



Province of
British Columbia

Ministry of
Energy, Mines and
Petroleum Resources

ASSESSMENT REPORT
TITLE PAGE AND SUMMARY

TYPE OF REPORT/SURVEY(S) GEOPHYSICAL	TOTAL COST 9,010.00
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AUTHOR(S) VLADIMIR CUKOR, P. Eng. SIGNATURE(S) *[Signature]*

DATE STATEMENT OF EXPLORATION AND DEVELOPMENT FILED MAY 21/90 YEAR OF WORK 90

PROPERTY NAME(S) POCAHONTAS GROUP

COMMODITIES PRESENT Gold & Copper

B.C. MINERAL INVENTORY NUMBER(S), IF KNOWN

MINING DIVISION NANAIMO NTS 92 F/9W

LATITUDE 49° 42' LONGITUDE 124° 26'

NAMES and NUMBERS of all mineral tenures in good standing (when work was done) that form the property [Examples: TAX 1-4, FIRE 2 (12 units); PHOENIX (Lot 1706); Mineral Lease M 123; Mining or Certified Mining Lease ML 12 (claims involved)]:

GRAD (16 units), POCAHONTAS 1-8

OWNER(S)

(1) DAMIR CUKOR (2)

MAILING ADDRESS

OPERATOR(S) (that is, Company paying for the work)

(1) DAMIR CUKOR (2)

MAILING ADDRESS

As above

SUMMARY GEOLOGY (lithology, age, structure, alteration, mineralization, size, and attitude):

Property is underlain by Karmutseu volcanics and limestone, intruded by Island Intrusion. Copper - gold and copper silver showings are present on the claims.

REFERENCES TO PREVIOUS WORK

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS		COST APPORTIONED
GEOLOGICAL (scale, area)				
Ground				
Photo				
GEOPHYSICAL (line-kilometres)				
Ground				
Magnetic				
Electromagnetic				
Induced Polarization				
Radiometric				
Seismic				
Other	Resistivity 13 km	GRAD		9,010.00
Airborne				
GEOCHEMICAL (number of samples analysed for)				
Soil				
Silt				
Rock				
Other				
DRILLING (total metres; number of holes, size)				
Core				
Non-core				
RELATED TECHNICAL				
Sampling/assaying				
Petrographic				
Mineralogic				
Metallurgic				
PROSPECTING (scale, area)				
PREPARATORY/PHYSICAL				
Legal surveys (scale, area)				
Topographic (scale, area)				
Photogrammetric (scale, area)				
Line/grid (kilometres)				
Road, local access (kilometres)				
Trench (metres)				
Underground (metres)				
				TOTAL COST
				9,010.00

FOR MINISTRY USE ONLY	NAME OF PAC ACCOUNT	DEBIT	CREDIT	REMARKS:
Value work done (from report)				
Value of work approved				
Value claimed (from statement)				
Value credited to PAC account				
Value debited to PAC account				
Accepted Date	Rept. No.			Information Class

SUB-RECORDER
RECEIVED

AUG 23 1970

M.R. # \$
VANCOUVER, B.C.

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LOG NO: 30-08	RD.
ACTION:	
FILE NO:	

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**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

20,217

POCAHONTAS GROUP

Texada Island, British Columbia Area

Owner: D. Cukor

1. INTRODUCTION

The program outlined in this Report was conducted by V. Cukor, P.Eng., of NVC ENGINEERING LTD. of Vancouver, B.C. It consisted of ground resistivity, utilizing a Scintrex IGS-2 system.

The program was conducted during the month of April and this work is to be applied for assessment credit with the Ministry of Energy, Mines and Petroleum Resources.

2. PROPERTY

The property is located on the north portion of Texada Island, approximately 11 km southeast of Vananda, B.C., covering the top and southwestern slope of Mt. Pocahontas (see Figures 1 and 2). The property is located in the Nanaimo Mining Division. It is centered at north latitude $49^{\circ}42'$ and west longitude $124^{\circ}26'$; it is shown on NTS sheet 92-F/9W.

Access to the claims from Vananda is provided via the all weather road, which transects the southwest corner of the property and by the dirt road which leads to Pocahontas Bay and then loops back toward the property.

The nearest accomodation is in Vananda, and the nearest supply centre is Powell River. Texada Island is serviced by a regularly scheduled B.C. Ferry route from Powell River; access to Powell River is by a combination of road and B.C. Ferry up the Sunshine Coast or up Vancouver Island to Comox, then over to the mainland. Texada Island is also serviced by regularly scheduled air service.

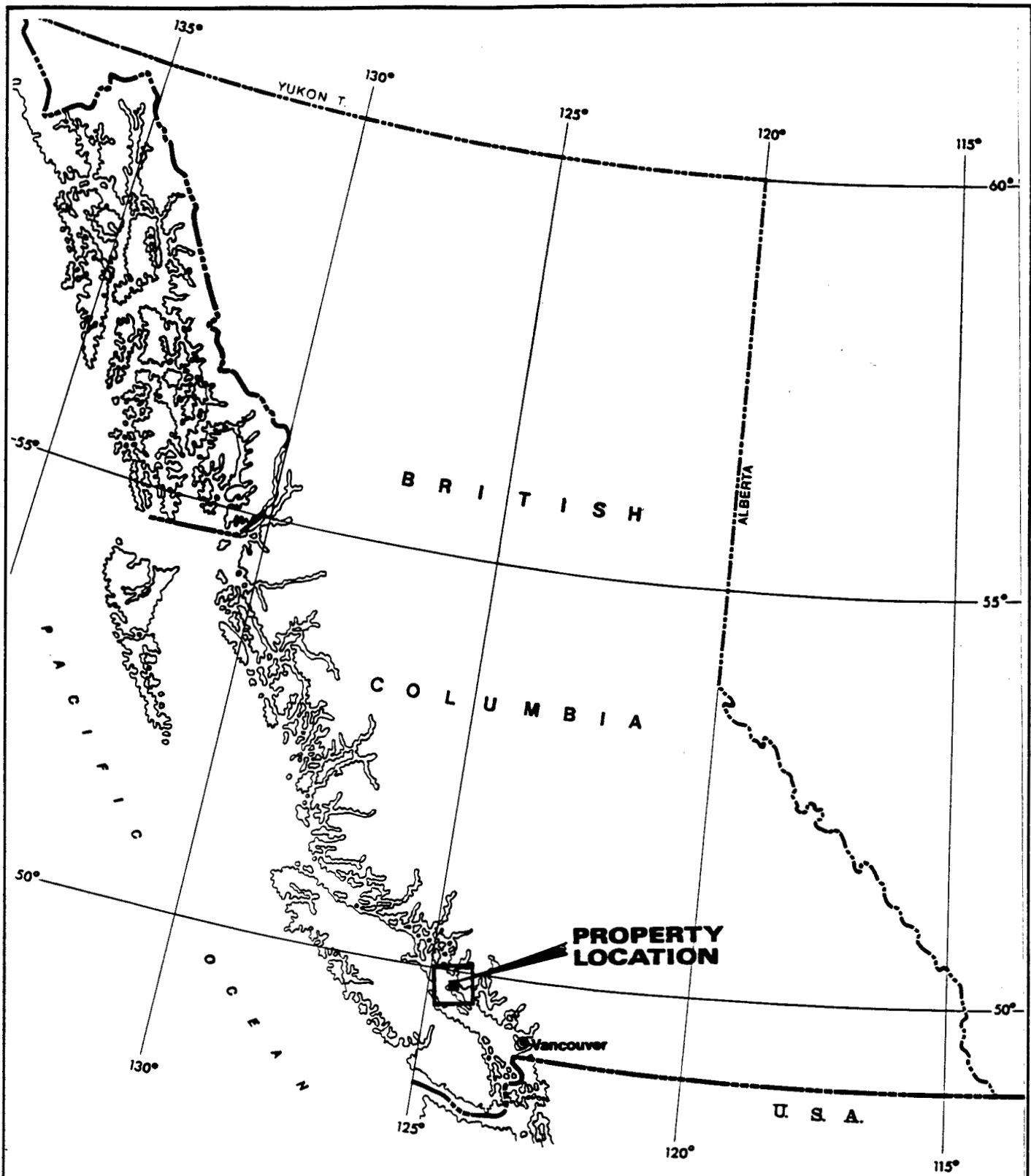
The property consists of the following mineral claims:

Claim	No. of units	Record No.	Anniversary Date
Grad	16	1737	May 28
Pocahontas 1-8	1 unit claims	2963-70	May 26

The topography is fairly moderate over much of the property area, except for the southwest facing slope, which is fairly steep. Elevations on the claims range from 300 to 1100 m above sea level. Occasionally, rock outcrops form bluffs. The property is partially covered with timber, with several large blocks logged recently. Some areas have been subjected to juvenile thinning.

The property region has a modified coastal climate; Texada Island is located in Vancouver Island's rain shadow. Summers are generally warm to hot and dry and winters mild with a moderate amount of atmospheric precipitation. The property is generally snow-free all year round.

Water and timber for exploration purposes are available on the property.



POCAHONTAS CLAIM GROUP

LOCATION MAP

NANAIMO M.D., B.C.

NTS 92 F/9W

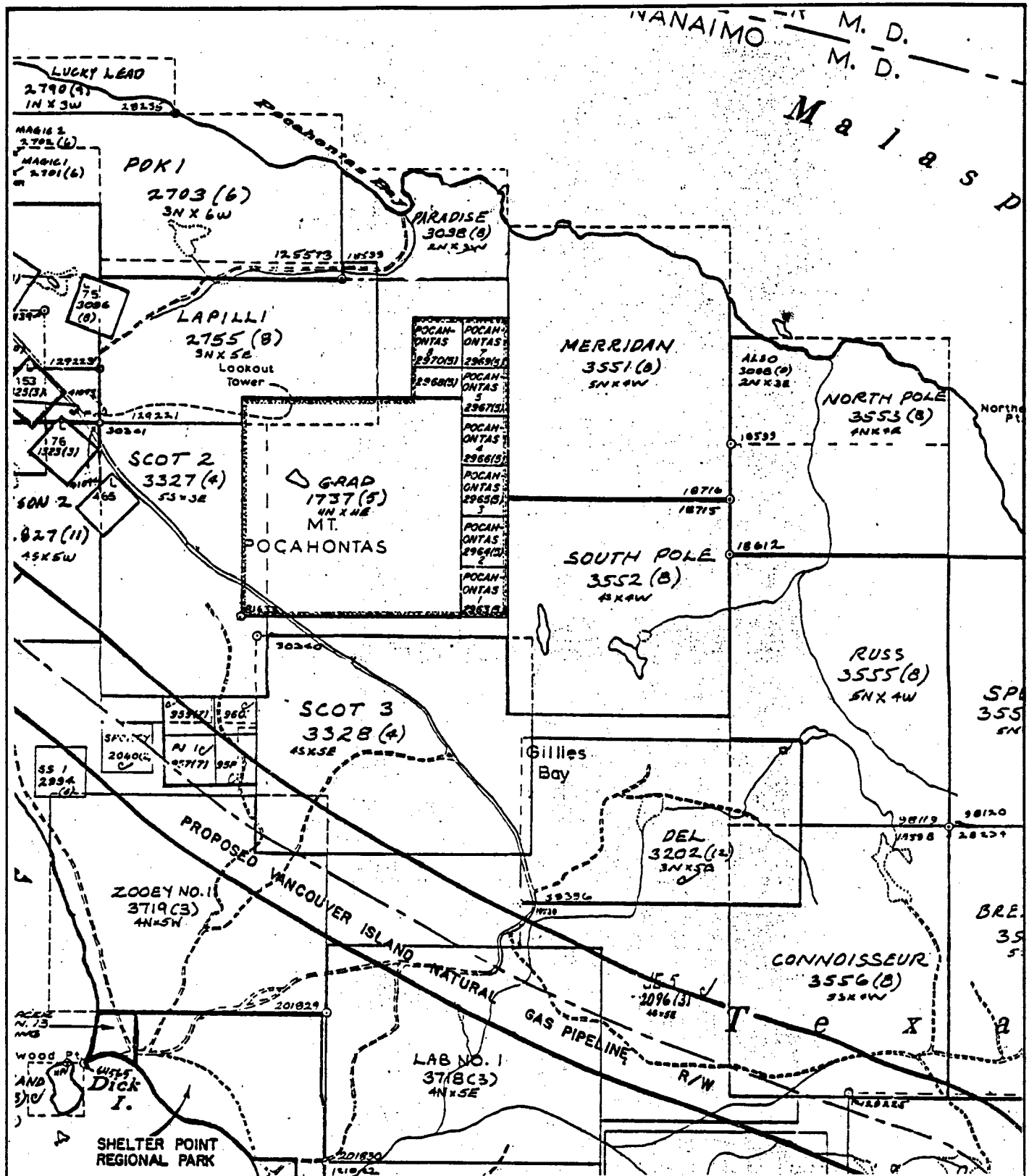
NVC ENGINEERING LTD.

VANCOUVER B.C.

DATE: August 1990

SCALE: 0  100 Miles

FIG. 1



POCAHONTAS CLAIM GROUP

CLAIM MAP

NANAIMO M.D., B.C.

NTS 92 F/9W

NVC ENGINEERING LTD.

VANCOUVER B.C.

DATE: August 1990

SCALE: 0 km

FIG. 2

3. GEOLOGY

3.1 Regional Geology

The area of the property is underlain by volcanic rocks of the Upper Triassic Karmutsen Formation which is the oldest part of the Vancouver Group. The Karmutsen is conformably overlain by limestones of the Upper Triassic Quatsino Formation, also known on Texada as the Marble Bay limestones. Both the Karmutsen and the Quatsino rocks were intruded by numerous stocks, sills and dykes of biotite-hornblende quartz diorites of Middle and Upper Jurassic Island Intrusions.

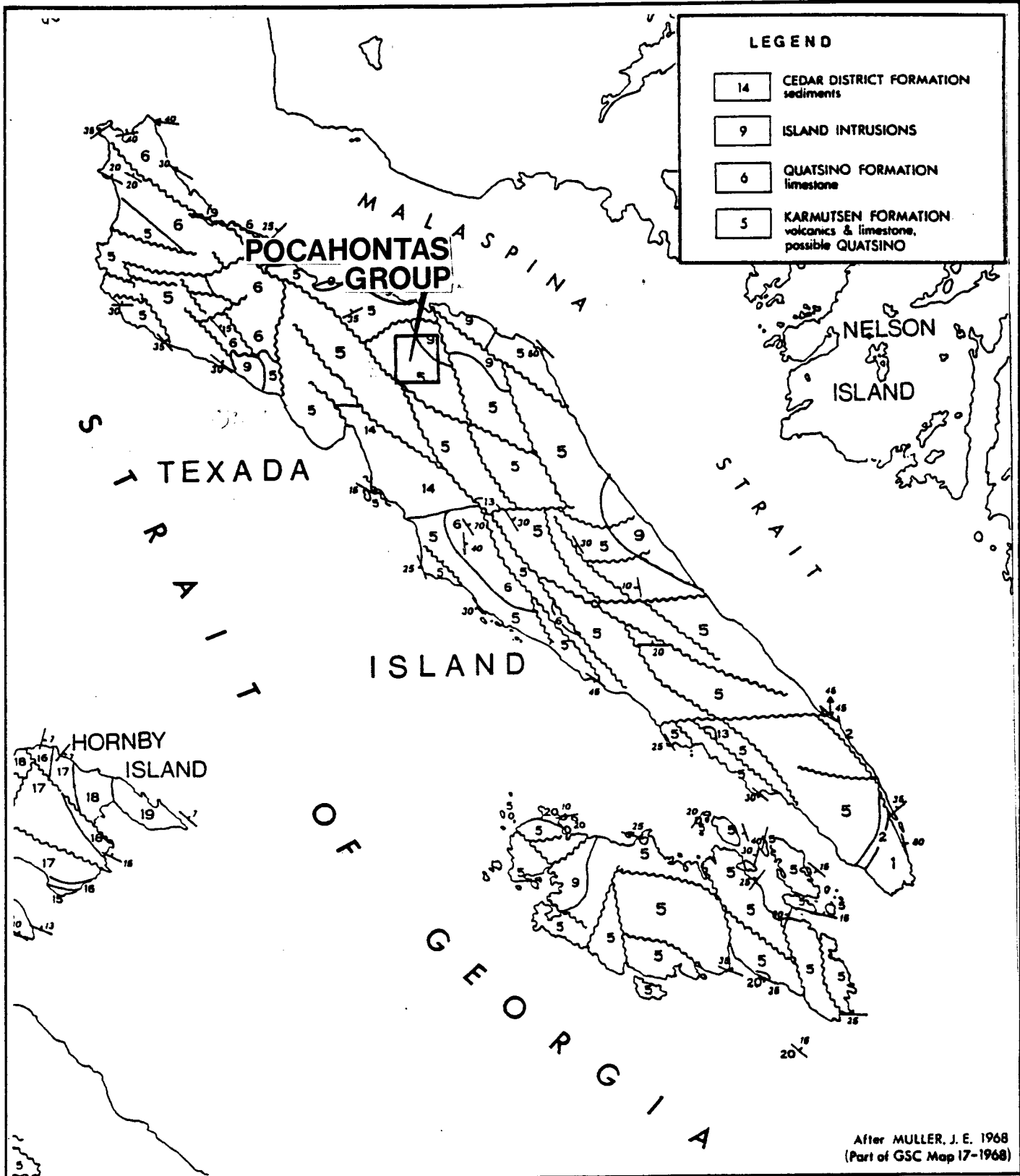
The rocks of the Karmutsen Formation (referred to as the Texada Formation by McConnell, 1914, p.21) are composed of pillowed basalt, succeeded by various types of breccia. The rocks are dark grey to black, weathering a reddish color; they are usually amygdaloidal. Pillowed lavas and breccias are overlain by well bedded lava flows. At the top of the Formation occurs a sequence of limestone beds up to ten meters thick. This limestone is usually interbedded with volcanic rocks, and it is fossiliferous. The ammonite fauna identified indicates the age of the rocks to be Upper Triassic.

The limestones of the Quatsino (Marble Bay) Formation are "massive or in beds several feet thick; in a minor part of the formation beds are a few inches thick and separated by thin shale and sandstone laminations." In many places the limestone is intruded by dykes and sills and near intrusive contacts the "limestone is metamorphosed into marble and in many instances into scarn with economic magnetite and chalcopryite deposits." (Muller, J.E., 1969)

The post Upper Triassic deformations are characterized by steep faults and related folds. The folding which probably started in Upper Triassic predated the emplacement of the main Coast Intrusives.

3.2 Property Geology

The claim group is underlain predominantly by the Upper Triassic andesitic volcanic rocks of the Karmutsen Formation. In the vicinity of the showing area the andesites or greenstones are locally interbedded with limestones of unknown thickness. This assemblage is intruded by a quartz diorite stock which underlies the northeastern part of the claims and is thought to be responsible for the skarn development within the limestone bands.



After MULLER, J. E. 1968
(Part of GSC Map 17-1968)

POCAHONTAS CLAIM GROUP

GENERAL GEOLOGY MAP

NANAIMO M.D., B.C.

NTS 92 F/9W

NVC ENGINEERING LTD.

VANCOUVER B.C.

DATE: August 1990

SCALE:

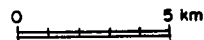


FIG.

3

The metasomatic processes produced by intrusive activity have resulted in recrystallization and development of both calc-silicate and magnetite skarns. The magnetite skarns are mineralized with chalcopyrite, pyrite and native gold. Previously conducted magnetometer surveys suggest that these may be extensive and they therefore constitute an excellent target for gold exploration.

4. GEOPHYSICAL SURVEYS

4.1 General Description

The survey was conducted over the previously cut grid, rehabilitated by some additional flagging. The 100 meter spaced grid lines have 25 meter surveyed stations. The total length of the surveyed grid was about 13 km.

The geophysical survey was performed utilizing the Scintrex IGS-2 system, which can be set to perform magnetic, VLF-EM and resistivity surveys. Only the resistivity survey was carried out during this survey.

For the resistivity survey, the IGS-2 makes measurements of the VLF electric field, utilizing a dipole with an electrode spacing of five meters. The instrument then automatically calculates apparent resistivity from the in-phase and quadrature components of the horizontal electric field, using the horizontal magnetic field as a phase reference. See the Appendix for the apparent resistivity calculation.

4.2 Discussion of Results

The survey data is presented on the Resistivity Contour Plan (see figure 4), scale 1:1,000; the values were contoured at 500 ohm-meter intervals.

Contouring revealed that the highs and lows are generally aligned along an approximate 130° - 310° trend, which appears to also be the the general trend of the geological structures.

In general terms, there is a fair correlation between the magnetic surveys from the past and the recent resistivity survey, where magnetic highs correlate with resistivity low zones and vice versa. The most interesting feature from this survey is a narrow low anomaly, which runs through the Black Prince showing area, coinciding with both soil geochemistry gold highs and a coinciding magnetic high. A parallel stucture appears to run on the eastern edge of the grid. Several other resistivity lows appear on the western side of the grid. However, these are much less defined due to markedly lower relief and aarently a lower background than appears on the eastern side of the grid.

5. CONCLUSIONS AND RECOMMENDATIONS

Good correlation between the past and recent geophysical surveys was achieved on the Pocahontas group of claims. Most intriguing is a resistivity low anomaly outlined over the Black Prince showing, and the related magnetic high zone, and extending south-east over two areas of high gold geochemical readings. This anomaly is a high priority target for any future exploration.

Respectfully submitted,

August 1990

V. Cukor, P.Eng.
NVC ENGINEERING LTD.

CERTIFICATE

I, VLADIMIR CUKOR, of 304-1720 Barclay Street, Vancouver, Province of British Columbia, DO HEREBY CERTIFY that:

1. I am a Consulting Geological Engineer with NVC Engineering Ltd., with business address as above;
2. I graduated from the University of Zagreb in 1963 as a Graduated Geological Engineer;
3. I am a Registered Geological Engineer in the Geological Section of the Association of Professional Engineers in the Province of British Columbia, Registration No. 7444;
4. I have practiced my profession as a Geological Engineer for the past twenty-seven years in Europe, North America and South America in engineering geology, hydrogeology, and exploration for base and precious metals;
5. I have performed and/or supervised the work program as documented in this Report.

August 1990

V. Cukor, P.Eng.
NVC ENGINEERING LTD.

APPENDIX A
COSTS OF THE WORK PROGRAM

COSTS OF THE WORK PROGRAM

Field Work

V. Cukor, P.Eng.	
6 days @ \$500/day	\$ 3000.00
Helper, 6 days @ \$120/day	720.00
Instrument rental, 6 days @ \$450/day	2700.00
Truck rental, 6 days @ 60/day	360.00
B.C. Ferry, gasoline	195.00
Camping costs and field supplies	650.00

Report

V. Cukor, P.Eng., 2 days @ \$500/day	1000.00
Drafting, 10 hrs @ \$20/hr	200.00
Typing, printing	185.00

TOTAL Costs \$ 9010.00

V. Cukor, P.Eng.

APPENDIX B
INSTRUMENT SPECIFICATIONS

1. THE IGS-2 SYSTEM

1.1 General Information

The IGS-2 Integrated Geophysical System is a portable microprocessor-based instrument which allows more than one type of survey measurement to be performed by a single operator during a survey.

The IGS-2 is a modular system which can easily be configured to suit different and changing survey requirements. Reconfiguring the system is easy and offers both operational flexibility and minimal redundancy with a minimum number of spare consoles and/or modules.

When configured with any of the available sensor options, the IGS-2 System Control Console becomes a method-specific instrument according to the sensor option(s) utilized. In addition, the IGS-2 Console is an electronic notebook into which geophysical, geological or other data may be manually entered and digitally stored.

Data is stored in the IGS-2 in an expandable, solid state memory and can be output in the field by connecting the instrument to a printer, tape recorder, modem or microcomputer.

The 32 character digital display uses full words in most cases, ensuring clear communication. Both present and previous data are displayed simultaneously, allowing comparisons to be made at a glance during a survey.

The IGS-2 records header information, data values, station number, line number, grid number and the time of each observation in its internal memory. Data are first sorted by grid number, then in order of increasing line number and, within each line, by increasing station number. In this way, the data are organized logically regardless of the sequence in which they were taken. Ancillary data can also be manually entered and recorded at a given station, along with the survey parameters.

1.2 Standard Console Specifications

Digital Display	32 character, 2 line LCD display
Keyboard Input	14 keys for entering all commands, coordinates, header and ancillary information
Languages	English plus French is standard
Standard Memory	16K RAM. More than sufficient for a day's data in most applications
Clock	Real time clock with day, month, year, hour, minute and second. One second resolution, ± 1 second stability over 12 hours. Needs keyboard initialization only after battery replacement
Digital Data Output	RS-232C serial interface for digital printer, modem, microcomputer or cassette tape recorder. Data outputs in 7 bit ASCII, no parity format. Baud rate is keyboard selectable at 110, 300, 600 and 1200 baud. Carriage return delay is keyboard selectable in increments of one from 0 through 999. Handshaking is done through X-ON/X-OFF protocol. Allows IGS-2 to act as a master for other instrumentation.

Analog Output	For a strip chart recorder. 0 to 999 mV full scale with keyboard selectable sensitivities of 10, 100 or 1000 units full scale.
Console Dimensions	240 x 90 x 240 mm includes mounted battery pack.
Weights	Console; 2.2 kg. Console with Non-rechargeable Battery Pack; 3.2 kg. Console with Rechargeable Battery Pack; 3.6 kg.
Operating Temperature Range	-40°C to +50°C provided optional Display Heater is used below -20°C.
Power Requirements	Can be powered by external 12 V DC or one of the Battery Pack Options listed below.

2. IGS-2/MP MAGNETOMETER

2.1 The Magnetic Method

The magnetic method consists of measuring the magnetic field of the earth as influenced by rock formations having different magnetic properties and configurations. The measured field is the vector sum of induced and remanent magnetic effects. Thus, there are three factors, excluding geometrical factors, which determine the magnetic field. These are the strength of the earth's magnetic field, the magnetic susceptibilities of the rocks present and their remanent magnetism.

The earth's magnetic field is similar in form to that of a bar magnet's. The flux lines of the geomagnetic field are vertical at the north and south magnetic poles where the strength is approximately 60,000 nT. In the equatorial region, the field is horizontal and its strength is approximately 30,000 nT.

The primary geomagnetic field is, for the purposes of normal mineral exploration surveys, constant in space and time. Magnetic field measurements may, however, vary considerably due to short term external magnetic influences. The magnitude of these variations is unpredictable. In the case of sudden magnetic storms, it may reach several hundred gammas over a few minutes. It may be necessary, therefore, to take continuous readings of the geomagnetic field with a base station magnetometer while the magnetic survey is being done. An alternative field procedure is to make periodic repeat measurements at convenient traverse points, although this is a very unreliable method during active magnetic storms when it is important to have proper reference data.

The intensity of magnetization induced in rocks by the geomagnetic field F is given by:

$$I = kF$$

where I is the induced magnetization

k is the volume magnetic susceptibility

F is the strength of the geomagnetic field

For most materials, k is very much less than 1. If k is negative, the body is said to be diamagnetic. Examples are quartz, marble, graphite and rock salt. If k is a small positive value, the body is said to be paramagnetic, examples of which are gneiss ($k =$

0.002), pegmatite, dolomite and syenite. If k is a large positive value, the body is strongly magnetic and it is said to be ferromagnetic, for example, magnetite ($k = 0.3$), ilmenite and pyrrhotite.

The susceptibilities of rocks are determined primarily by their magnetite content since this mineral is so strongly magnetic and so widely distributed in the various rock types. (Of considerable importance, as well, is the pyrrhotite content.)

The remanent magnetization of rocks depends both on their composition and their previous history. Whereas the induced magnetization is nearly always parallel to the direction of the geomagnetic field, the natural remanent magnetization may bear no relation to the present direction and intensity of the earth's field. The remanent magnetization is related to the direction of the earth's field at the time the rocks were last magnetized. Movement of the body through folding, etc., and the chemical history since the previous magnetization are additional factors which affect the magnitude and direction of the remanent magnetic vector.

Thus, the resultant magnetization M of a rock is given by:

$$M = M_n + kF$$

where M_n is the natural remanent magnetization, and F is a vector which can be completely specified by its horizontal (H) and vertical (Z) components and by the declination (D) from true north. Similarly, M_n is specified when its magnitude and direction are known. Thus, considerable simplification results if $M_n = 0$, whereupon M merely reduces to kF . In the early days of magnetic prospecting, it was usually assumed that there was no remanent magnetization. However, it has now been established that both igneous and sedimentary rocks possess remanent magnetization, and that the phenomenon is a widespread one.

2.2 Magnetometer Specifications

Total Field Operating Range	20,000 to 100,000 nT (1 nT = 1 gamma)
Gradient Tolerance For Total Field	<u>+5000 nT/m</u>

3. IGS/VLF-4 ELECTROMAGNETIC RECEIVER

3.1 VLF Theory

VLF stations (total of 12 stations located around the world) radiate electromagnetic waves on the VLF band in the range between 15 to 29 kHz. The signals are transmitted for purposes of navigation and communication with submarines. The VLF Electromagnetic Receiver picks up the magnetic and electric fields of these signals to provide information about the electrical properties of the earth.

The signal transmitted by the VLF station is recorded by the vertical coils as:

$$H_p = A \sin w ; H_s = B \cos (w - \phi) \quad (1.0)$$

where H_p = primary signal

A = amplitude of primary signal

H_s = secondary (phase laged) signal

B = amplitude of secondary signal

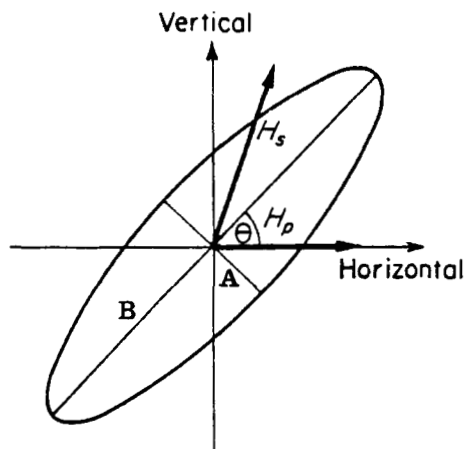
w = frequency

t = time

ϕ = phase lag

These two received signals combine giving an ellipse (see fig. A), which two axis correspond to the length and width of the ellipse.

$$\text{i.e. } \frac{H_p^2}{A^2} + \frac{H_s^2}{B^2} - \frac{2 H_p H_s \sin \phi}{AB} = \cos^2 \phi$$



By measuring the angle from the horizontal to the longaxis of the ellipse (θ), a conductor is located when this tilt angle is zero.

As its primary measurement, the IGS-2/VLF-4 employs two mutually orthogonal receive coils to determine three parameters of the VLF magnetic field. These are: 1) the horizontal amplitude vector in a direction perpendicular to a line joining the operator to the station; 2) the amplitude of the component of the vertical field vector which is in phase with the horizontal vector; and 3) the amplitude of the component of the vertical field vector which is 90° out of phase with the horizontal vector. These three parameters, for the given VLF transmitter, are recorded simultaneously. Since the vertical components are expressed as a percentage of the horizontal vector, they are automatically normalized for any changes in the amplitude of the transmitted primary field.

The primary field from a VLF station can, in fact, vary considerably. For the most part, the field fluctuates moderately during the course of the day due to changes in atmospheric conditions. There are, however, more dramatic changes. Towards evening there is a large upwards swing in the field strength, and at several points during the day, both partial and total drops in the field amplitude can be observed. In the light of these irregularities, the horizontal field data should always be considered with reservation as it is difficult to know whether changes are caused by conductors or by variations in the station's signal.

If the primary field strength is constant, changes in the amplitude of the horizontal magnetic field mainly reflect variations in the conductivity of the earth. Normally, there will be no vertical magnetic field. However, near a conductor, a vertical field will be observed. The relative amplitudes of the in-phase and quadrature components may be used to interpret the conductivity-size characteristics of the conductor.

3.2 IGS/VLF-4 Specifications

Frequency Tuning	Automatic digital tuning. Can be tuned to any frequency in the range 15.0 to 29.0 kHz with a bandwidth of 150 kHz.
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Up to three frequencies can be chosen by keyboard entry for sequential measurements.

Field Strength Range	Fields as low as 100 mA/m can be received. In practice, background noise may require fields up to 5-10 times this level. Maximum received field is 2 mA/metre. These values are specified for 20 kHz. For any other frequency, calculate the above limits by multiplying by the station frequency in kHz and dividing by 20.
Signal Filtering	Narrow bandpass, low pass and sharp cut-off high pass filters.
Measuring Time	0.5 seconds sample interval. As many as 216 samples can be stacked to improve measurement accuracy.
VLF-Magnetic Field Components Measured	1) Horizontal amplitude, 2) vertical in-phase component, and 3) vertical quadrature components. Vertical components are displayed as a percentage of horizontal component and are related in phase to the horizontal component. Their range is $\pm 120\%$; reading resolution 1%.
VLF-Magnetic Field Sensor	Two air-cored coils in a backpack mounted housing with an electronic level for automatic tilt compensation. The error in the vertical in-phase component is less than 1% for tilts up to $\pm 15^\circ$.

3.3 Fraser Filtering

This technique for filtering VLF-EM data was proposed by Dr. D. C. Fraser in 1969. The reason for applying this filter is that there is a dynamic range problem when presenting the data as profiles. In the same area that a 5° peak to peak anomaly may be significant, anomalies of 100° may also occur. This filtering operation transforms the zero cross-overs into peaks and noise is reduced by application of a low-pass filter. The data may be presented as profiles or the positive values may be contoured.

This filter was originally applied to dip angle data as collected by VLF receivers such as the Radem by Crone Geophysics. It is equally applicable to vertical in-phase and quadrature data.

The filter phase-shifts the data by 90° so that zero cross overs and inflections are transformed into peaks. It removes dc and attenuates long spatial wavelengths to increase resolution of local anomalies.

These requirements are met by the difference operator $(R(n+1)-R(n))$, where $R(n)$ and $R(n+1)$ are any two consecutive readings.

The filter does not exaggerate the random noise. This is achieved by applying a low-pass operator to the differences as follows:

$$0.25(R(n+1)-R(n)+0.50(R(n+2)-R(n+1))+0.25(R(n+3)-R(n+2))).$$

The filtered output is then $0.25(R(n+2)+R(n+3)-R(n)-R(n+1))$.

As this filtering process was originally designed to be simple so it could be applied by field personnel with limited facilities, the constant is eliminated.

The plotted function then becomes $F(n+1,n+2)=(R(n+2)+R(n+3)-(R(n)+R(n+1)))$.

The interpretation of filter plots is qualitative. Since the filter retains relative amplitudes, large responses can be equated with large and/or highly conductive zones. Very sharp responses indicate shallow sources, and, conversely, broader anomalies indicate progressively deeper sources. The contouring connects responses from line to line and serves to delineate the trend of conductive zones.

An additional interpretive tool is a pseudo-section of the filter outputs. This is produced by processing a given data profile with filters of various lengths or spans. As the length of the filter increases, responses from increasing depths are successively emphasized. Therefore, if these outputs are arranged on a section such that greater depths correspond to longer filters, then the section should approximately resemble the current pattern in the ground. However, it must be emphasized that this is only an approximation to the section (i.e. pseudo-section). Construction of the section follows a number of steps.

3.4 Resistivity

To permit measurement of the VLF-electric field, a dipole consisting of two cylindrical electrodes and five metres of wire is used. When this dipole is correctly laid out, the IGS-2/VLF-4 measures the in-phase and quadrature components of the horizontal electric field in the direction of the line joining the operator and the transmitter station. The phase reference is the horizontal magnetic field.

The IGS-2/VLF-4 uses the magnetic and electric field measurements to automatically calculate the apparent resistivity of the earth as well as the phase angle between the magnetic and electric field components. If the earth is uniform (not layered) within the depth of the VLF measurement, the phase angle between the horizontal magnetic and electric VLF fields will be 45°. A non-uniform earth will give rise to other phase angles.

The following formulae are used for resistivity and phase calculations:

Apparent Resistivity Calculation:

$$\rho = \frac{1}{2\pi f \mu_0} \left| \frac{E_x}{H_y} \right|^2$$

where:

ρ = apparent resistivity on ohm metres

E_x = horizontal electric amplitude, calculated

$$E_x = (E_x(I)^2 + E_x(Q)^2)^{1/2}$$

H_y = horizontal magnetic amplitude, measured

f = VLF station frequency in Hertz

μ_0 = permeability of the ground in Henries/metre,
a constant

The resistivity calculation has a range of 1 to 100,000 ohm metres with a resolution of 1 ohm metre.

Phase Angle Calculation:

The phase angle ϕ is expressed as:

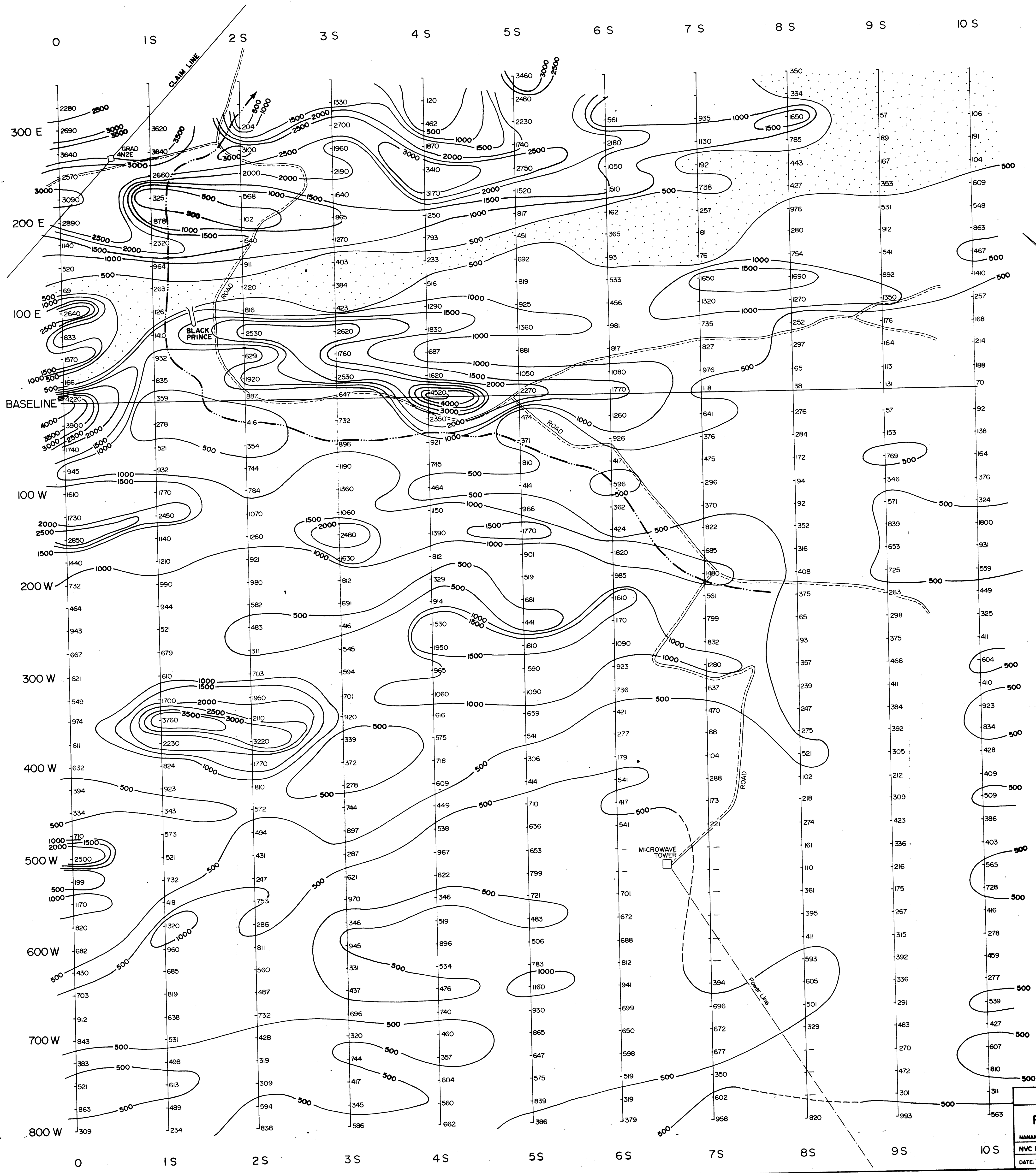
$$\phi = \text{arc tan } \frac{E_x(Q)}{E_x(I)}$$

where:

$E_x(Q)$ = horizontal quadrature VLF electric field

$E_x(I)$ = horizontal in-phase VLF electric field,
phase referenced to the horizontal
magnetic field, H_y .

The phase angle calculation has a range of -180° to $+180^\circ$ with a resolution of 1° . By definition, the angle is positive when the electrical field leads the magnetic field.



GEOLOGICAL BRANCH
ASSESSMENT REPORT

20,217

POCAHONTAS CLAIM GROUP	
RESISTIVITY CONTOUR PLAN	
NANAIMO B.C.	NTS 92 F/9M
NVC ENGINEERING LTD.	VANCOUVER B.C.
DATE: August 1990	SCALE: 1" = 100' FIG. 4

U W