomalies found here on lines 7900 and 8000N, and the narrow but open anomaly on line 8100N cross areas of both high and relatively low resistivities. This might indicate disseminated sulfides in more crystalline rocks with higher sulfides in lower resistivity breccia zones. Being open both to the N and S, this sulfide zone might have considerable extent. The downslope area to the S enters the valley bottom of Craigtown Creek where the overburden is likely too deep to allow for meaningful soils geochemistry.

M. A. Kaufman

M. A. Kaufman

Sept. 14, 1999



Expiry Date Dec. 31, 1999

Statement of Costs

Cdn. Funds

Peter E. Walcott & Associates	
I. P. Survey: -----	\$ 9,711.62
Horst Klassen:	
Line Cutting: -----	\$ 657.30
B.C. Workers' Comp. Coverage -----	\$ 35.40
M. A. Kaufman Living Expenses	
5 days x \$ 90.00/day -----	\$ 450.00
M. A. Kaufman Vehicle/travel	
1500 km x \$.35/km -----	\$ 525.00
Sub total in Cdn. Funds -----	\$ 11, 379.32

U. S. Funds

M. A. Kaufman Itemized Time:

June 15 - July 8; 1 day -----	map prep., planning, contracts, misc.
July 9; 1 day -----	Line prep.,
July 16; 1 day -----	Line Prep. meet with I. P. Crew
July 17; 1/2 day -----	Start I. P. survey
July 20; 1 day -----	Meet I. P. Crew, review data, geology on lines.
Aug. 7; 1 day -----	Geology on lines
Sept. 6 - Oct. 6; 3 days -----	Report and Map Prep.

Total M. A. Kaufman Time	
8 1/2 days x \$400.00/day -----	\$ 3400.00
Drafting -----	\$ 125.00
Flagging -----	\$ 5.79
Copies -----	\$ 50.00
Sub total in U. S. Funds -----	\$ 3580.79
Convert U. S. To Cdn Funds; 3580.79x1.45-----	\$ 5192.00
Grand Total in Cdn Funds -----	\$ 16, 571.00

Statement of Qualifications

I, M. A. Kaufman hereby state that I have worked as a mining geologist and mining engineer for 42 years.

I received an A, B, degree in geology from Dartmouth College in 1955, and an M. S. degree in geology and mining engineering from the University of Minnesota in 1957.

I am currently registered as a Professional Engineer/Geologist in the province of British Columbia.

From the period 1955 - 1965 I worked for the major companies Kennecott Copper Corp., Giant Yellowknife Gold Mines (Falconbridge), Kerr-McGee, and Hunting Survey Corp., Ltd. I then worked independently as a consultant and contractor, mainly for major companies. From 1969 through 1988, I was a principal of the consulting and contracting firm of Knox, Kaufman, Inc. From 1989 to present I have worked as an independent consultant and prospector.

SURVEY SPECIFICATIONS.

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

The system consists basically of three units, a receiver (Iris), a transmitter (Hunttec 7.5kw) and a commercial motor generator (Honda). The transmitter, which provided a maximum of 7.5 kw d.c. to the ground, obtains its power from a 7.5 kw 400 c.p.s. alternator driven by a gasoline engine. The cycling rate of the transmitter is 2 seconds "current-on" and two 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 and 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 (ρ_a) in ohm metres is proportional to the ratio of the primary voltage and measured current, the proportionality factor depending on the geometry of the array used. The chargeability and resistivity are called apparent, as they are values, which 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 depth to be explored by the particular separation, "n", traverse.

On this survey a 25-metre dipole was employed and first to sixth separation readings were obtained. In all some 4.5 kilometers of I.P. traversing were completed using the above method.

PERSONNEL EMPLOYED ON SURVEY.

Name	Occupation	Address	Dates
Peter E. Walcott	Geophysicist	Peter E. Walcott & Associates Limited 605 Rutland Court, Coquitlam, B.C. V3J 3T8	August 3,4 1999
Marek Welz	Geophysicist	"	July 16 th - 21 st , 1999
Kristina Walcott	Geophysical Operator	"	July 16 th - 21 st , 1999
Rod Grummisch	"	"	July 16 th - 21 st , 1999
Merih Fidan	Geophysical Helper	"	July 16 th - 21 st , 1999
Clancy Angers	Geophysical Helper	"	July 16 th - 20 th , 1999

**PETER E. WALCOTT
& ASSOCIATES LTD**

Geophysical Services

INVOICE

GST #104 159 298

NO. 4135

Date: July 30th, 1999

Terms: On Receipt

**TO: M.A. Kaufman
P.O. Box 14336
Spokane, Washington
U.S.A.**

Re: I.P. survey, Salmo area, B.C.

1.	Mobilization Vancouver – Salmo – return July 16 th & July 21 st	\$950.00
2.	Provision of geophysicist, operator, 3 helpers, 4 x 4 truck, I.P. equipment, 4 x 4 truck, computer and printer July 17 th – July 20 th , 1999 = 4 days at \$1740.00 per day	\$6,960.00
3.	Accommodation 5 ½ days July 16 th – Jul. 21 st = 5 ½ days At \$210.00 per day	<u>\$1,155.00</u>
		\$9,065.00
4.	GST	<u>\$634.55</u>
		<u>\$9,711.62</u>
	Less initial deposit	<u>\$2,500.00</u>
		<u>\$7,211.62</u>

WLASSEN RESOURCES
P.O. BOX 172 SPokane, B.C.
V0G 1Z0 CANADA.

DOG

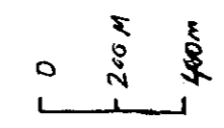
OUR NUMBER	306570
DATE	JULY-19-1999
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
FOB	

TAX REG NO _____
SOLD TO M.A. KAUFMAN
SPokane WASH. 99214 U.S.A.
SHIP TO P.O. BOX 14336
ADDRESS _____ VIA _____

INVOICE

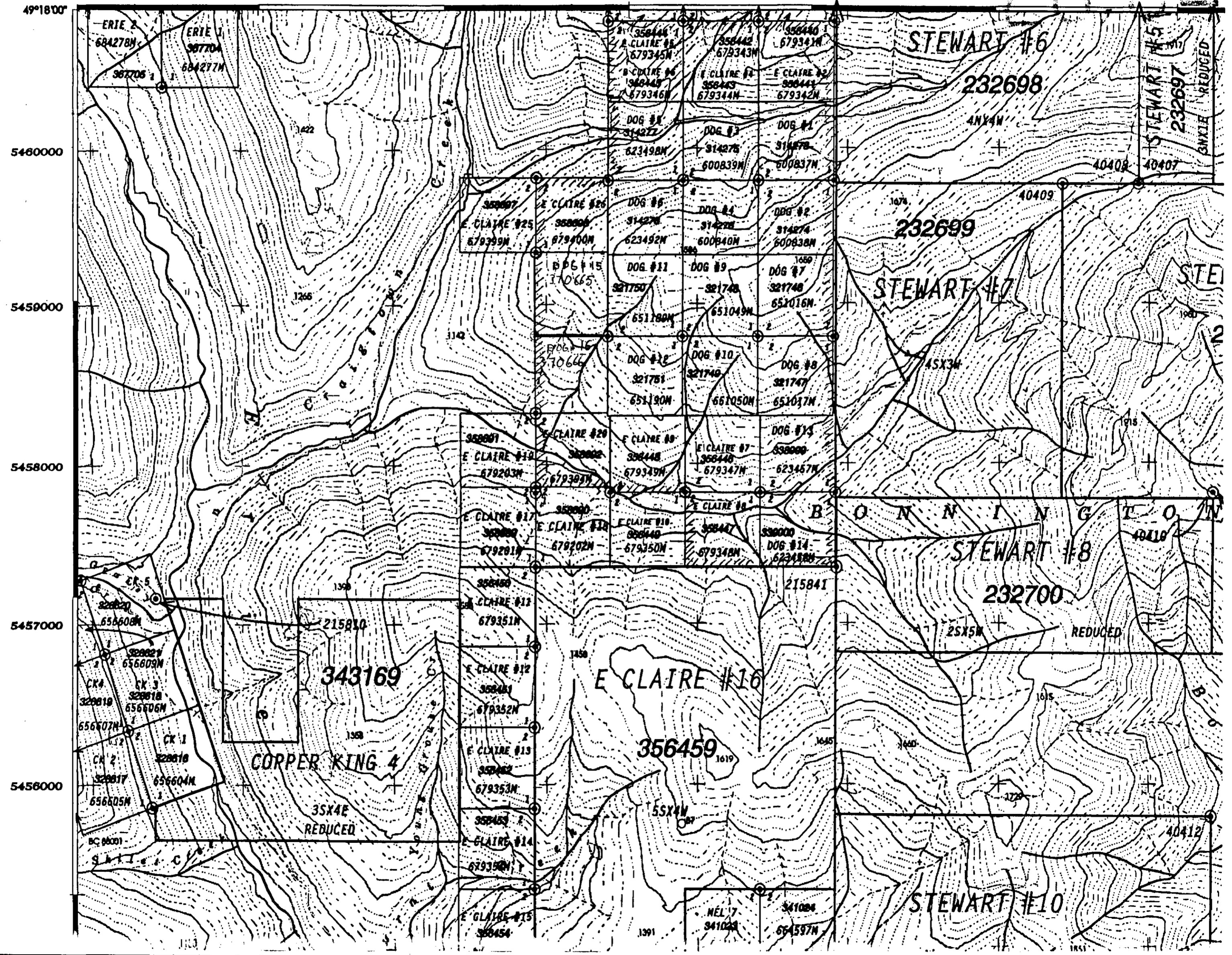
QUANTITY	DESCRIPTION	PRICE	AMOUNT
2	DAY BRUSH OUT AND REFLAG LINES		576.00
	MILEAGE		26.64
	TAX 14% GST 4.68		60.72
	TOTAL		<u>663.36</u>

INDICATES BOUNDARY
OF M. A. KAUFMAN
CONTROLLED CLAIMS



117°24'00" 471000 472000 473000 474000 475000 476000 477000 478000

49°18'00"



26029

STEWART #5
232697
30X12
REDUCED

STEWART #6
232698
40X40

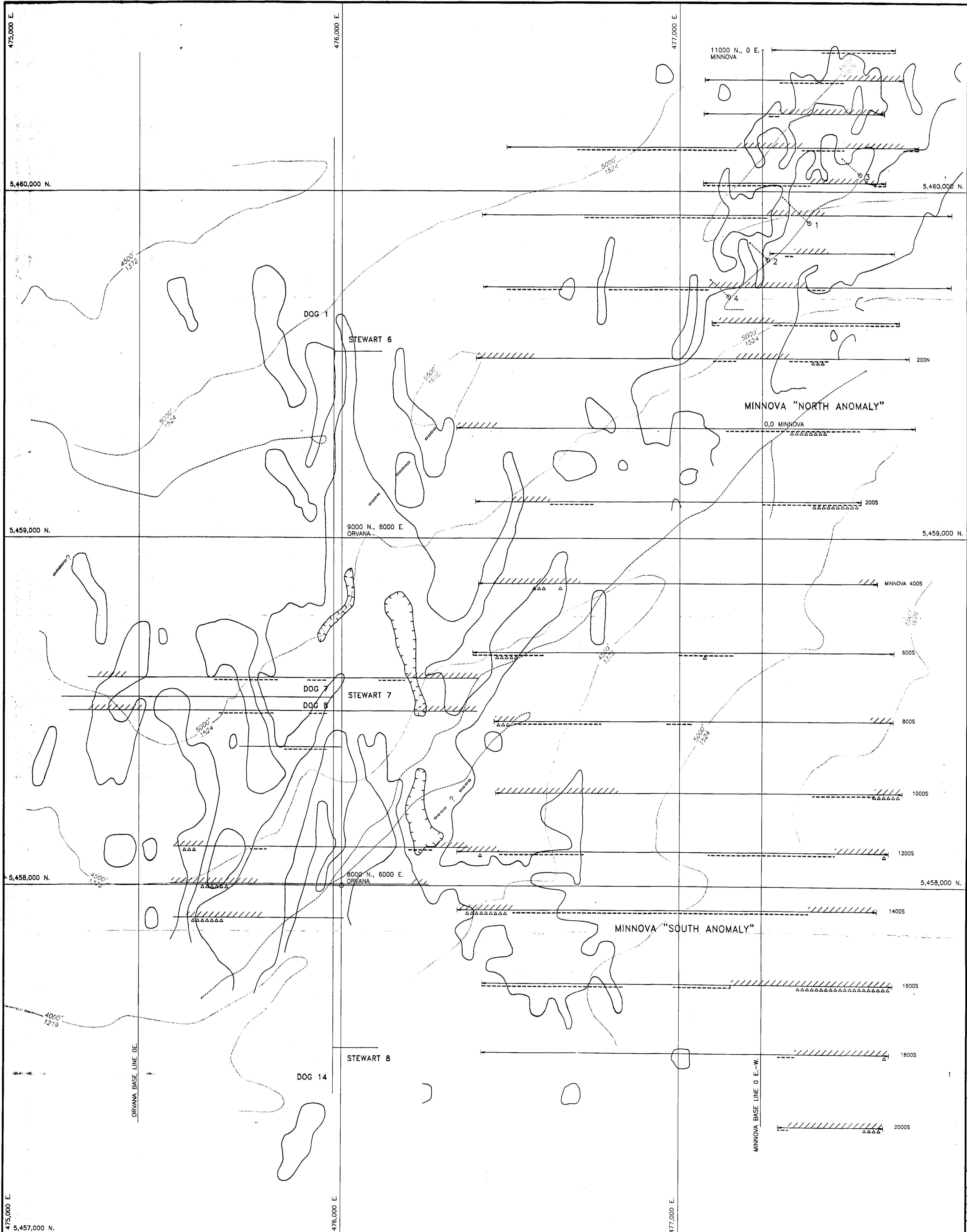
STEWART #7
232699
45X30

BONNINGTON
STEWART #8
232700
25X50
REDUCED

COPPER KING #4
343169
35X40
REDUCED

ECLAIRE #16
356459
55X40

STEWART #10
341004
341005
65X57M

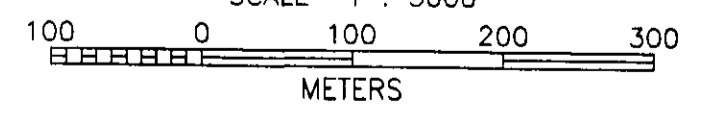


EXPLANATION

- Outline of MINNOVA and/or ORVANA soils geochem anomaly. +40 ppb gold contour. For detail refer to accompanying 1:5000 geochem sample map. (SEE ORVANA 1997 ASSES. REP.)
- Lloyd geophysics conductor
- Geophysics line
- End of MINNOVA I.P. line.
- Relatively low resistivity
- Moderate chargeability anomaly
- Strong chargeability anomaly
- Drill hole

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

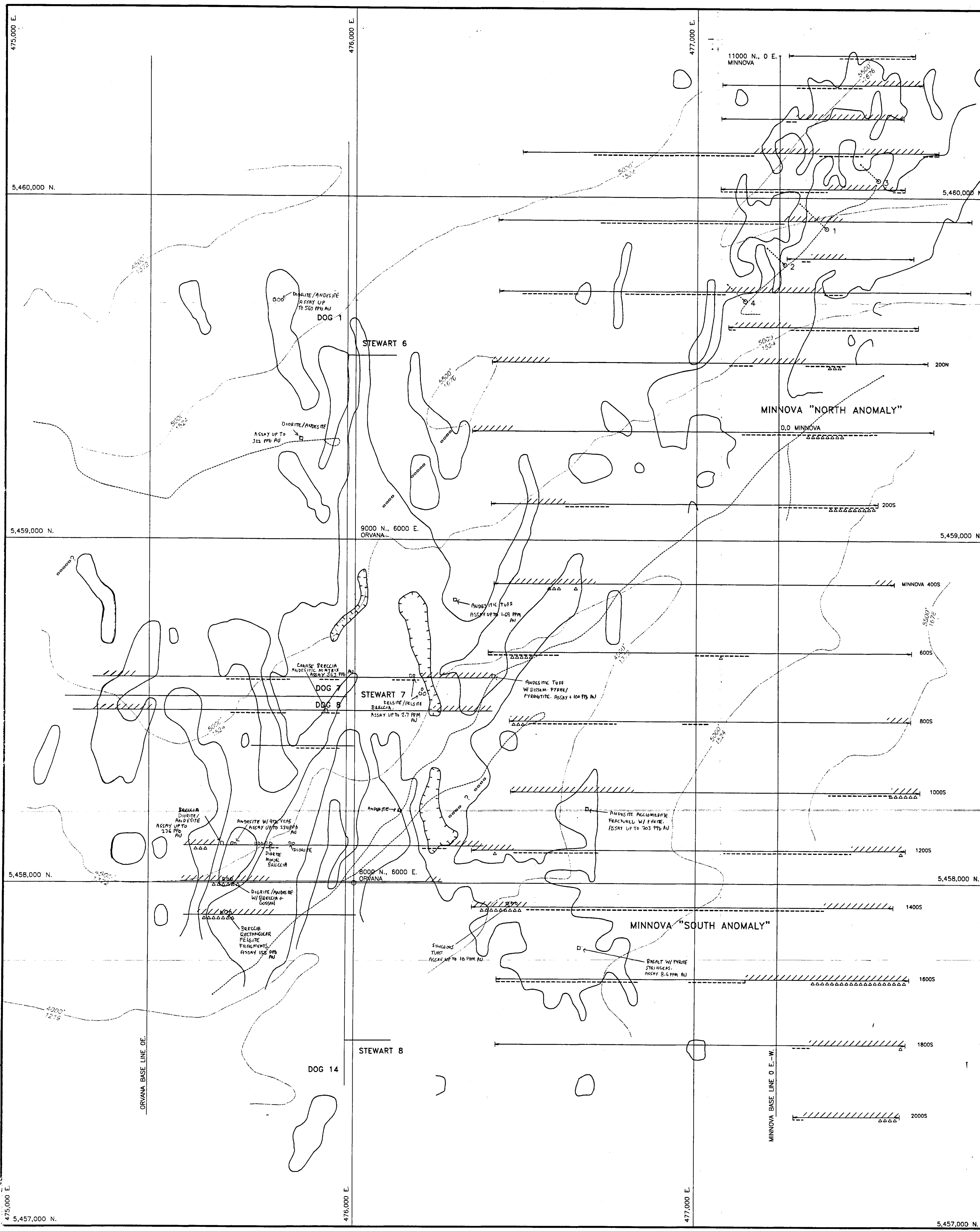
26,049



STEWART AND DOG CLAIM GROUPS
1999 COMPILED MAP SHOWING:
MINNOVA GEOCHEM/I.P., (ON MINNOVA
EAST GRID)
ORVANA GEOCHEM/EM, AND
WALCOTT GEOPHYSICS/I.P., (ON ORVANA
GRID)

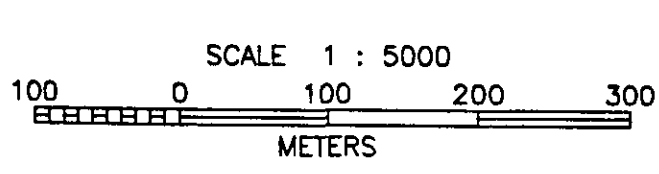
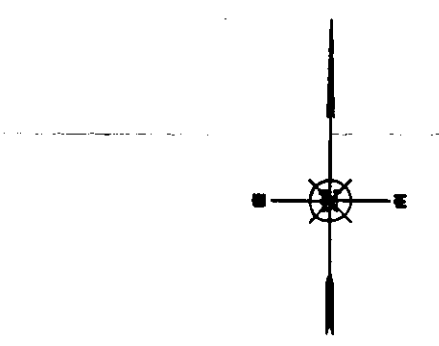
DRAWING RECORD		
DATE	DESCRIPTION	BY
10/16/98	Completion	M.A. Kaufman
	Field survey	J. Denny
9/17/99	Completion	M.A. Kaufman

DRAWING NO. 0560
DOG COMP DWG 1:50 P.S. **PLATE**



EXPLANATION

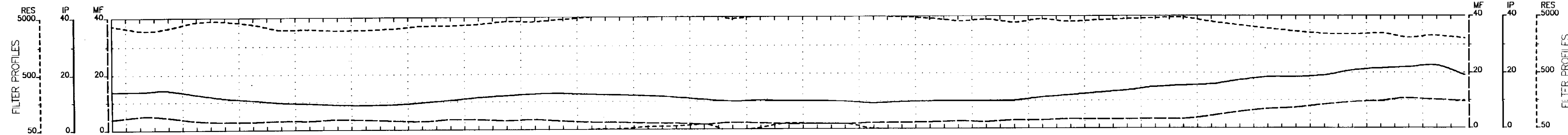
- Outline of MINNOVA and/or ORVANA soils geochem anomaly. +40 ppb gold contour. For detail refer to accompanying 1:5000 geochem sample map.
- Lloyd geophysics conductor
- Geophysics line
- End of MINNOVA I.P. line.
- Relatively low resistivity
- Moderate chargeability anomaly
- Strong chargeability anomaly
- Drill hole
- GEOLOGICAL INFORMATION**
- OUTCROP
- FLORT THOUGHT TO BE CLOSE TO SOURCE
- LITHOLOGIC DESCRIPTION



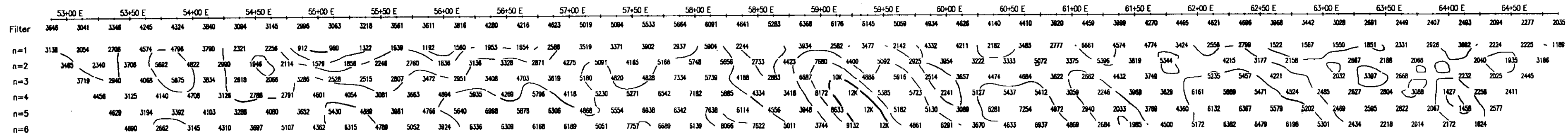
STEWART AND DOG CLAIM GROUPS
 1999 COMPILATION MAP SHOWING:
 MINNOVA GEOCHEM/I.P., (ON MINNOVA
 EAST GRID)
 ORVANA GEOCHEM/EM, AND
 WALCOTT GEOPHYSICS/I.P., (ON ORVANA
 GRID)

DRAWING RECORD		
DATE	DESCRIPTION	BY
10/16/98	Compilation	M.A. Kaufman
	Field survey	J. Denny
8/17/98	Compilation	M.A. Kaufman

DRAWING NO. 0560
 DOG_COMP.DWG 1:50 P.S. **PLATE**

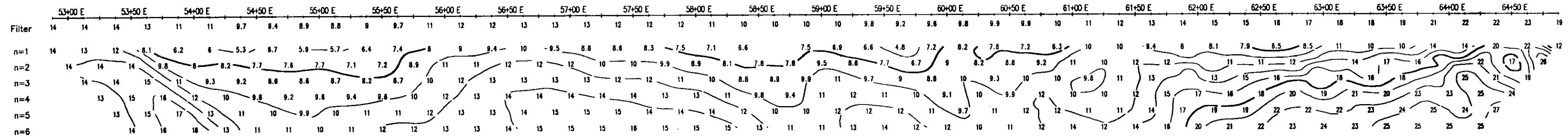


RESISTIVITY
ohm-metres

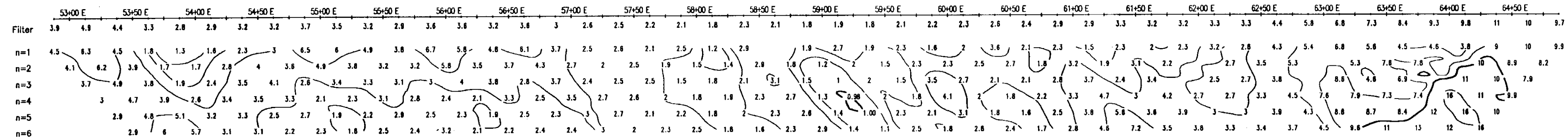


INTERPRETATION

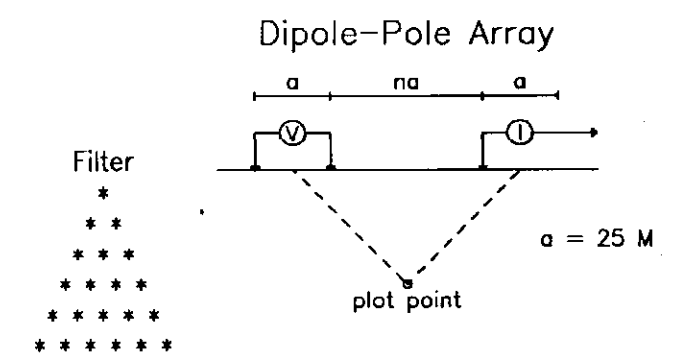
CHARGEABILITY
millivolts/volt



METAL FACTOR
ch/res X 100



Line 8600 N



Instruments: Huntex 7.5 KW TX, BRGM IP6 Rx.
Frequency: 0.125 Hz.
Operators: M.W., K.W.

Logarithmic Contours
1, 1.5, 2, 3, 5, 7.5, 10, ...

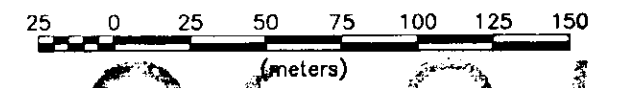
INTERPRETATION

- Well defined, strong increase in polarization with or without marked decrease in resistivity.
- Fairly well defined moderate increase in polarization.
- Fairly well defined weak increase in polarization.

Resistivity feature.

GEOLOGICAL SURVEY BRANCH

Scale 1:2500



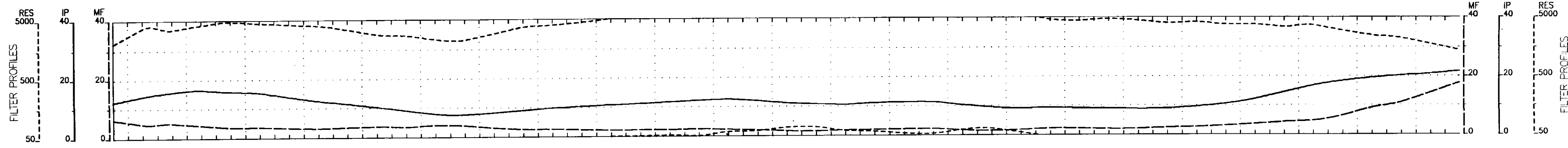
26,049

M.A. KAUFMAN

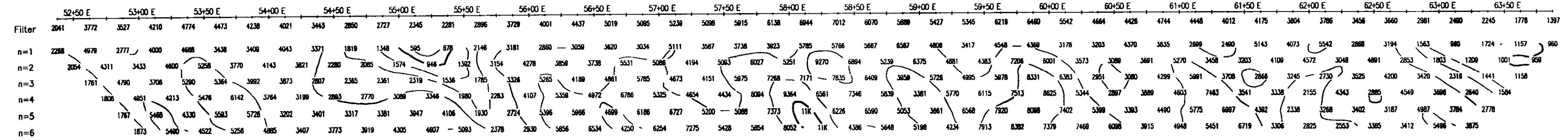
INDUCED POLARIZATION SURVEY
DOG CLAIM GROUP, NELSON M.D., B.C.
SALMO, B.C.

Date: JULY 1999 N.T.S.: 82 F
Interpretation: P.E.W.

PETER E. WALCOTT & ASSOC. LTD.

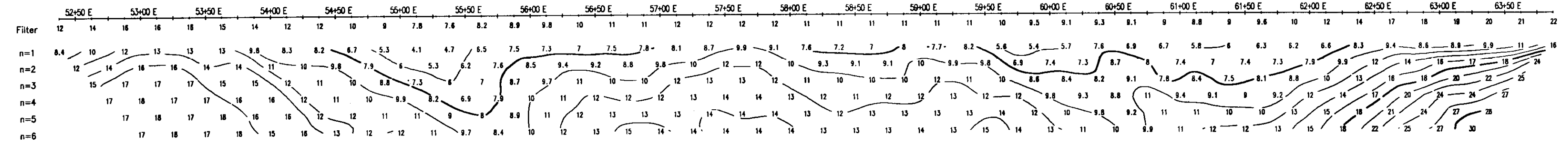


RESISTIVITY
ohm-metres

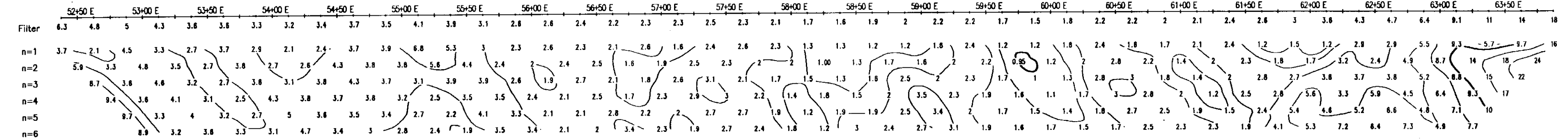


INTERPRETATION

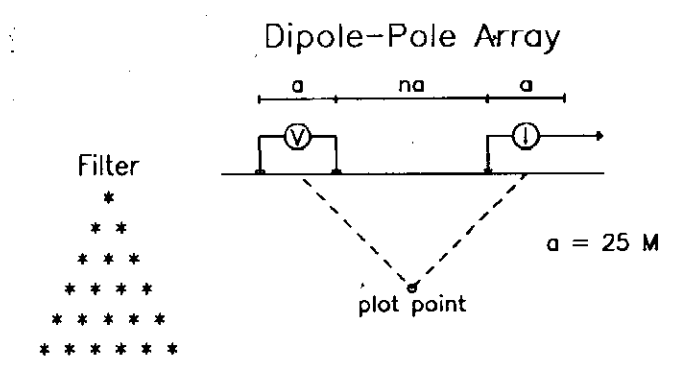
CHARGEABILITY
millivolts/volt



METAL FACTOR
ch/res X 100



Line 8500 N

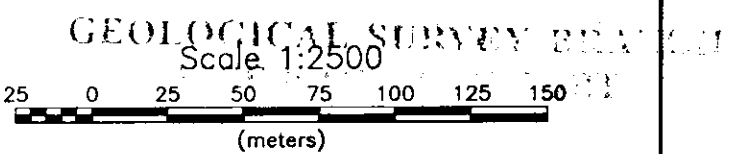


Instruments: Hunttec 7.5 KW TX, BRGM IP6 Rx.
Frequency: 0.125 Hz.
Operators: M.W., K.W.

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

INTERPRETATION

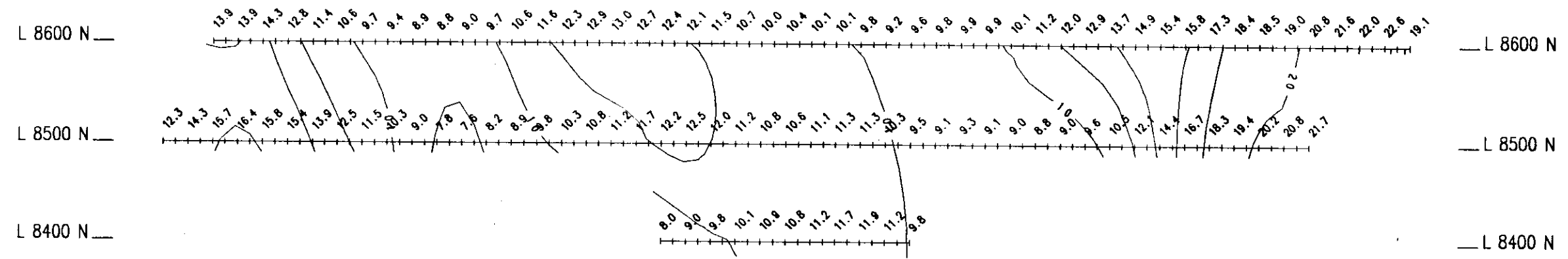
- Well defined, strong increase in polarization with or without marked decrease in resistivity.
- Fairly well defined moderate increase in polarization.
- Fairly well defined weak increase in polarization.
- Resistivity feature.

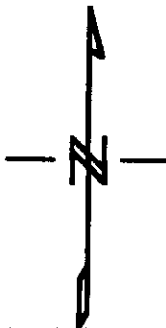


26049

M.A. KAUFMAN
INDUCED POLARIZATION SURVEY
DOG CLAIM GROUP; NELSON M.D., B.C.
SALMO, B.C.
Date: JULY 1999 N.T.S.: 82 F
Interpretation: P.E.W.
PETER E. WALCOTT & ASSOC. LTD.

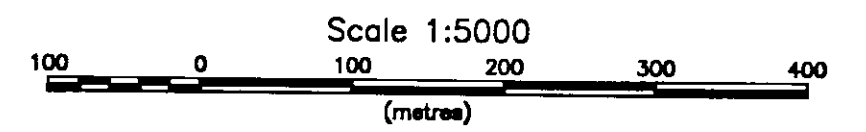
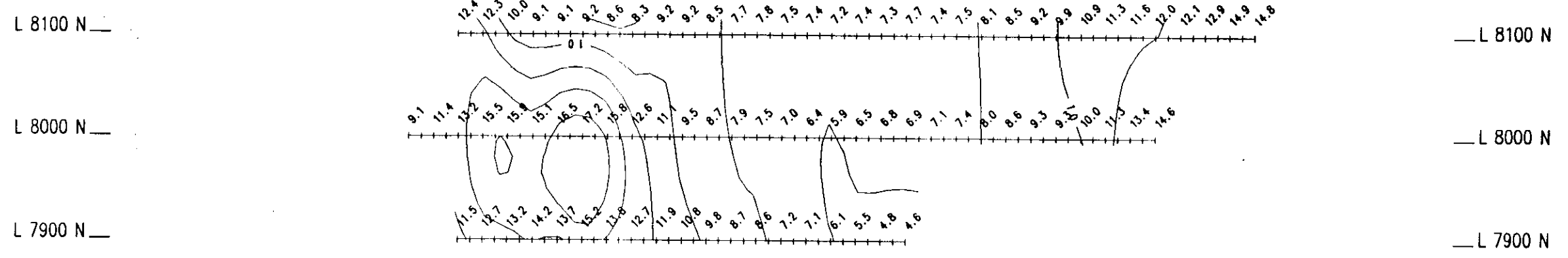
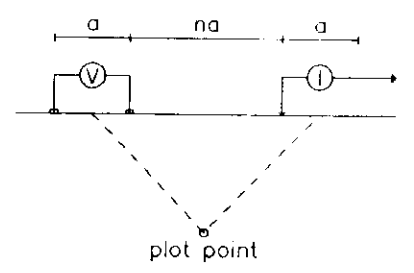
5200E 5300E 5400E 5500E 5600E 5700E 5800E 5900E 6000E 6100E 6200E 6300E 6400E 6500E




GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

26,049

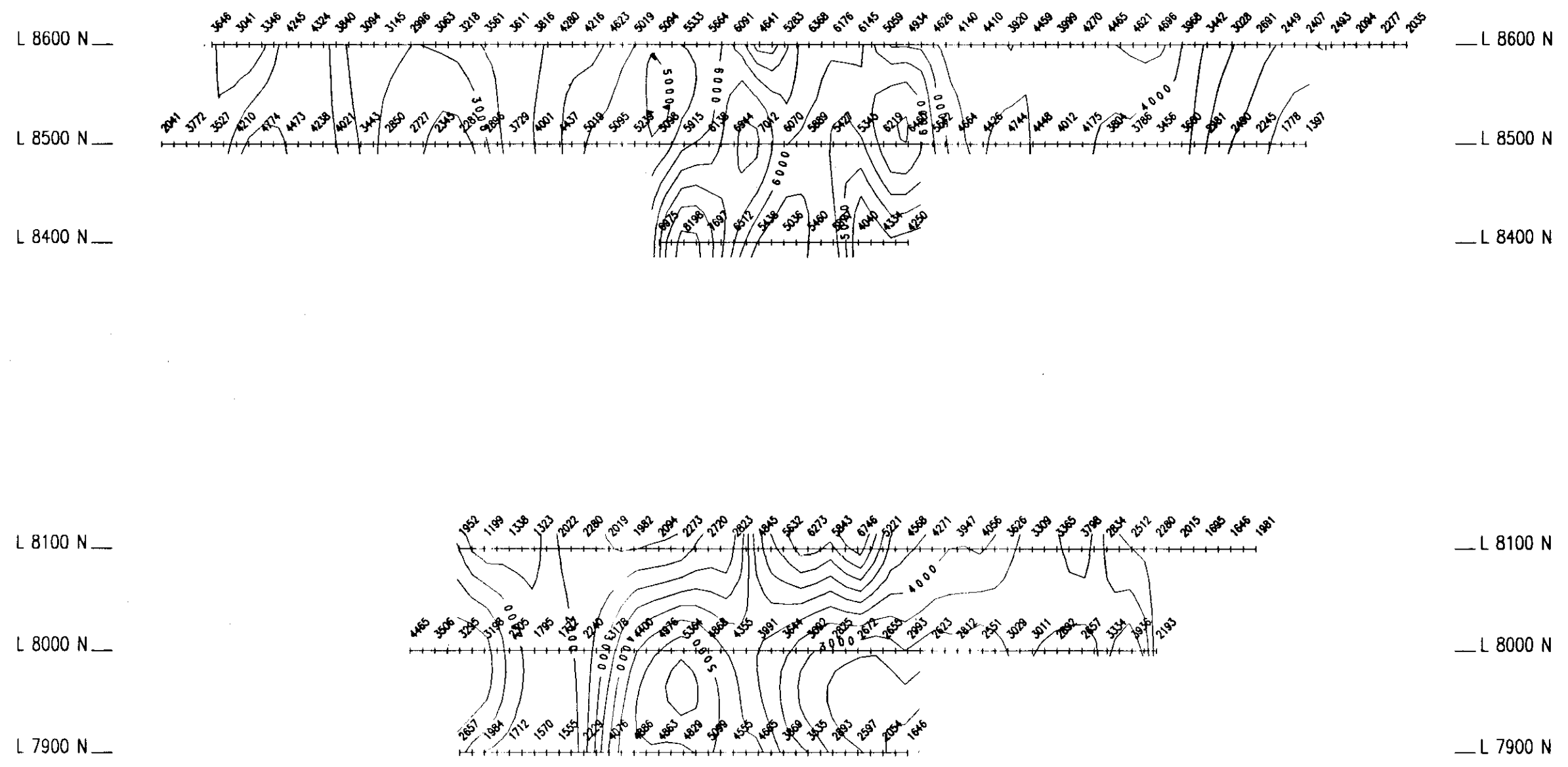
Dipole-Pole Array



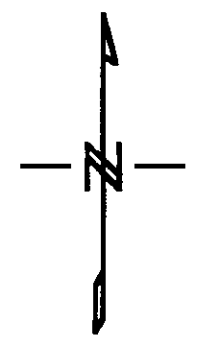
5200E 5300E 5400E 5500E 5600E 5700E 5800E 5900E 6000E 6100E 6200E 6300E 6400E 6500E

M.A. KAUFMAN	
INDUCED POLARIZATION SURVEY CONTOURS OF APPARENT CHARGEABILITY <small>IN OHM-MS, A = 50 MS., 21 POINT FILTER</small> <small>POLE-DIPOLE ARRAY, C1 TO EAST</small>	
<small>DOG CLAIM GROUP: SALMO, B.C.</small> <small>NELSON MINING DIVISION: NTS 82F</small>	
<small>Map No. W568-IPF</small>	<small>Processed: July 1999</small>
Processed by: PETER E. WALCOTT & ASSOC. LTD.	

5200E 5300E 5400E 5500E 5600E 5700E 5800E 5900E 6000E 6100E 6200E 6300E 6400E 6500E

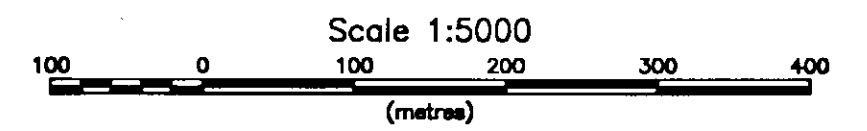
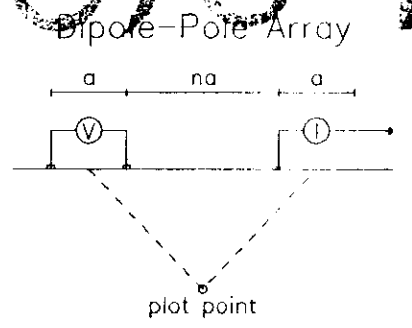


5200E 5300E 5400E 5500E 5600E 5700E 5800E 5900E 6000E 6100E 6200E 6300E 6400E 6500E



GEOLOGICAL SURVEY BRANCH
BRITISH COLUMBIA

26,049

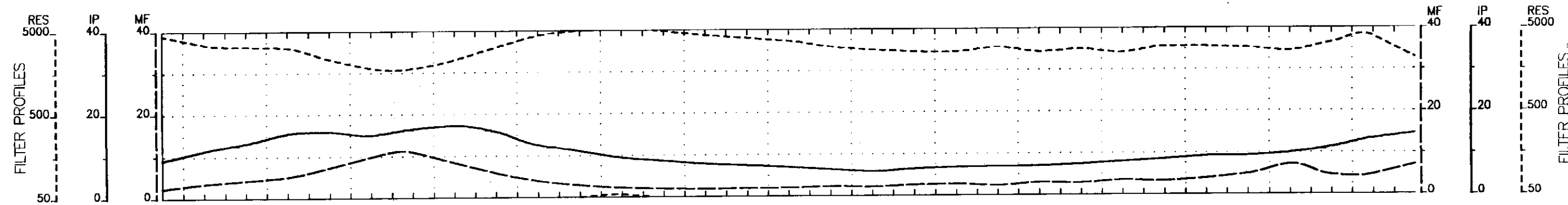


M.A. KAUFMAN

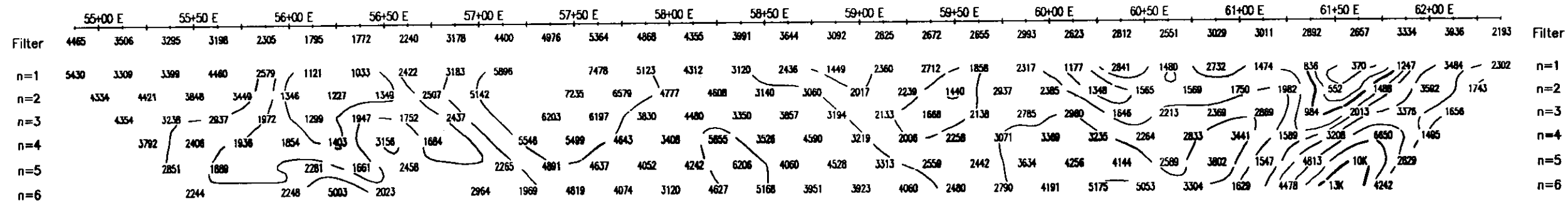
INDUCED POLARIZATION SURVEY
CONTOURS OF APPARENT RESISTIVITY
IN OHM-MS, A = 50 MS., 21 POINT FILTER
 POLE-DIPOLE ARRAY, C1 TO EAST

DOG CLAIM GROUP: SALMO, B.C.
 JULY 1999

Map No. W568-RESF Processed: July 1999
 Processed by: PETER E. WALCOTT & ASSOC. LTD.

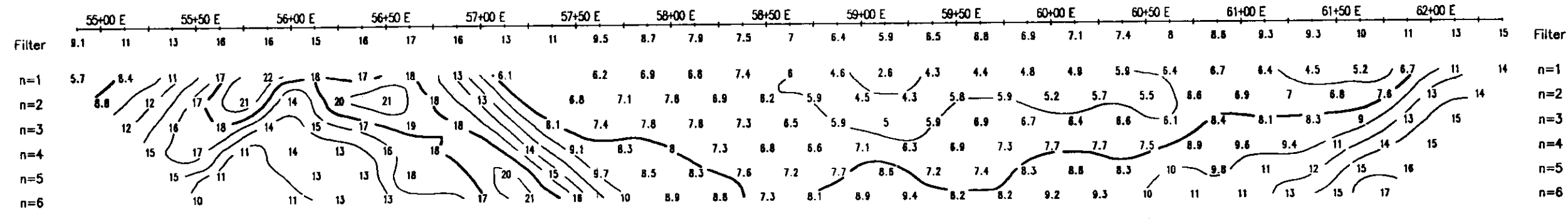


RESISTIVITY
ohm-metres

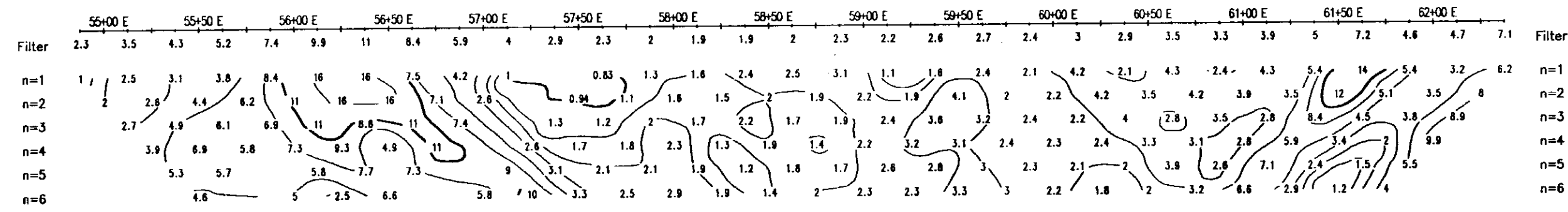


INTERPRETATION

CHARGEABILITY
millivolts/volt



METAL FACTOR
ch/res X 100



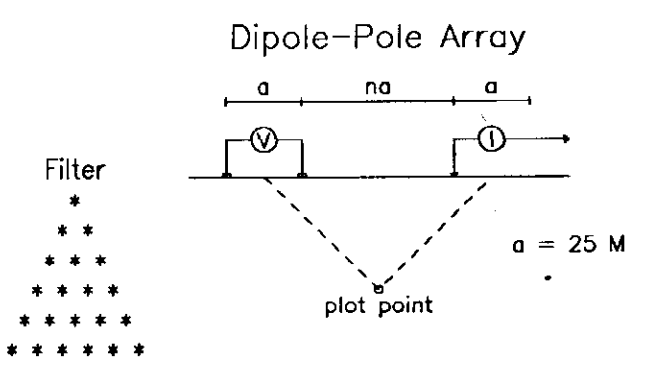
RESISTIVITY
ohm-metres

INTERPRETATION

CHARGEABILITY
millivolts/volt

METAL FACTOR
ch/res X 100

Line 8000 N



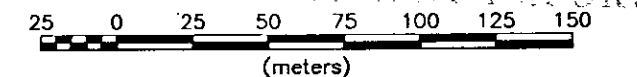
Instruments: Huntex 7.5 KW TX, BRGM IP6 Rx.
Frequency: 0.125 Hz.
Operators: M.W., K.W.

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...

INTERPRETATION

- Well defined, strong increase in polarization with or without marked decrease in resistivity.
- Fairly well defined moderate increase in polarization.
- | Fairly well defined weak increase in polarization.
- | Resistivity feature.

GEOLOGICAL SURVEY BRANCH
Scale 1:2500 NT REPORT



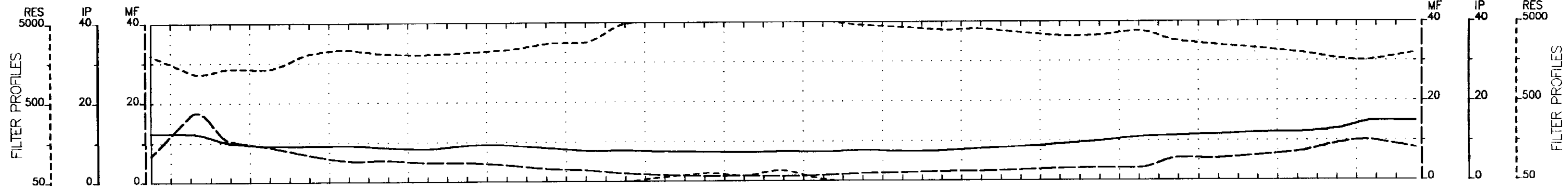
26,049

M.A. KAUFMAN

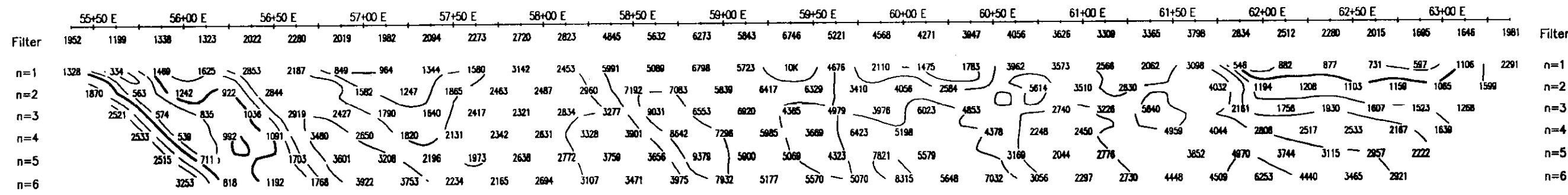
INDUCED POLARIZATION SURVEY
DOG CLAIM GROUP; NELSON M.D., B.C.
SALMO, B.C.

Date: JULY 1999 N.T.S.: 82 F
Interpretation: P.E.W.

PETER E. WALCOTT & ASSOC. LTD.

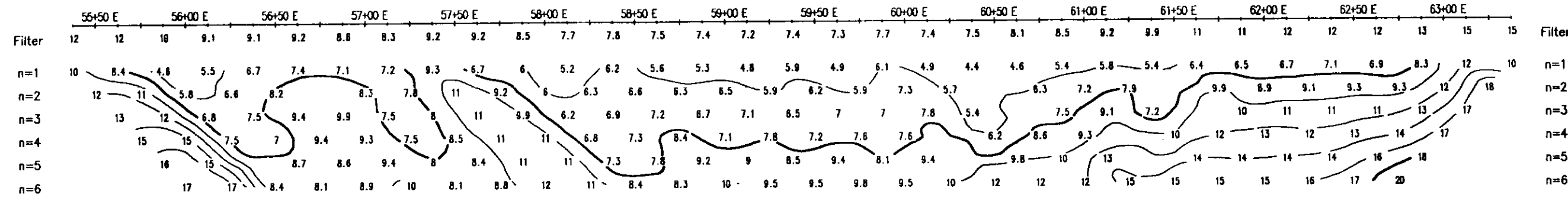


RESISTIVITY
ohm-metres

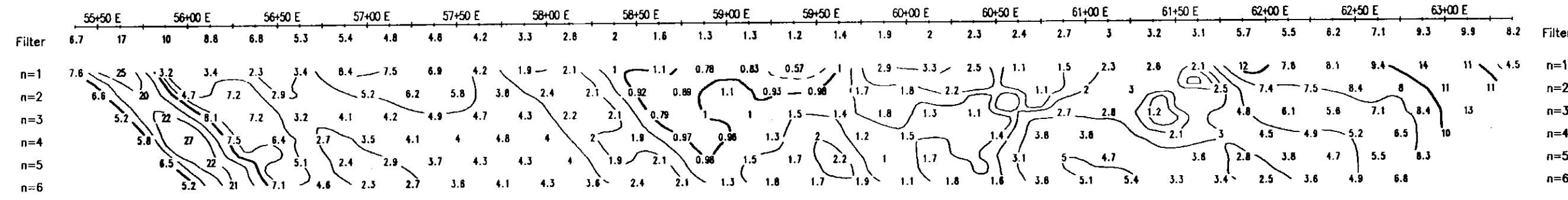


INTERPRETATION

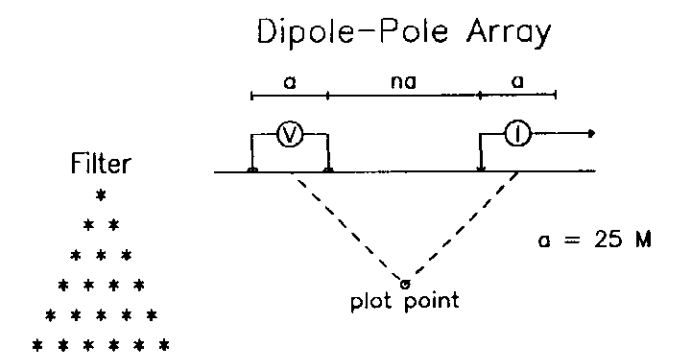
CHARGEABILITY
millivolts/volt



METAL FACTOR
ch/res X 100



Line 8100 N



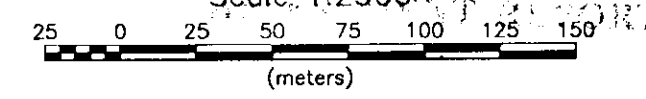
Instruments: Huntec 7.5 KW TX, BRGM IP6 Rx.
Frequency: 0.125 Hz.
Operators: M.W., K.W.

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

INTERPRETATION

- Well defined, strong increase in polarization with or without marked decrease in resistivity.
- Fairly well defined moderate increase in polarization.
- Fairly well defined weak increase in polarization.
- | Resistivity feature.

GEOLOGICAL SURVEY BRANCH
Scale: 1:2500



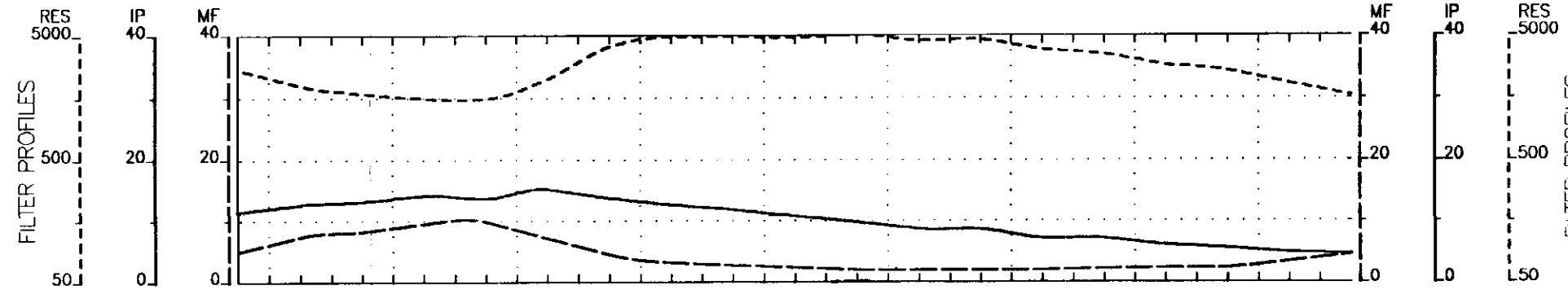
26.049

M.A. KAUFMAN

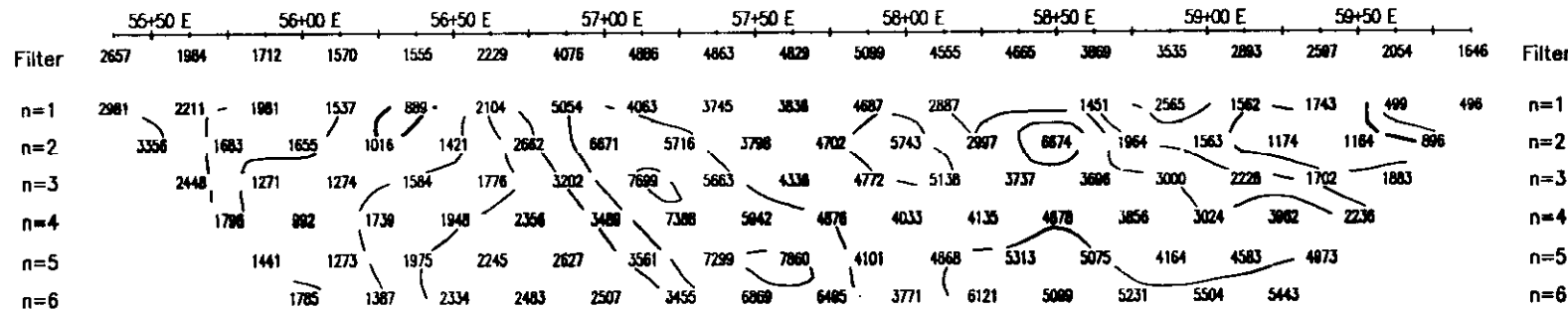
INDUCED POLARIZATION SURVEY
DOG CLAIM GROUP; NELSON M.D., B.C.
SALMO, B.C.

Date: JULY 1999 N.T.S.: 82 F
Interpretation: P.E.W.

PETER E. WALCOTT & ASSOC. LTD.

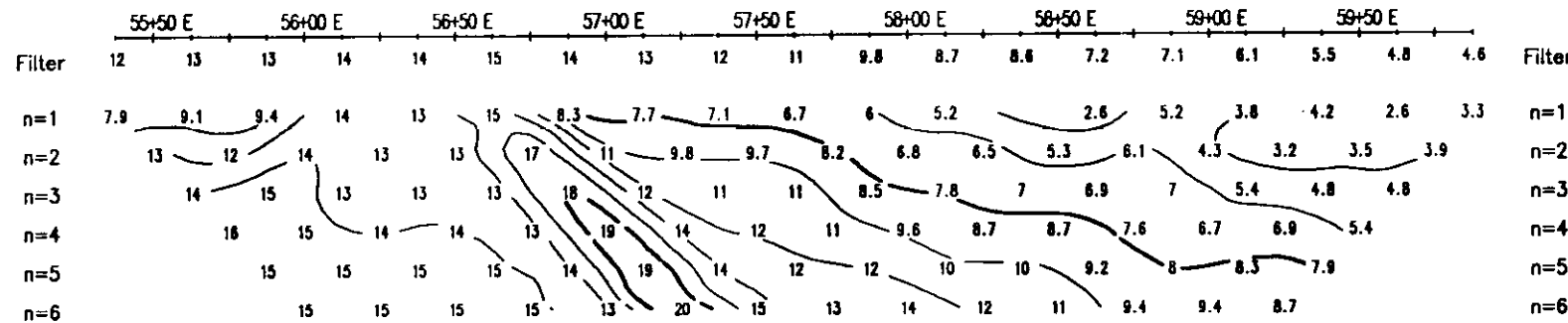


RESISTIVITY
ohm-metres

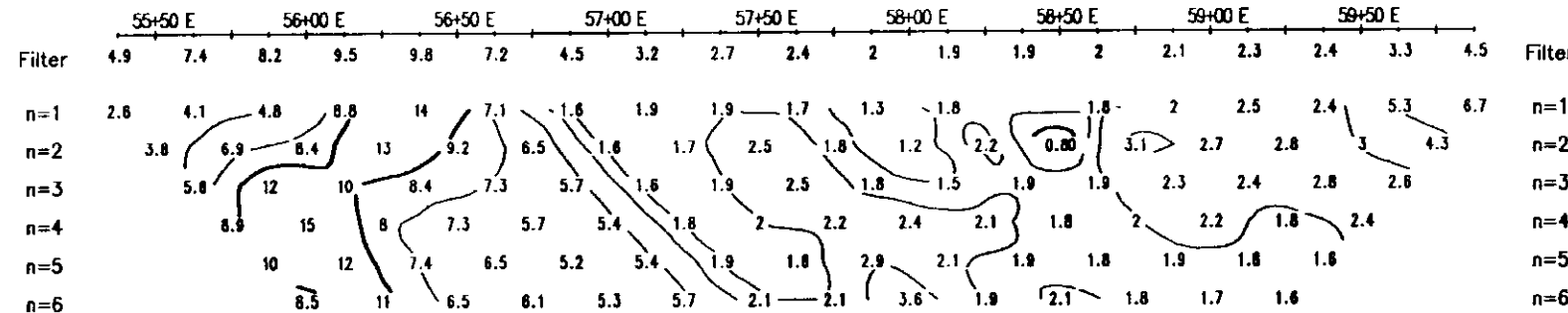


INTERPRETATION

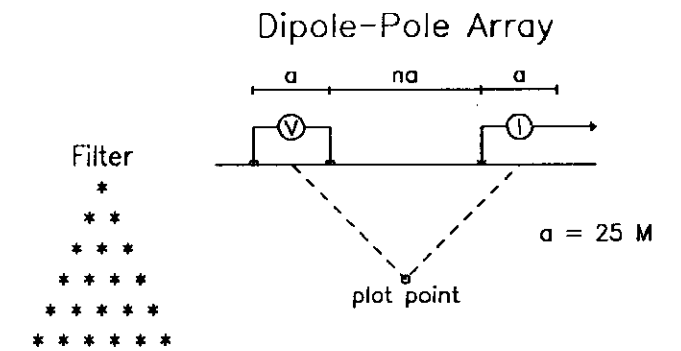
CHARGEABILITY
millivolts/volt



METAL FACTOR
ch/res X 100



Line 7900 N



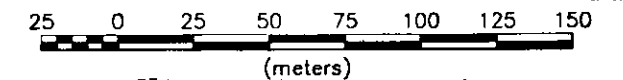
Instruments: Huntec 7.5 KW TX, BRGM IP6 Rx.
Frequency: 0.125 Hz.
Operators: M.W., K.W.

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...

INTERPRETATION

- Well defined, strong increase in polarization with or without marked decrease in resistivity.
- Fairly well defined moderate increase in polarization.
- Fairly well defined weak increase in polarization.
- | Resistivity feature.

GEOLOGICAL SURVEY BRANCH
Scale 1:25000 REPORT



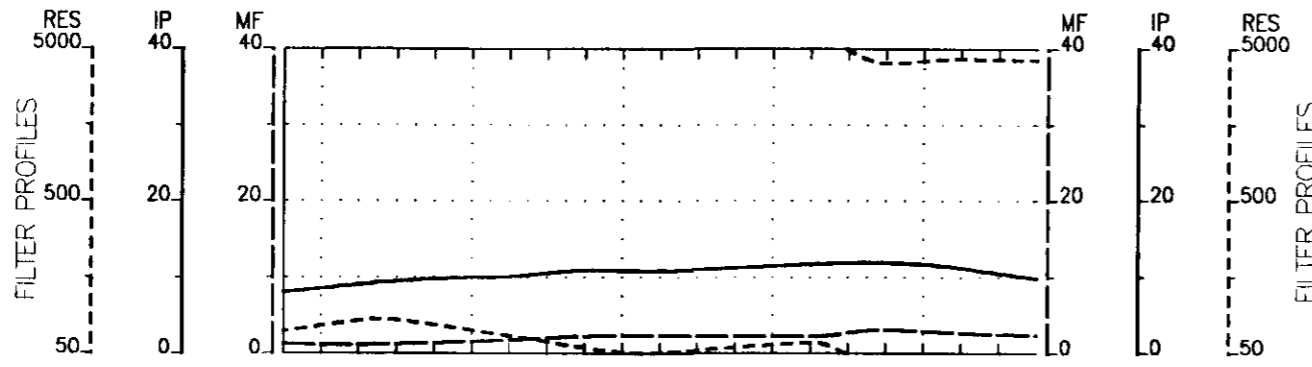
26,049

M.A. KAUFMAN

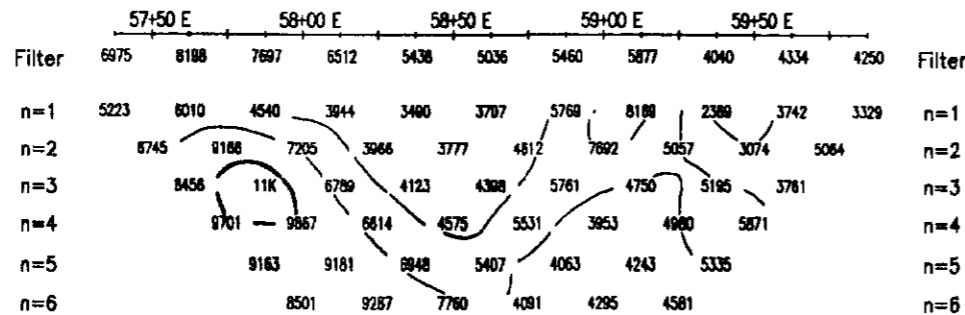
INDUCED POLARIZATION SURVEY
DOG CLAIM GROUP; NELSON M.D, B.C.
SALMO, B.C.

Date: JULY 1999 N.T.S.: 82 F
Interpretation: P.E.W.

PETER E. WALCOTT & ASSOC. LTD.

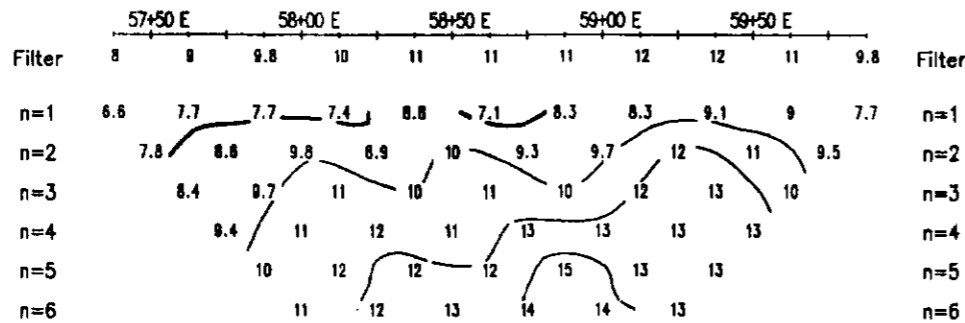


RESISTIVITY
ohm-metres

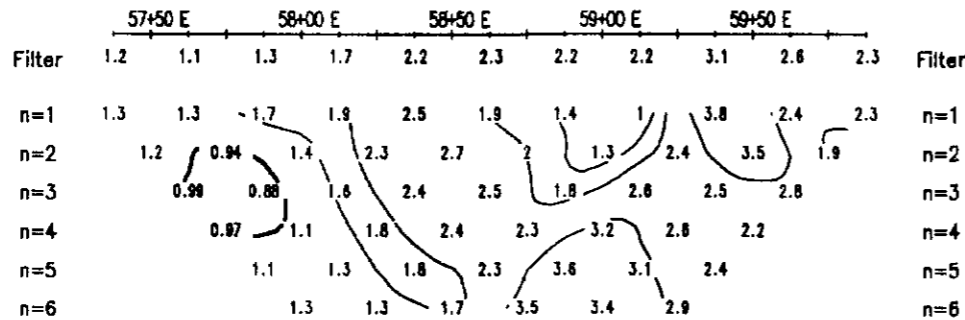


INTERPRETATION

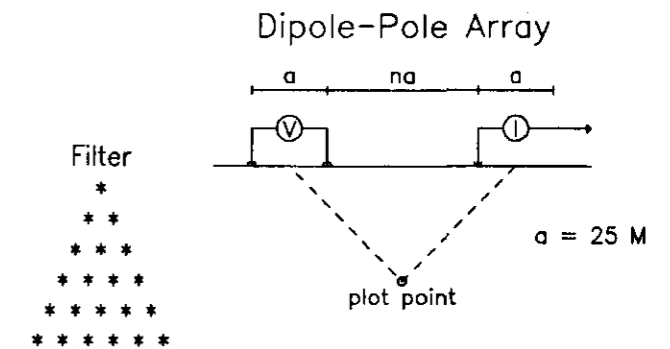
CHARGEABILITY
millivolts/volt



METAL FACTOR
ch/res X 100



Line 8400 N



Instruments: Huntex 7.5 KW TX, BRGM IP6 Rx.
Frequency: 0.125 Hz.
Operators: M.W., K.W.

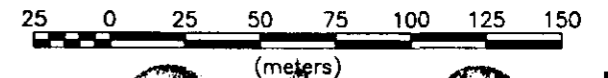
Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...

INTERPRETATION

- Well defined, strong increase in polarization with or without marked decrease in resistivity.
- Fairly well defined moderate increase in polarization.
- Fairly well defined weak increase in polarization.
- Resistivity feature.

GEOLOGICAL SURVEY BRANCH

Scale 1:2500



26,049

M.A. KAUFMAN

INDUCED POLARIZATION SURVEY
DOG CLAIM GROUP; NELSON M.D., B.C.
SALMO, B.C.

Date: JULY 1999 N.T.S.: 82 F
Interpretation: P.E.W.

PETER E. WALCOTT & ASSOC. LTD.