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	GEOPHYSICAL REPORT		
	on the		
	CAMBRIA PROPERTY		William .
	(CAMBRIA 1 - 3 CLAIMS)	7 6 0 2 2 6	
	SKEENA MINING DIVISION	<del></del> <del>A</del> A A A A A A A A A A A A A A A A A	
	BRITISH COLUMBIA		
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M.R. # \$	Latitude: 55° 44' N Longitude: 129° 34' W	2 13 2 13 2 14	

Owner: & Operator Cambria Resources Limited

2204-2075 Comox Street

Vancouver, B.C. V6G 1S2

Consultants:

Searchlight Consultants Inc. 505-744 West Hastings Street Vancouver, B.C. V6C 1A5

FILMED

by:

David M. Nelles, B.Sc.

April 10, 1989

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#### INTRODUCTION

The Kitsault River valley, previously explored for its high-grade silver veining, has recently seen renewed exploration efforts focusing on a belt of hydrothermally altered rocks known as the Copper Belt. While copper is the most abundant mineral within this belt, precious metal mineralization hosted in hydrothermal veining has been discovered in several localities.

The Cambria property, situated at the northwestern end of the Copper Belt, encompasses a large area of hydrothermally altered rocks hosting both base and precious metal mineralization.

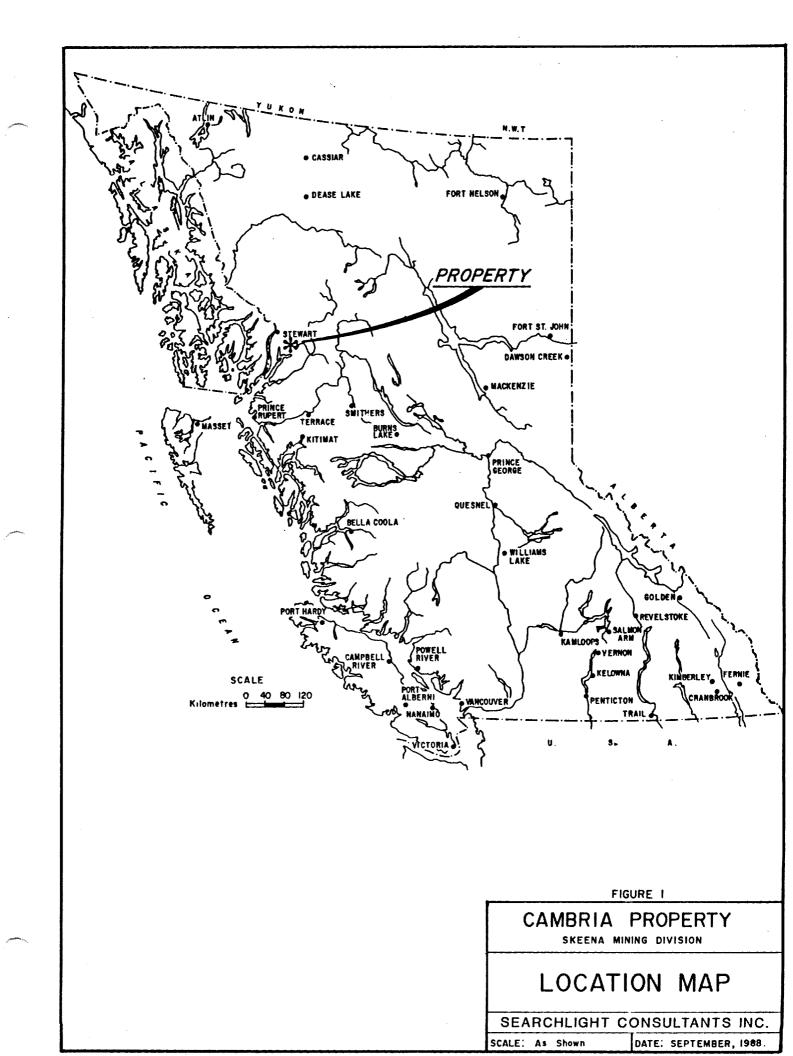
In order to test the potential of the hydrothermal system hosting this mineralization, a programme of induced polarization-resistivity geophysics followed by preliminary diamond drilling was recommended in the area of the previously defined geochemical anomalies. Unfortunately, inclement weather prevented all but sporadic helicopter access, thus preventing the mobilization of the drill to the property. For this reason, a decision was made to defer the drilling until next year.

This report was prepared at the request of Cambria Resources Limited and provides a description of the work that was completed as part of the 1988 field programme, as well as a summary of the previous exploration on the property.

#### **Location and Access**

The Cambria property is located approximately 32 kilometres southeast of Stewart, British Columbia and is centered near 55° 44' north latitude and 129° 34' west longitude in the Skeena Mining Division (Figure 1). The claims straddle Homestake Ridge, a broad spur separating the West Kitsault and Kitsault Rivers just south of the Cambria Icefield. This icefield occupies much of the ground between the property and Stewart, the closest support center.

Road access to within 8 kilometres of the property has recently been established by Dolly Varden Resources to access their property from Alice Arm, at the mouth of the Kitsault River. This road is currently passable by four wheel drive vehicle for 14 kilometres and could be upgraded and extended as far as the property should road access be required. Overgrown trails from the end of this road presently give access to the property by foot, although crossing the Kitsault River is likely to be difficult. At present, access to the property is best gained by helicopter from Stewart, the return trip taking approximately 40 minutes.



### Physiography, Vegetation and Climate

The property lies on Homestake Ridge, a southwesterly trending broad-backed spur that rises abruptly from the valley floor of the Kitsault River at an elevation of 500 metres. Elevations within the claims vary from 600 metres (1,970 feet) in the south to over 1,630 metres (5,315 feet) in the northwest. The ridge itself is surrounded on both sides by receding glaciers and steep valley walls and varies from 500 to 800 metres in width. It is relatively flat in many places and is transected by a number of small creeks which drain into numerous lakes and ponds, thus ensuring an ample water supply throughout the field season. Outcrop exposure is excellent on the ridge itself although often covered by vegetation and talus on the steeper flanks.

Treeline lies at approximately 1,100 metres. Bio-geoclimatic zones range from coastal forest in the valley bottoms through sub-alpine and alpine at the higher elevations. On the lower parts of the ridge in the southern part of the property vegetation consists of mountain hemlock, Pacific silver fir, western hemlock and yellow cedar, often up to one metre in diameter. The steep east and west flanks of the ridge are predominantly covered with slide alder and vine maple interspersed with dense patches of berry bushes and devils club.

The broad top of the ridge is predominantly alpine with mountain heather and patches of stunted mountain hemlock. Above treeline the slopes are covered with mountain heather and grasses eventually grading to bare rocks and perennial snow on the highest reaches of the property.

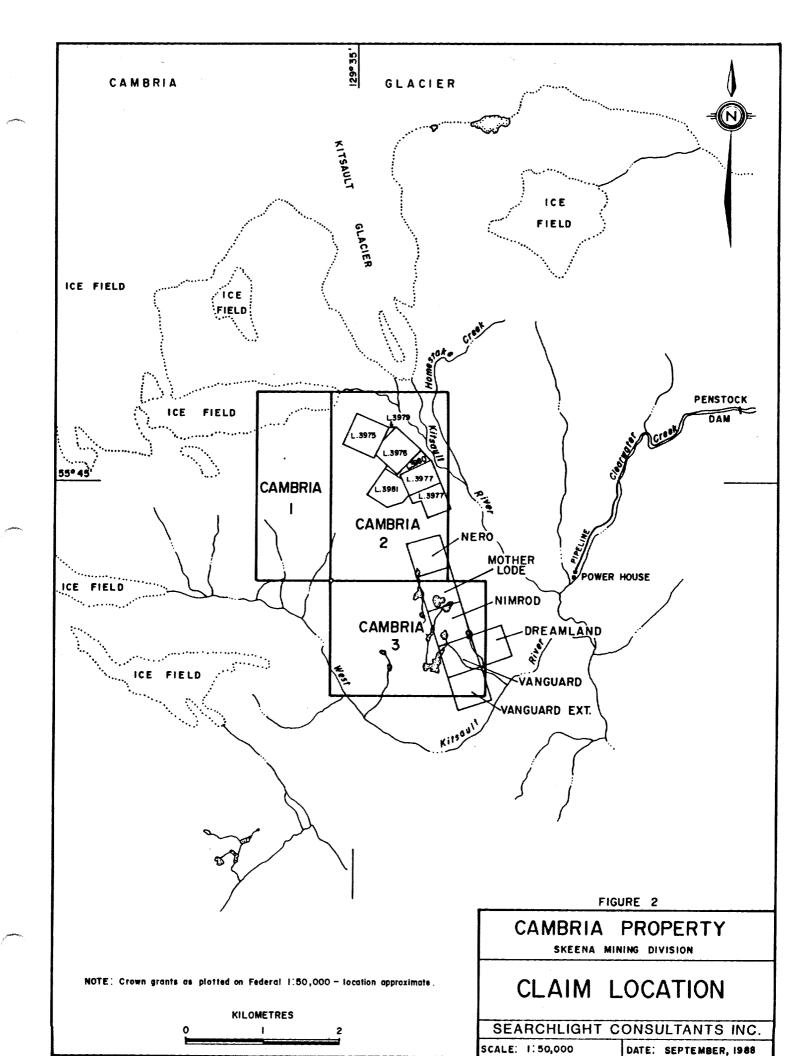
Precipitation in the area is heavy, in excess of 5,000 millimetres per year. The higher and less exposed portions of property appear to accumulate in excess of 5 metres of snow during the winter, much of which remains on the property well into July. Perennial snow patches are common at elevations greater than 1,250 metres.

### **Claim Information**

The Cambria group consists of three claims, the Cambria 1, 2 and 3 (Figure 2). The claims are recorded in the name Cambria Resources Limited of Vancouver, B.C. who have entered into an option agreement with the original owners under which they can acquire a 100 per cent interest in the property over five years (subject to a 10 per cent net operating profit). The following table details information pertaining to these claims:

Claim Name	Units	Record Number	Expiry Date		
CAMBRIA 1	10	5357	May 6, 1999		
CAMBRIA 2	15	5358	May 6, 1999		
CAMBRIA 3	12	5359	May 6, 1999		
* when the work herein described is accepted for assessment.					

The common Legal Corner Post and several identification posts for the Cambria claims were examined by Neil Froc, B.A.Sc. during October, 1986 and appear to be located according to current mining regulations.



### History

Mineral exploration in the Kitsault valley started in the early 1900's because of interest generated by discoveries at Anyox and in the Stewart region. The Dolly Varden, Homestake, North Star and Torbrit properties were mined between 1915 and 1959. Total production was 1,284,882 tonnes grading 485 grams silver per tonne, 0.38 per cent lead and 0.02 per cent zinc (Dawson and Alldrick, 1986).

The area saw renewed exploration focussed on porphyry copper-molybdenum deposits from 1965 to 1970. The Ajax molybdenum prospect was staked during this period. Drilling at Ajax outlined indicated reserves of 526,967,000 tonnes grading 0.09 per cent molybdenum (Dawson and Alldrick, 1986).

The first recorded mineral exploration in the upper Kitsault River area took place in 1912 when the Dolly Varden mineral claim was staked on a quartz vein carrying gold, silver and copper values on the west side of Kitsault River south of Evindsen Creek. The next two years saw considerable exploration activity and several copper showings with gold and silver values were staked and worked on north of the confluence of Evindsen Creek and Kitsault River.

In the autumn of 1914, the Homestake mineral claim was located by A. Davidson of Alice Arm. This was the first recorded activity in the immediate area of the Cambria property. Several more claims were staked the following three years including the Homestake No. 1, Homestake No. 2, Homestake No. 3 and Tip Top mineral claims. These claims, along with the Homestake and Homestake No. 1 fractional mineral claims comprise the Homestake Group.

In 1918, the Homestake claims were bonded to the Mineral Claims Development Company which did practically no work on them. In 1921 this company was reorganized into the Consolidated Homestake Mining and Development Company, with registered office at Vancouver, B.C. This company, with English and Canadian finances, carried out a small amount of surface and underground work under the supervision of A. C. Gerhardi between the years 1921 and 1925 (Minister of Mines, 1938). In 1925 the claims were given crown grant status.

In 1926 the Homestake, with three other groups, was bonded to the C. Spencer interests of Vancouver, but no work was done by them and the option was abandoned in 1927. In 1934 the property was optioned by a Vancouver syndicate which later formed British Lion Mines Ltd. (Minister of Mines, 1938). The president of British Lion, A. F. Smith, was one of the original owners of the property.

During the period 1937 to 1939 this company drove the "Smith" and "Myberg" adits and carried out extensive trenching in the area of the "Myberg" adit. In 1939 8.0 tonnes (8.8 tons) of selected ore was shipped which returned 1,120 grams (36 oz.) gold, 1,617 grams (52 oz.) silver, 63.5 kg (140 lb.) lead, 303 kg (668 lb.) zinc and 599 kg (1,320 lb.) copper (Black, 1951). This gives a gold value of 140.3 grams per tonne (4.09 ounces per ton).

Since 1939 only minor work has been carried out on the Homestake property, and it has apparently lain dormant since 1952. There is still one habitable cabin located at 860 metres elevation on the Homestake No. 1 claim (L. 3976).

Several other properties adjoining the Homestake were active at the same time. These include the Monarch, Blue Ribbon, Matilda (Gold Reef), Fox, Lucky Strike and Vanguard. Most of these received minor surface and underground development and a number of mineralized shears and veins were discovered carrying values in silver, gold, copper, lead and zinc. These properties, with the exception of the Vanguard Group, were restaked beginning in 1964 by Dwight Collison of Alice Arm as the Cascade Falls, Lucky Strike and Ted claims.

The Vanguard Group, still in good standing, received extensive work including about 275 metres of underground work between the early 1900's and 1966. The Vanguard Group consists of the Nero, Mother Lode, Nimrod, Vanguard, Dreamland and Vanguard Extension claims. The property was originally explored for copper and by 1927 several open cuts and two adits had been completed.

About 1925, gold was discovered on the Nero claim to the north of the main showings and surface work was done on this and nearby showings. In 1947 a crosscut adit was begun below the main gold showing and work continued on this until the early 1950's.

In 1966 Canex Aerial Exploration Ltd. optioned the property from the owner, M. Peterson of Alice Arm. Canex carried out geological mapping, a geochemical survey and an electromagnetic survey. Canex later dropped the option. In 1968 an additional three metres of underground work was done. A cabin, in very bad condition, is still standing on the Vanguard claim.

The Cascade Falls, Lucky Strike and Ted claims were held by D. Collison until his death in April, 1979. During this time he carried out surface trenching, minor underground work and a very limited diamond drill programme. A cabin was built by Collison at 1150 metres elevation on the property, this cabin is still in good condition although very small.

In June, 1979, Newmont Exploration of Canada Limited optioned the property from Ruby Collison, widow of Dwight Collison. Newmont was interested in the property for its potential for a large, near surface, massive sulphide deposit. In 1979 Newmont established a rough grid and a reconnaissance geological and soil geochemical survey was conducted.

In 1980, Newmont cut and surveyed approximately 28 kilometres of grid over which it completed electromagnetic and magnetic geophysics, soil and lithogeochemistry, geological mapping and blast trenching.

This work failed to define a near surface massive sulphide deposit of economic dimensions but did suggest that potential existed for the development of hydrothermal mineralization with associated anomalous precious metal values in both rock and soil samples. At the end of 1980, however, Newmont dropped their option.

In 1984 Homeridge Resources Ltd. optioned the property from Ruby Collison. No work was carried out on the property other than a brief property visit and the claims were allowed to lapse the following year.

In May, 1986, the Cambria 1, 2 and 3 claims were staked to encompass all of the area held by Collison as well as much of the surrounding ground. The owners subsequently entered into an option agreement with Cambria Resources Limited who implemented a work programme which focused on the re-evaluation of Newmont's data without a bias toward massive sulfide deposits. This programme included geological mapping, lithogeochemical sampling and blast trenching and successfully identified a large, complex hydrothermal system hosting significant gold and silver mineralization. For additional information regarding this programme, the reader should refer to the 1986 report by Coombes and Smith.

In order to determine the best targets for drilling within this system, a programme of induced polarization-resistivity geophysics was carried out over a portion of the grid in September, 1988. The results of this survey form the basis of this report.

### **Summary of Work**

In order to better define drill targets within the wide area of hydrothermal alteration previously mapped within the claims, an induced polarization-resistivity geophysical survey was carried out as part of the 1988 exploration programme. A total of 4.3 line kilometres were surveyed with stations spaced at 25 metres along previously established grid lines spaced at 100 metres. The 40 hectares encompassed fell mainly within the Cambria 2 claim, although the eastern corner of the grid did cross into the Cambria 1 claim. Once complete, the sections generated from this survey were used to target preliminary diamond drill holes.

Unusually poor weather conditions combined with unreliable transportation services, however, precluded all attempts at establishing a drill on the property. As it was unlikely that the drilling could be completed before the onset of heavy snows, it was decided to defer this portion of the programme until next year.

#### REGIONAL GEOLOGY

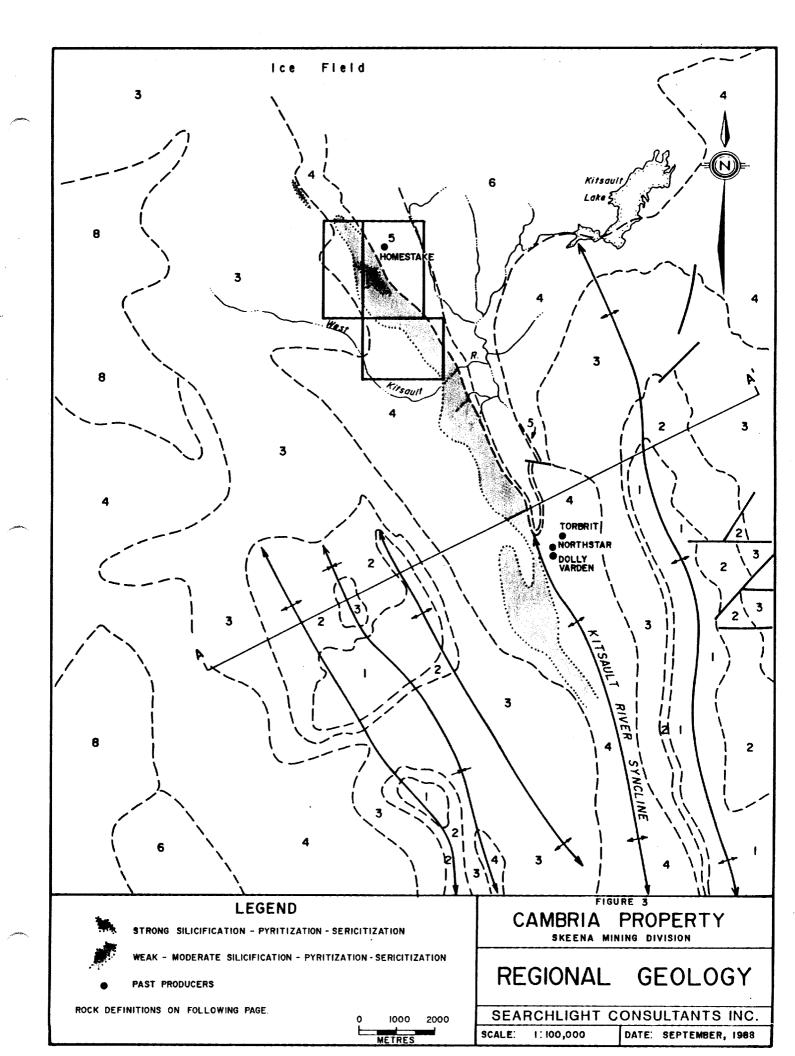
The upper Kitsault Valley area is underlain by a complex suite of marine sedimentary and volcanic rocks which lies on the extreme western margin of the Intermontane Belt, just east of the Coast Plutonic Complex (Figure 3). Both the lower sedimentary and volcanic units are correlative with the Lower to Middle Jurassic Hazelton Group and are intimately related. These units are intercalated and may have been deposited during a geologically complex period. The base of the oldest member, a sequence of deep water, thin bedded clastic rocks, is not exposed it the area, but is believed to be at least 1,200 metres thick. An upper sedimentary unit of probable Middle to Upper Jurassic age overlies this assemblage and is exposed at both ends of the Kitsault Valley. Scattered Eocene intrusions on Mt. McGuire and near Alice Arm represent the youngest rocks in the area.

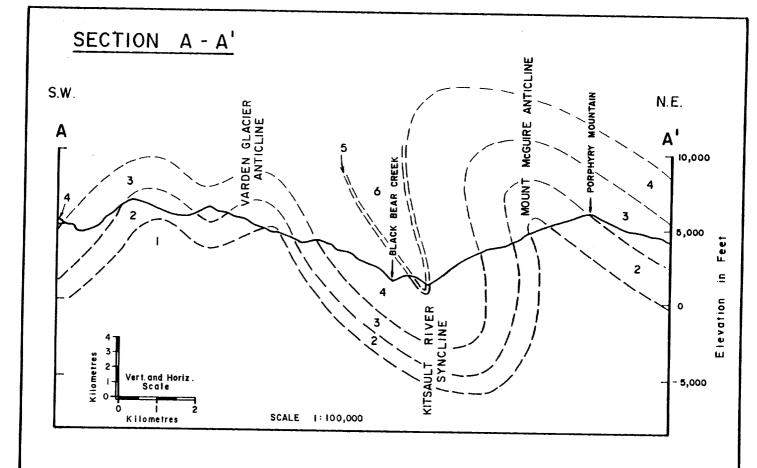
The entire Hazelton sequence has undergone greenschist facies metamorphism and while generally easily to distinguish, some of the rocks in the area have been silicified and /or sericitized to a point where the units could not be differentiated. Intense pyritization usually accompanies this alteration.

The members of the Hazelton group have been folded into several major structures, all of which parallel each other and the north-south regional trend. Broad secondary folding perpendicular to this trend is also evident. The Kitsault River syncline, which approximates the Kitsault valley, is the prominent feature in the district. Many of the regions mineral deposits occur along this syncline, including all of the past producers.

Evidence of structural faulting, both major and minor, can be seen in many of the prominent valleys. The dominant trend of these faults appears to be north-northeast, with near vertical dip. A second set of conjugate(?) faults appear to trend northwest. Many of these structures have been intruded by Tertiary microdiorite and lamprophyre dykes.

Mineralization in the Upper Kitsault Valley has been categorized into four main types: silver rich quartz-barite-jasper replacement deposits; quartz-carbonate veining; silicified zones containing chalcopyrite; and auriferous quartz-carbonate veining associated with hydrothermal systems. The first category includes the Torbrit, Dolly Varden and North Star orebodies and is typified by silver, galena and sphalerite mineralization. The quartz-carbonate vein deposits are stratabound and sparsely mineralized with pyrite and other minerals. The third type of mineralization occurs within the Copper Belt, a 15 kilometre band of intense silicification, sericitization and pyritization on the west limb of the Kitsault River syncline, within the intermediate volcanic unit. The fourth category includes mineralization occurring near the north end of the Copper Belt, and will be discussed in detail under Property Geology.





#### **LEGEND**

### Tertiary

8 COAST RANGE BATHOLITH: Quartz monzonite and granodirite.

### Middle -Upper Jurassic

6 UPPER SEDIMENTARY UNIT: Siltstone, shale, conglomerate, limestone and minor sandstone.

### Lower-Middle Jurassic

5 EPICLASTIC AND FELSIC VOLCANIC UNIT: Volcanic conglomerate, breccia, dacite pyroclastics and feldspar porphyry flows.

# Lower-Middle Jurassic (cont.)

- 4 INTERMEDIATE VOLCANIC UNIT: Andesite pyroclastics, siltstone, sandstone, conglomerate and chert.
- 3 MIDDLE SEDIMENTARY UNIT: Siltstone, volcanic breccia, sandstone and conglomerate.
- 2 MAFIC VOLCANIC UNIT: Olivine and augite porphyry basalt flows, basaltic conglomerate, siltstone, sandstone, wacke and limestone.
- 1 LOWER SEDIMENTARY UNIT: Siltstone, argillite, shale, wacke, sandstone and limestone.

After Alldrick et al, 1986

#### PROPERTY GEOLOGY

The Cambria claims are underlain by a suite of sulphide-rich sedimentary and volcanic rocks which can be correlated with the Lower to Middle Jurassic Hazelton Group (Figure 4). Detailed geological mapping has delineated a northwesterly trending, northeasterly dipping sequence of andesite, andesite agglomerate and andesite breccia extrusives with interbedded argillites. Variably sized feldspar porphyry dykes and sills, locally crosscutting each other, have intruded the entire sequence and represent some of the youngest rocks on the property.

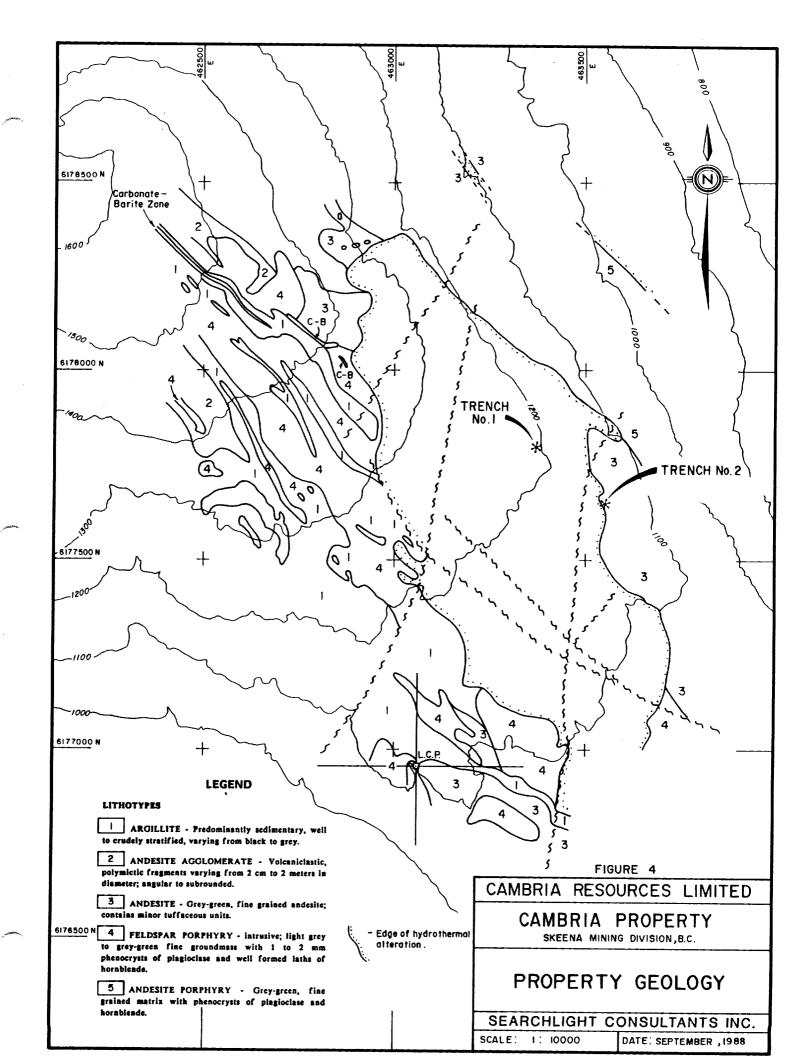
Structurally, several major northeasterly trending, near vertical fault zones have been mapped within the claims. A number of steeply dipping, northwesterly trending conjugate(?) fault zones have also been noted, but are difficult to distinguish because they parallel bedding. Minor isoclinal folding has occurred locally, resulting in overturned beds.

Intense hydrothermal alteration has occurred within, and next to, the feldspar porphyry unit in the central portion of the map area. Alteration takes the form of sericitization, silicification and pyritization which has completely masked the textures and mineralogy of the original rocks over an area approximately 1000 metres by 500 metres. The alteration appears to be spatially related to the feldspar porphyry unit and is structurally controlled by several northwesterly and northeasterly trending, steeply dipping faults. The zone correlates favorably to areas with precious and, to a lesser extent, base metal soil anomalies. The majority of the old workings are within this alteration zone.

The extremely large alteration halo indicates that at least one degassing event took place. This event forced silica-rich gases throughout the surrounding wall rock, altered several of the original minerals to sericite and deposited silica and (remobilized) pyrite upon cooling.

Numerous quartz and quartz/carbonate veins have been mapped in surface exposures within the claims. These veins comprise variable amounts of quartz, calcite and barite with associated base and precious metals.

Pyrite was found in varying quantities throughout the property and is especially abundant within the hydrothermally altered rocks. Numerous narrow mineral occurrences dominated by galena, sphalerite, and chalcopyrite have also been noted. In general, this mineralization can be classified into four deposit types:



- 1. Stringer sulphide zones consisting of veinlets of pyrite, scattered sphalerite, galena, chalcopyrite and arsenopyrite occurring in association with hydrothermally altered rocks.
- 2. Narrow and discontinuous sulphide-rich breccia zones consisting of interstitial pyrite supporting andesite or hydrothermally altered breccia fragments.
- 3. Narrow banded stratiform sulphide zones comprising layers of fine grained massive pyrite, sphalerite, galena, scattered chalcopyrite and finely disseminated needles of arsenopyrite and occurring within argillite.
- 4. Narrow carbonate horizons sparsely to well mineralized with galena, sphalerite and chalcopyrite and hosted by argillite. Locally along strike, these zones are seen to be calcite filled breccia veins, with variable amounts of barite, which transects the enveloping argillite.

All of the four deposit types mentioned above appear to be hydrothermal in origin. The first two have formed along shears and fault zones with varying amounts of brecciation, the third has formed along bedding planes within argillite and the fourth has formed along a major break paralleling bedding, possibly towards the upper part of the hydrothermal system. This mineralization appears to be controlled by rolls in the structures in which they have been emplaced, intersections of shear zones or by the fissility of the host rock.

Several of the mineralized zones sampled returned significant gold and silver values and at least two were noted to contain visible electrum (gold/silver alloy). The better gold values almost invariably came from northeasterly to easterly trending veins and shear zones within or near to the hydrothermal alteration zone. The best gold value obtained to date was collected by Newmont from a vein of this type near L5N 6+00E. This sample assayed 80.0 gram/tonne (2.10 oz/ton) gold. Another sample collected at 11+75N, 0+30W assayed 7,241.14 gram/tonne (211.20 oz/ton) silver. This sample was from a vein containing abundant sphalerite, galena, arsenopyrite and tetrahedrite (friebergite).

Petrographic work has determined that the veins exhibit multiple phases of filling. The first phase consisted mainly of pyrite and sphalerite in a quartz gangue and probably represents the lowest part of a precious metal horizon. The second phase carried galena, arsenopyrite, friebergite (silver-rich tetrahedrite), stibnite and minor chalcopyrite in a calcite gangue and typifies deposition at the top of a precious metal horizon. A possible third phase was dominated by barite and represents filling some distance above a third precious metal horizon. The change in vein mineralogy between subsequent pulses indicates that the system was gradually cooling and suggests that the deposition horizons became progressively lower. Gold is seen in varying ratios with silver as electrum associated with both the first and second pulses of mineralization.

### **GEOPHYSICS**

In order to determine the best targets for drilling within the large area of hydrothermal alteration, an induced polarization-resistivity geophysical survey was carried out east of the baseline between lines four and nine north. A total of 4.3 line kilometres were surveyed, encompassing 166 stations and generating over 900 readings. The work was performed by Target Surveys Ltd of Vancouver, B.C.

#### Instrumentation

The survey was conducted utilizing an Elliot 1.5 kilowatt transmitter and Crone Newmont Mark IV receiver deployed in a dipole-dipole array with a=25 metres and n=1-6. Power was supplied by a Briggs and Stratton 120 volt, 440 hertz generator.

The dipole-dipole array was chosen because of its symmetry. Non-symmetrical arrays such as pole-dipole present interpretational difficulties.

### Theory

#### **Induced Polarization**

When a voltage is applied to the ground, electrical current flows, mainly in the electrolyte-filled capillaries within the rock. If the capillaries also contain certain particles that transport current by electrons (most sulfides, some oxides and graphite), then the ionic charges build up at the particle-electrolyte interface: positive charges where the current enters the particle and negative charges where it leaves. This accumulation of charge creates a voltage that tends to oppose the current flow across the interface. When the current is switched off, the created voltage slowly decreases as the accumulated ions diffuse back into the electrolyte. This type of induced polarization phenomena is known as electrode polarization.

A similar effect occurs if clay particles are present in the conducting medium. Charged clay particles attract oppositely-charged ions from the surrounding electrolyte and, when the current stops, the ions slowly diffuse back to their equilibrium state. This process is known as membrane polarization and gives rise to induced polarization effects even in the absence of metallic-type conductors.

Most IP surveys are carried out by taking measurements in the "time-domain" or the "frequency-domain". Time-domain measurements involve sampling the waveform at intervals after the current is switched off to derive a dimensionless parameter, the chargeability M which is a measure of the strength of the induced polarized effect. Measurements in the frequency-domain are based on the fact that the resistance produced at the electrolyte-charged particle interface decreases with increasing frequency. The difference between apparent resistivity readings at a high and low frequency is expressed as the percentage frequency effect or PFE.

### Resistivity

Apparent resistivity, computed from electrical survey results, is the true earth resistivity only in a homogenous sub-surface. Where vertical (and lateral) variations in electrical properties occur, the apparent resistivity is influenced by the various layers, depending on their depth relative to the electrode spacing. A single reading cannot therefore be attributed to a particular depth.

The ability of the ground to transmit electricity is, in the absence of metallic-type conductors, almost completely dependent on the volume, nature and content of the pore spaces. Empirical relationships can be derived linking the formation resistivity to the pore water resistivity, as a function of porosity. Such a formula is Archie's Law, which states (assuming complete saturation in clean formations):

$$R_O/R_W = 1/O^2$$

Where:  $R_0$  is formation resistivity  $R_w$  is pore water resistivity O is porosity

### **Survey Procedure**

The IP and resistivity measurements were taken in the time-domain mode using an eight second square wave charge cycle (2 seconds positive charge, 2 seconds off, 2 seconds negative charge, 2 seconds off). The over voltage discharge was read, integrated and is presented as chargeability in milliseconds. The physical parameters which govern the flow of the primary field are shown as apparent resistivity in ohm-metres.

The electrode spacing (or dipole length) is denoted as a and was chosen as 25 metres. The n value varied from 1 to 6 so that the dipole separation (na) varied from 25 to 150 metres. This gives a theoretical depth penetration of 75 metres depending on the ground resistivity.

Steel stakes were used for current electrodes, while the potential electrodes were comprised of metallic copper in copper sulfate solution, in plastic spikes with non-polarizing, unglazed porcelain tips.

All survey measurements were taken at 25 metre stations along previously established lines. The spacings of these stations were not corrected for slope and thus do not correlate exactly with the stations established by Newmont.

## **Compilation of Data**

The chargeability values were read directly from the instrument, and therefore no data processing was required prior to plotting. The resistivity values were derived from current and voltage readings taken in the field. These values were combined with the geometrical factor appropriate for the dipole-dipole array, to compute the apparent resistivities.

The data was plotted in section form along topographic profiles at a scale of 1:1000. Values were plotted at a  $45^{\circ}$  angle from the location of the current dipole and the potential dipole taking topography into account. All data was then contoured at reasonable intervals for interpretation (Appendix A). A plan of anomalies projected to surface using data from the n=2 level was also prepared (Figure 5).

#### Discussion of Results

The entire survey area is characterized by highly resistive bedrock. The rocks therefore appear to be very tight (low porosity) and siliceous. The usefulness of the resistivity data used would therefore seem limited in this type of environment. There are some local areas of lower resistivities in or near fault zones (which often coincide with drainages) and possibly in areas of oxidation, where the porosity of the surrounding rocks has increased. Zones of low resistivity which do not coincide with chargeability highs suggest the presence of unmineralized faults.

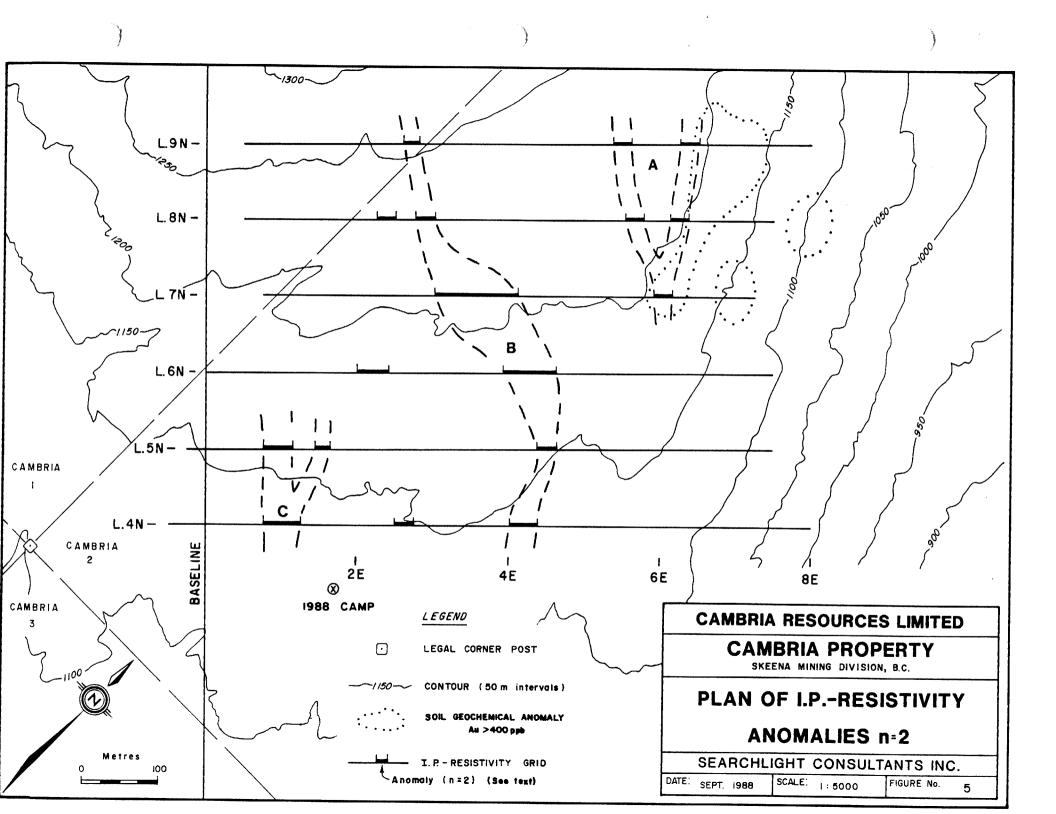
The chargeability values appear to be directly indicative of the sulphide content of the rocks. Some of the higher readings suggest the presence of finely disseminated sulphides associated with the hydrothermal event. Several interesting zones were defined by chargeability highs.

The best geophysical anomaly (denoted A on figure 5) was defined near 6E between lines 7 and 9N. This anomaly splits into two north of line 7, possibly indicating two parallel and probably related mineralized zones. This anomaly coincides with the geochemical anomaly defined by Newmont in 1980 as well as some of the better mineralized veining exposed on the property.

Anomaly B, the most persistent of those defined, was picked up between 2+50 and 4+50E on lines 4 to 9N. It approximates the center of the large area of hydrothermal alteration and cannot be attributed to a specific zone of mineralization exposed at the surface.

The third anomaly, C, was defined just east of the baseline on lines 4 and 5N and may be indicative of pyritic porphyry dykes which have intruded the surrounding argillite.

Of the three anomalies, anomaly A must be considered the best target for drilling and should be actively pursued.



#### **CONCLUSIONS**

On the basis of the preceding results, considered with information gained from previous exploration, the following conclusions relating to the Cambria property can be drawn:

- 1. The property is situated in a favorable geological environment, nearly identical to that hosting several major past-producing silver mines in the Kitsault River valley.
- 2. The claims encompass at least one major hydrothermal system hosted by intensely fractured volcanics over which coincident soil geochemical and numerous lithogeochemical anomalies have been defined. A large zone of hydrothermal alteration appears to have resulted from the emplacement of this system.
- 3. A geophysical survey carried out over this area successfully defined three induced polarization-resistivity anomalies, one of which is coincident with the geochemical anomalies.
- 4. There are numerous veins of varying composition and precious metal content throughout the property, especially in the area of intense hydrothermal alteration. Assay values as high as 2.10 ounces per ton gold and 211.20 ounces per ton silver have been obtained from these veins. The best values appear to come from veins trending northeasterly to easterly.
- 5. There is a former producing gold mine on what appears to be one of several parallel systems partially encompassed by several privately held Crown granted claims within the Cambria claims. Extensions of this, and at least one other system, pass onto the Cambria claims.
- 6. There is a mill situated at the site of the Dolly Varden Mine in the Kitsault River valley. This property is currently undergoing extensive surface and underground exploration for both silver and gold, with hopes of putting it into production within the next few years. This would mean that there is an operating mill within eight kilometres of the Cambria property.
- 7. Access to the property, should major development be warranted, could be established from Alice Arm without unreasonable expenditure. The remains of the old road grade come within one kilometre of the claims.
- 8. Excellent potential exists for the location and development of a significant precious metal deposit within the Cambria claims.

## **COST STATEMENT**

Cambria Assessment Programme (September 2-11, 1988).

### Field

Wages:	
D. Nelles, 2-11 September, 10 man days @ \$2672,670.00	
H. Macfarlane, 2-11 September, 10 man days @ \$262.502.625.00	
N. Nash, 3-11 September, 9 man days @ \$1651,485.00	
Truck Rental: 2 weeks @ \$300/week + kilometres 750 00	
Room & Board: September 2-11 50 man days 901 56	
Helicopter: 14.6 hours @ \$718.20	
Expediting (includes some board & supplies):	
Supplies and consumables	
Transportation: Airfare, fuel, freight, etc	
Equipment rental: Tents, camp gear, radios, etc	
2 weeks @ \$250/week	
Contract expenses: Target Surveys	
Subtotal	\$35,609.54
0.00	
Office	
D	
Report preparation: 6.7 days @ \$229.50	
Office expenses 640.34	
Drafting and maps	
Computer and copying	
Subtotal	\$3,921.07
Total	<b>610 510 (1</b>
	\$39,530.61

### CERTIFICATE OF QUALIFICATIONS

### I, David M. Nelles, do hereby certify that:

- 1. I am a geologist employed by Searchlight Consultants Inc. with a business address of 505-744 West Hastings St., Vancouver, British Columbia, V6C 1A5.
- 2. I graduated from the University of British Columbia in 1983 with a Bachelor of Science degree (Geology) in 1983.
- 3. I have practiced my profession in Canada and the western United States continuously for six years.
- 4. I was directly involved with the exploration work carried out on the Cambria claims in 1988.
- 5. The programme carried out on the Cambria property was recommended and supervised by F. Marshall Smith, a Professional Engineer with offices in Vancouver, British Columbia.
- 6. This report is based on data generated from a geophysical survey carried out on the Cambria claims in September, 1988 as well as from reports by Professional Engineers and others working for the current and previous owners and operators of the property.
- 7. I currently hold a 50% interest in the claims which comprise the Cambria property. This interest is the subject of an option agreement with Cambria Resources Limited under which Cambria can earn a 100% interest in the claims.

Dated this W day of April, 1989

David M. Nelles, B.Sc.

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# APPENDIX A

I.P.-Resistivity Sections

