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REPORT  
on the  
MINERAL POTENTIAL  
of the  
**PILLDOLLA and JI PROPERTIES**

Jervis Inlet Area,  
British Columbia

for  
**AQUATERRE MINERAL DEVELOPMENT LTD.**

written by  
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Consulting Geologist

February, 1994

## SUMMARY

During the summer of 1993, Aquaterre Mineral Development Ltd. completed field programs consisting of geological mapping, prospecting, geochemical sampling, trenching and channel sampling on the Pildolla and JI Properties, located on Jervis Inlet respectively 155 km. north-northwest and 120 km. northwest of Vancouver, British Columbia. Both properties encompass "pendants" of metasedimentary and metavolcanic rocks similar to the hostrocks at the Britannia Mine which produced 47.5 million tonnes of massive sulphide (VMS) ore grading 1.1% Cu. Both properties are in precipitous but accessible locations within 10 kilometres of Jervis Inlet, a coastal fjord northeast of Powell River. Logging roads traverse portions of both properties and have been constructed to within 1 kilometre of the main areas of interest on each.

At the Pildolla property three areas of float mineralization contain boulders which have returned highly encouraging assays of up to one percent copper with between one and seven grams per tonne gold (0.2 oz./ton). These are new discoveries made by Aquaterre in 1993, and while the limited follow-up in 1993 did document some sub-ore grade mineralization in bedrock at the Cave Zone, there has been no follow-up of the potential source of the mineralized float from the moraine below the aptly-named Cliff Area which is strongly gossanous and partially covered by alder and vegetation.

At the JI Property, geochemical sampling by another company in 1975 outlined a strong copper-in-soil anomaly which Aquaterre has duplicated and expanded. VMS-style copper and zinc showings are present at Mount Diadem and several other showings adjacent to and along strike from the JI Property anomalies. The soil geochemical anomaly needs to be drill-tested to determine if it is derived from a bedrock source of VMS-style mineralization or is due to some other cause.

The 1993 results are very encouraging, particularly those on the Pildolla Property. An expanded program directed at investigating the source of the mineralized float on the Pildolla Property and the geochemical anomaly on the JI Property is therefore recommended for 1994. This program would include continued detailed surface exploration followed by 1500 metres of diamond drill testing, the specific drill sites contingent upon the field program results. A Phase I budget of respectively \$44,000 and \$43,000 is proposed for the Pildolla and the JI Properties.

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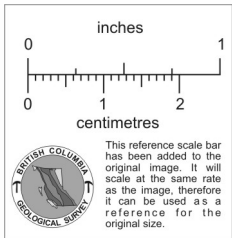
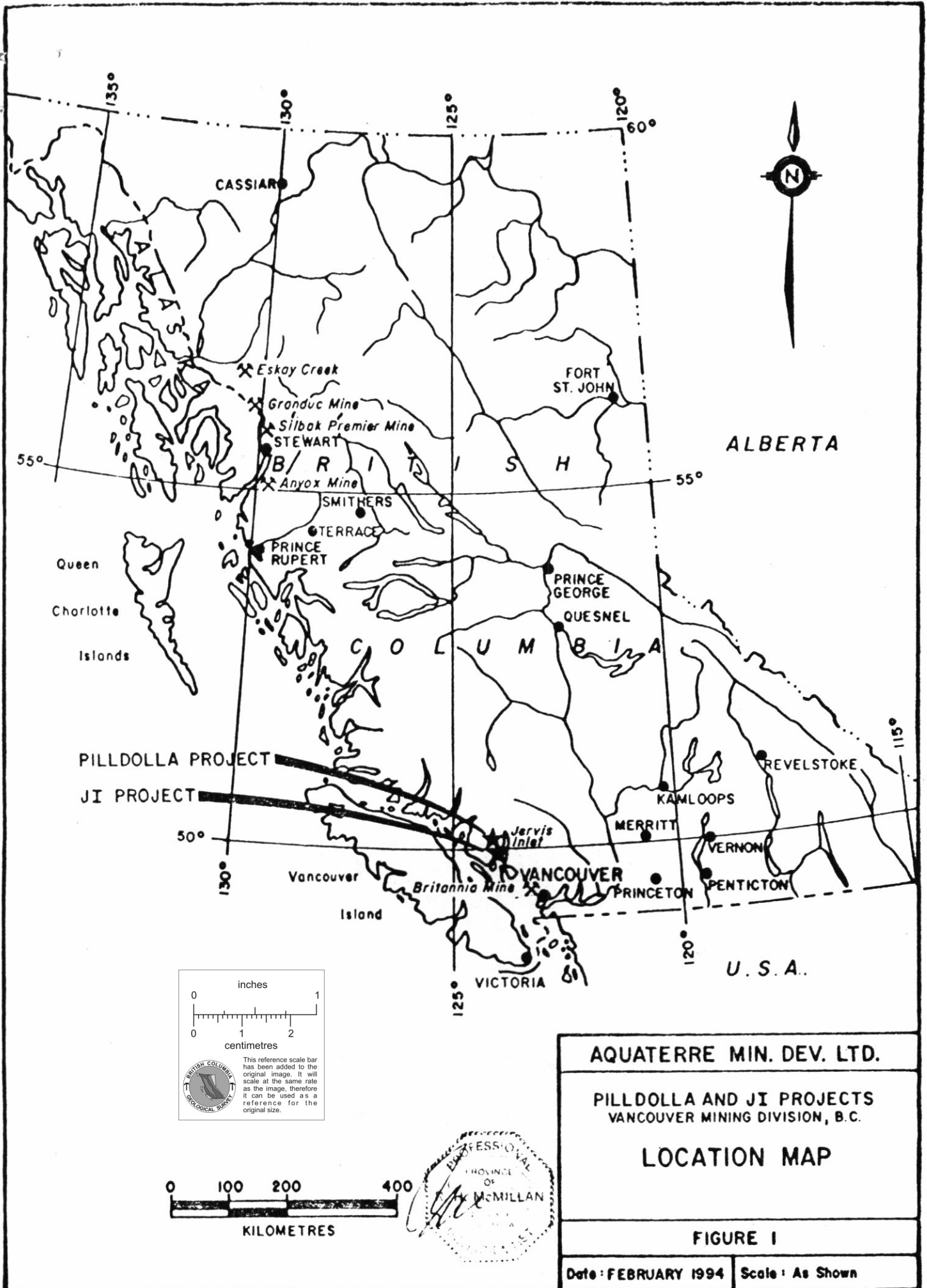
## 1.0 INTRODUCTION

In 1992 Aquaterre Mineral Development Limited completed an extensive research program for exploration opportunities for volcanogenic massive sulphide (VMS) deposits on the west coast of British Columbia between Vancouver and Stewart. The focus on the program was directed towards readily-accessible areas on the western flank of the Coast Mountain Ranges. Although this area has been known as a highly favourable geological environment for VMS deposits, only minor work has been undertaken in recent years and very little of this utilizing modern geophysical and geochemical prospecting techniques.

Some of British Columbia's most significant early mining production has been gleaned from the Coast Mountains – specifically, the Anyox Deposits yielded 22 million tonnes of ore at a recovered grade of 1.5 % Cu, 9.6 g/t Ag and 0.17 g/t Au between 1914 and 1936 (Hoy, 1991) and the Britannia Mine produced 47.5 million tonnes at a recovered grade of 1.1 % Cu, 3.8 g/t Ag and 0.3 g/t Au between 1905 and 1974 (Hoy, 1991) – however exploration was inhibited in the early part of the century by the primitive infrastructure available. More recently, and in relatively remote areas north of Stewart, significant discoveries at Granduc in 1951 (estimated to be 49 million tonnes grading 1.55 % Cu and 6.9 g/t Ag at the time by Grove, 1986) and Eskay Creek in 1988 (4.5 million tonnes grading 24 g/t Au and 867.4 g/t Ag (Int. Corona Corp., 1991)) have confirmed the Coast Mountains as an area with an extremely favourable mineral endowment in VMS Deposits.

The Aquaterre research program was highly successful and resulted in the acquisition of two properties in accessible areas on Jervis Inlet 100 km. north of Vancouver. The Pildolla Property, located 10 km. north of the head of Jervis Inlet, was staked in August, 1993 and the JI Property, 40 km. to the south on the west side of Jervis Inlet in May and August of 1993.

Aquaterre's initial interest in the Jervis Inlet area and specifically the Pildolla and JI Properties, was directed towards prospecting several large "roof pendants" of Lower Cretaceous Gambier Group felsic volcanic rocks (Figure 4) which are host to the Britannia Deposits located along strike, 90 kilometres to the southeast. At Pildolla Property, reconnaissance of the "roof pendant" at the head of Jervis Inlet resulted in the observation of multicoloured, intense gossans associated with the contact area between metavolcanic and metasedimentary Gambier Group rocks. Prospecting on the ground resulted in the discovery of mineralized till and talus samples containing chalcopyrite and iron sulphide minerals with high gold values in two areas. In the Cliff Area (Figures 6 and 10), boulders from glacial moraine returned assays as high as 6.9 g/t Au, 25.3 g/t Ag and 0.9 % Cu and in the Cave Area, samples of talus boulders returned assays as high as 12.7 g/t Au, 108 g/t Ag and 2.15 % Cu. These encouraging results led to staking of the property and a follow-up program of prospecting and surface trenching, the results of which are discussed below.



<b>AQUATERRE MIN. DEV. LTD.</b>	
PILLDOLLA AND JI PROJECTS VANCOUVER MINING DIVISION, B.C.	
<b>LOCATION MAP</b>	
<b>FIGURE I</b>	
Date: FEBRUARY 1994	Scale: As Shown

At the JI Property, an exploration program by another company in 1974 outlined a high copper-in-soil anomaly (Folk, 1975) in an area underlain by a "roof pendant" of Gambier Group volcanic and sedimentary rocks. The 1993 Aquaterre program has defined a strongly anomalous, east-southeast-trending soil geochemical anomaly with copper values up to 1542 ppm Cu within an area 350 by 800 metres.

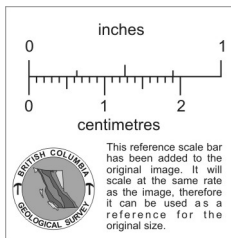
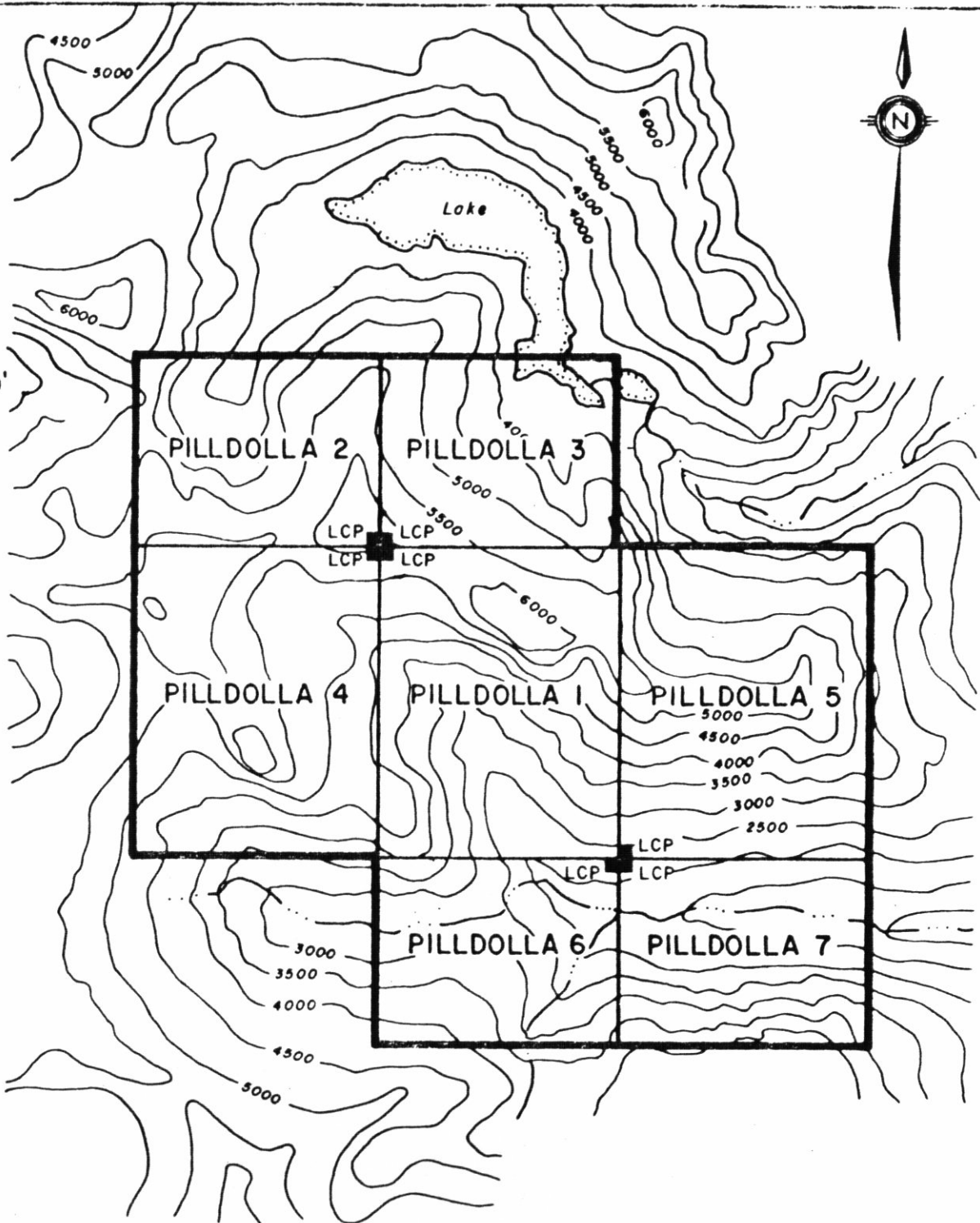
This report results from an evaluation of the Pilldolla and JI Properties by the author in 1993. A one day visit was made to the properties in October after the 1993 work program on the property. The conclusions and data presented in this report are based on the property visit, and a review of the literature listed in the Bibliography (Appendix I). No attempt has been made to present all the results of the 1993 work program in the present report, however all data that have influenced the author's conclusions and recommendations are summarized herein. Details of the results of the 1993 work program on the property have been presented in two reports by Pamicon Developments Ltd. (Todoruk and Schatten 1993a and 1993b) -- much of the geological description and data presented in this report is derived from these reports which can be made available upon request.

## 2.0 LIST OF CLAIMS

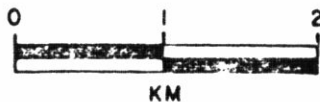
Records of the British Columbia Ministry of Energy, Mines and Petroleum Resources indicate that the Pilldolla 1 - 7 mineral claims are owned by Aquaterre Mineral Development Ltd. (Figure 2). On October 21, 1993, the author inspected the Legal Corner Post for the Pilldolla 1,2,3 and 4 Claims and found it to be located in accordance with the Mineral Tenure Act of British Columbia.

<u>Claim Name</u>	<u>Record Number</u>	<u>No. of Units</u>	<u>Record Date</u>	<u>Expiry Date</u>
Pilldolla 1	320675	20	August 14, 1993	1997 Aug. 14
Pilldolla 2	320846	12	August 26, 1993	1995 Aug. 26
Pilldolla 3	320847	12	August 26, 1993	1995 Aug. 26
Pilldolla 4	320848	20	August 26, 1993	1995 Aug. 26
Pilldolla 5	320849	20	August 26, 1993	1995 Aug. 26
Pilldolla 6	320850	12	August 26, 1993	1995 Aug. 26
Pilldolla 7	320851	12	August 26, 1993	1995 Aug. 26
	<b>Total:</b>	<b>108</b>		

Records of the British Columbia Ministry of Energy, Mines and Petroleum Resources indicate that the JI 1 - 6 mineral claims are owned by Aquaterre Mineral Development Ltd. On October 21, 1993, the author inspected the Legal Corner Post for the JI 2 and 3 Claims and found it to be located in accordance with the Mineral Tenure Act of British Columbia.



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Contour Level In Feet



AQUATERRE MIN. DEV. LTD.

PILLDOLLA PROJECT  
VANCOUVER MINING DIVISION, B.C.

CLAIM MAP

FIGURE 2

Date: FEB. 1994

NTS: 92K/8

Scale: 1:50000

124°10'



<u>Claim Name</u>	<u>Record Number</u>	<u>No. of Units</u>	<u>Record Date</u>	<u>Expiry Date</u>
Jl 1	317922	20	May 27, 1993	1995 May 27
Jl 2	317923	20	May 26, 1993	1995 May 26
Jl 3	317924	20	May 26, 1993	1997 May 26
Jl 4	317925	18	May 26, 1993	1995 May 26
Jl 5	317926	4	May 26, 1993	1997 May 26
Jl 6	320376	6	Aug. 5, 1993	1995 Aug. 5
	<b>Total:</b>	<b>102</b>		

**3.0 LOCATION AND ACCESS**

**3.1 Pilldolla Property**

The Pilldolla Property is located approximately 125 kilometres northwest of Vancouver, B.C. and 85 kilometres east-northeast of Campbell River, B.C. (Figure 1). The small village of Egmont on the Sunshine Coast lies 60 kilometres to the south. Pilldolla Creek runs east-west along the south end of the property draining into Skwawka River near the head of Jervis Inlet. The highest mountain peaks in the immediate claims area reach elevations of 1970 metres. Coordinates of the claims area are 124° 07' west longitude and 50° 18' north latitude, and the property is within the Vancouver Mining Division.

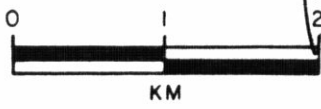
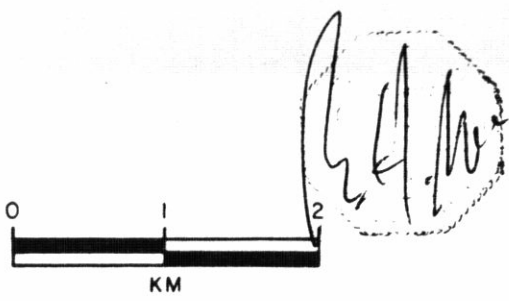
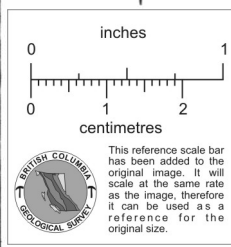
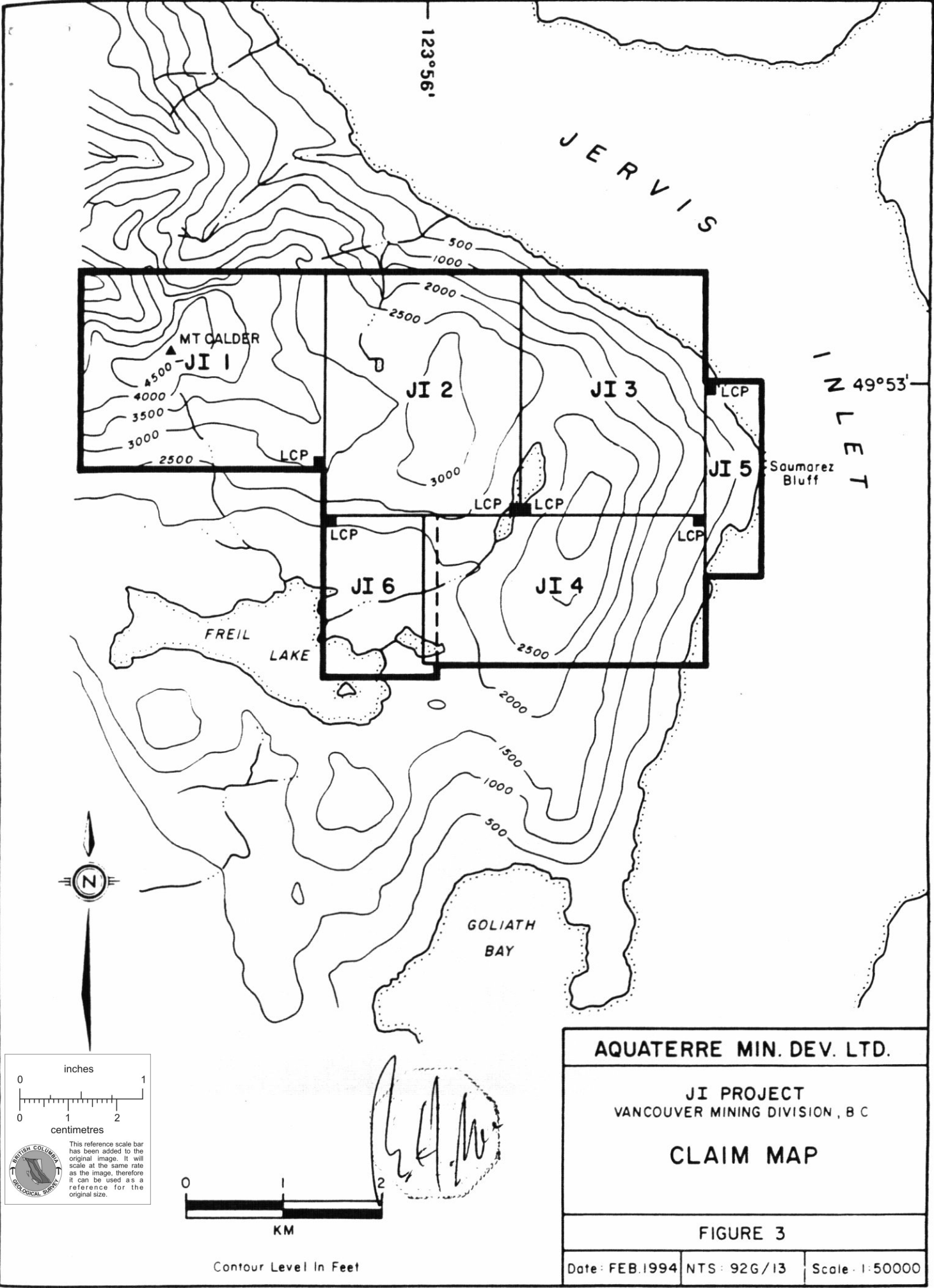
During the recent program, access to the property was by helicopter which was based in Egmont. Access on surface is available via a barging service to a well maintained logging camp at the head of Jervis Inlet. Westward from there new logging roads follow the north side of Pilldolla Creek to within one kilometre of the claims.

Physiographically, the property is mountainous with steep valleys and alpine areas. Glaciers traverse the west end of the property. Vegetation consists of spruce and cedar trees with thick underbrush of slide alder and locally devils club.

Precipitation in the area consists of heavy rainfall during the spring and fall months and snow accumulations of several metres between December and May. Work is best undertaken between May and November in the early exploration phases, however year-round work will be no problem if the property advances to development or production.

**3.2 Jl Property**

The Jl Property is located 40 km. south of the Pilldolla Property, approximately 90 kilometres northwest of Vancouver. Egmont is 14 kilometres to the south. Freil Lake is located immediately west of the Jl 6 claim. Coordinates of the claims area are 123° 56'



Contour Level In Feet

<b>AQUATERRE MIN. DEV. LTD.</b>		
<b>JI PROJECT</b> VANCOUVER MINING DIVISION, B.C.		
<b>CLAIM MAP</b>		
<b>FIGURE 3</b>		
Date: FEB.1994	NTS: 92G/13	Scale: 1:50000

west longitude and 49° 52' north latitude – the property is also within the Vancouver Mining Division.

Although a helicopter was used during the 1993 exploration program, access to the property can be gained via a 30 - 45 minute powerboat ride from Egmont. Access is also available by barging up Hotham Sound to the south end of the claims where logging roads are available.

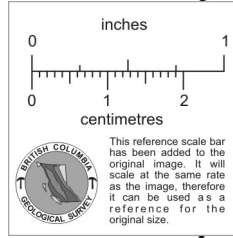
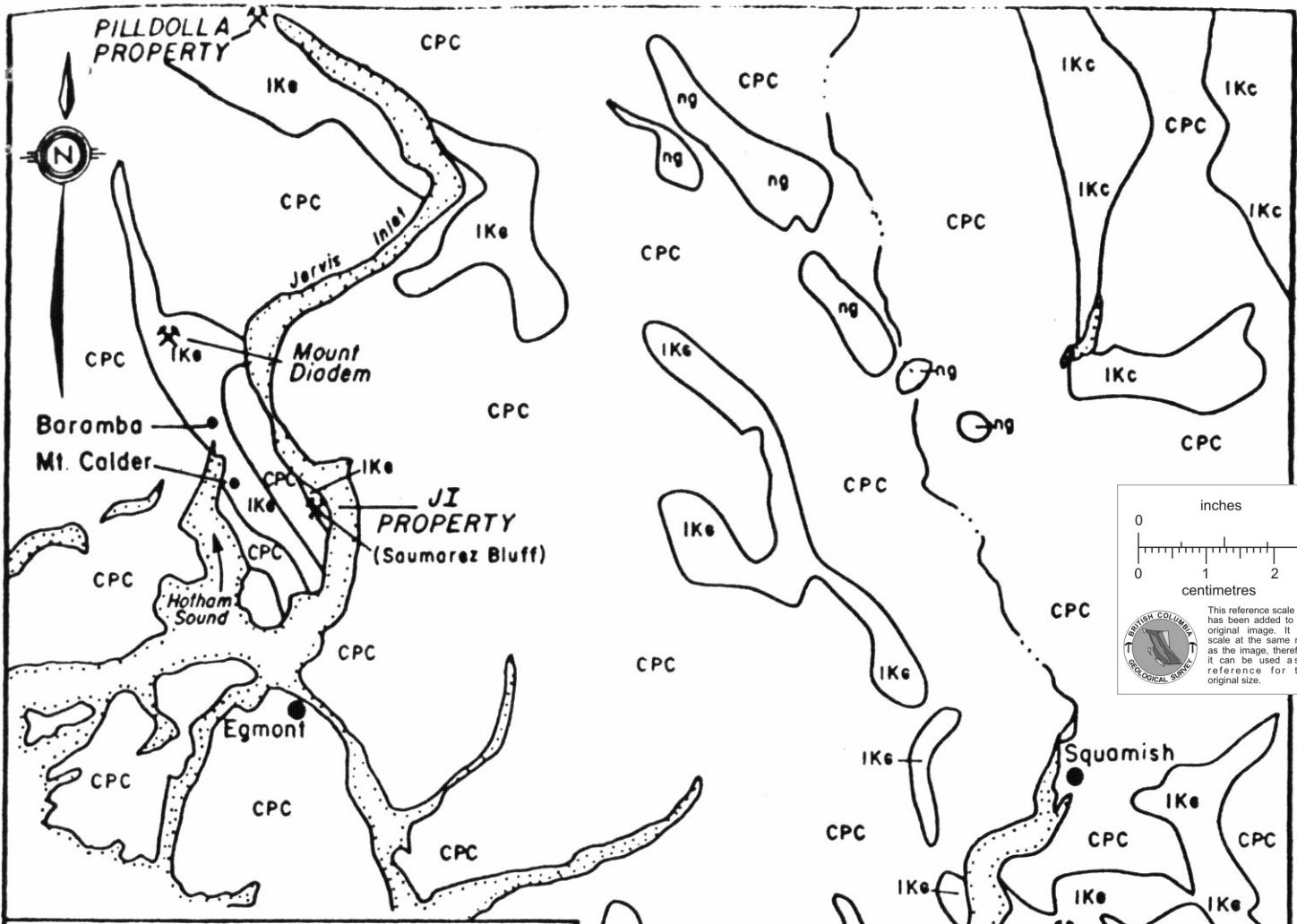
Physiographically, the property is moderate to extremely steep along coastal shorelines and relatively subdued further inland. Mt. Caulder is the highest mountain peak in the immediate claims area and reaches an elevation of 1465 metres. Vegetation consists of spruce and cedar trees with thick underbrush of slide alder and locally blackberry bushes. Several creeks run through the claims area.

Like the Pildolla Property, precipitation in the area consists of heavy rainfall during the spring and fall months with snow accumulations of several metres between December and May. The property is easily workable between May and November and could be worked year-round with little added difficulty. Lower elevations of the claims would normally be snow free year-round.

#### 4.0 AREA HISTORY

The Britannia Mine, located 30 kilometres north of Vancouver, has been the most important base metal producer in the mainland of southwestern British Columbia. The Britannia orebody was discovered in 1888 (Irvine, 1946) when prospectors examined a large iron-stained bluff which proved to be the outcrop of a major ore body. Development work began in 1902, with the first production in 1905. Between 1905 and 1974, a total of 47.5 million tonnes was produced (page 2) from ten ore-zones within the "Britannia Shear Zone". An inventory of 1.4 million tonnes grading 1.9% Cu remains (Hoy, 1991). The mineralization occurs in rocks of the Britannia Group near the top of a dacite pyroclastic unit beneath argillites – the Britannia Group is believed to be correlative with and part of the lower Cretaceous Gambier Group.

In the Jervis Inlet area, Bacon (1957) reports that early in the century prospectors were attracted by the reddish appearance of some of the mountains bordering Jervis Inlet near Mount Diadem. Apparently by 1917 short adits had been driven on the more promising occurrences. Early reports (Blanchard, 1922) commented on the difficulties for exploration because of the lack of infrastructure and ruggedness of the area. Bacon (1957) reports pyrite, sphalerite, galena and chalcopyrite mineralization exposed over widths of up to 6.2 metres. He sampled several occurrences exposed in trenches and outcrops over an area of approximately a square kilometre and obtained assays as high as 6% Zn, 1.1% Pb



- Mine or Mineral Prospect
- Mineral Occurrence

**QUATERNARY**

- Glacial Deposits, Drift
- Garibaldi Group; Basalt, Andesite

**TERTIARY**

- Quartz Monzonite

**TERTIARY AND/OR LATE CRETACEOUS**

- Kitsilano And Burrard Formations; Sandstone, Conglomerate
- Coast Plutonic Complex; Quartz Diorite, Granodiorite, Diorite

**LOWER CRETACEOUS**

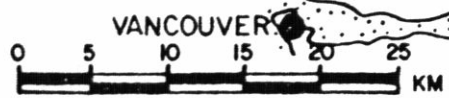
- Cheakamus Sediments: Greywacke, Arkose
- Gambier Group: Tuff, Breccia, Argillite

**TRIASSIC**

- Bowen Island Group: Greenstone

**CRETACEOUS OR OLDER**

- Metasedimentary Rocks, Schist, Greenstone or Greenschist Rank
- Migmatitic Complexes of Amphibolite Rock



**AQUATERRE MIN. DEV. LTD.**

**PILLDOLLA AND JI PROJECTS  
VANCOUVER MINING DIVISION, B.C.**

**REGIONAL GEOLOGICAL MAP**

**FIGURE 4**

(modified after Roddick et al, 1979)

and 397 g/t Ag across 1.5 metres and 1.6% Cu and 222 g/t Ag and 0.3% Zn across 1.3 metres. Host rocks are believed to be mafic volcanic rocks, argillites and tuffaceous sedimentary rocks intruded by granitic rocks of the Coast Plutonic Complex. Although Bacon (1957) assigned the host rocks to the Jervis Group of "unknown age", they have more recently been correlated with the Lower Cretaceous Gambier Group (Roddick et al, 1979). The showings are now interpreted to be stratabound and volcanogenic in character. The Anaconda company completed some diamond drilling on the Mount Diadem properties in the 1970's. The most recent work on the Mount Diadem deposits has been by Noranda Exploration Company, who reportedly completed an airborne magnetic-electromagnetic-VLF EM survey in 1993.

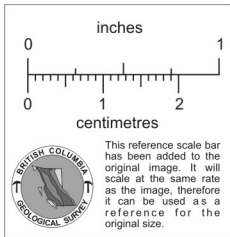
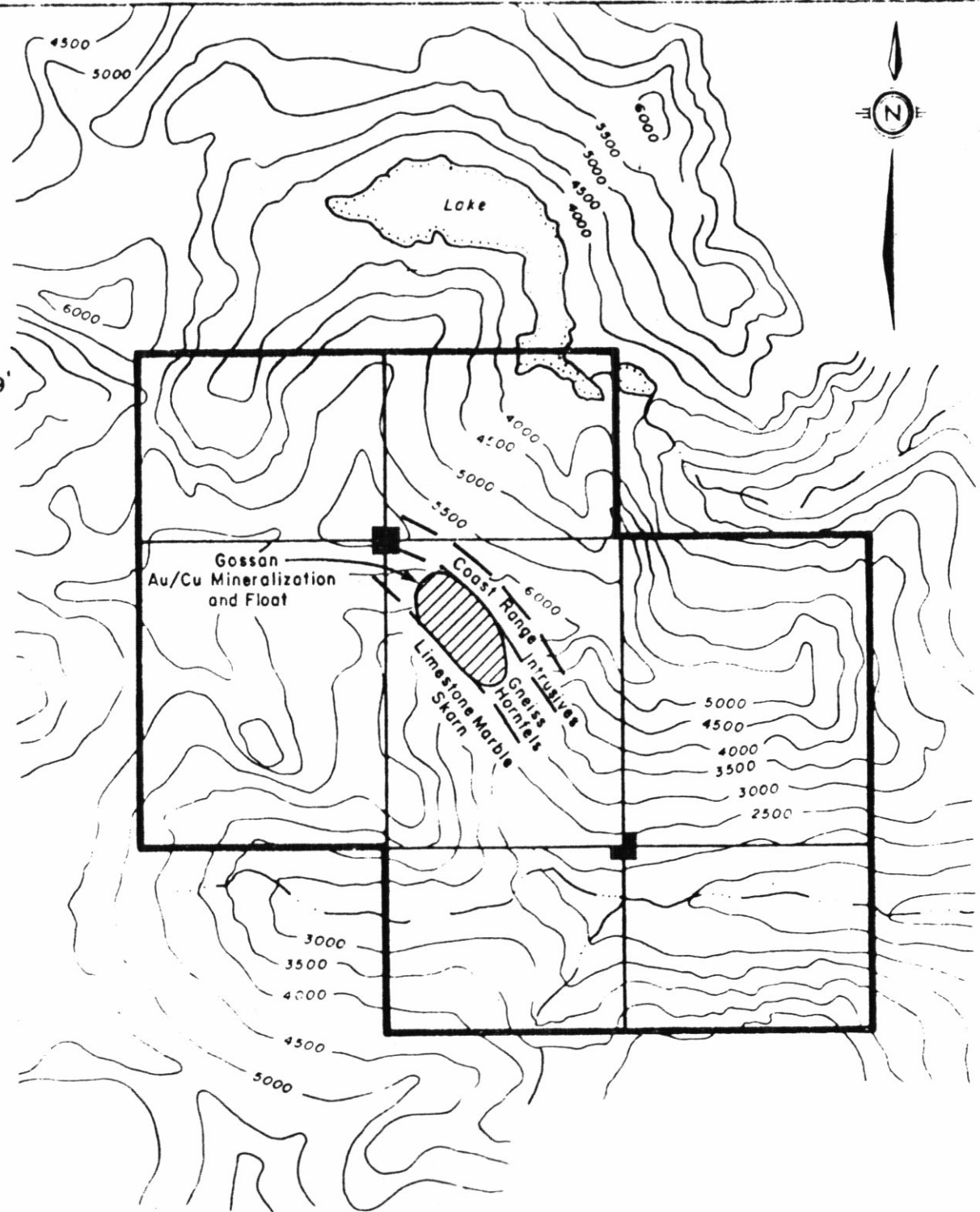
The Pilledolla Property is located 30 kilometres to the north of the Mt. Diadem VMS occurrences. No known recorded information is available regarding prospecting or exploration activity within the claims which constitute the Pilledolla property, and no signs of previous work are evident in the field. The mineralization found during the course of the 1993 season is considered to be a new discovery (Todoruk and Schatten, 1993a).

The JI property is located 40 kilometres south of the Pilledolla property and 16 kilometres southeast of the Mount Diadem occurrences. The only known work on the JI property was in 1975, when work was recorded on the BUN claims (Folk, 1975). A soil sampling survey outlined a northwest-trending copper anomaly measuring approximately 300 by 900 metres, with values up to 1320 ppm Cu. Although geological mapping and prospecting outlined pyrite and minor chalcopyrite at various locations and what was described as "a weak stockwork and hematite, chlorite, epidote, magnetite, secondary biotite, fracturing, bleaching and silicification", the amounts of mineralization were insufficient to explain the anomaly and Folk (1975) suggested that the cause of the anomaly might be a hidden concentrated source. The Aquaterre work in 1993 has duplicated and expanded the copper anomaly. A limited hand trenching program has not yielded an explanation of the anomalous geochemistry.

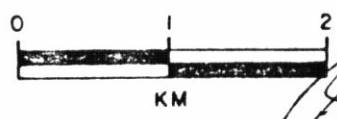
Approximately 300 metres west of the JI #1 claim, on the west flank of Mount Calder, the Calder showing is host to stratabound Cu-Zn mineralization hosted by siliceous argillite and "rhyolite-dacite flows" (Crabb, 1983) with "grab" samples assaying as high as 19% Cu and 2.6% Zn (Crabb, 1983). In the same general area, and probably the same showings, Hansen (1985) reported two separate showings with "minor quartz, pyrite, chalcopyrite and sphalerite mineralization" over widths of up to a metre and grab samples up to 1.56% Cu and 0.7 % Zn. Five kilometres north of the Calder showing and the JI Property the Baramba showing is reported (Brewer, 1918) to be a 5 metre wide zone containing magnetite, pyrrhotite and chalcopyrite within a 200 metre wide "shear zone" within "metamorphosed sedimentaries". Development consisted of 130 metres of drifting in 4 adits and 20 metres in an open cut. The Jolley Group adjoins the Baramba to the north and consists of magnetite, chalcopyrite, pyrite and bornite (?) within "graphitic metamorphosed



50°19'



124°10'



Contour Level in Feet



**AQUATERRE MIN. DEV. LTD.**

**PILLDOLLA PROJECT  
VANCOUVER MINING DIVISION, B.C.**

**MAJOR GEOLOGICAL UNITS**

**FIGURE 5**

**Date: FEB. 1994**

**NTS: 92K/8**

**Scale: 1:50000**

rock". Development work consisted of two short adits. One chip sample taken from the face of one of the adits assayed 2.6% Cu across 0.9 metres (Brewer, 1918).

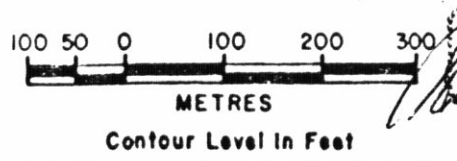
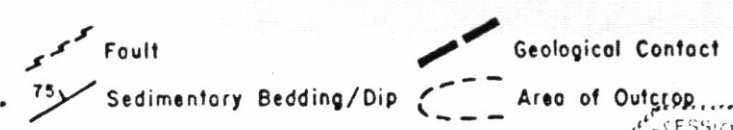
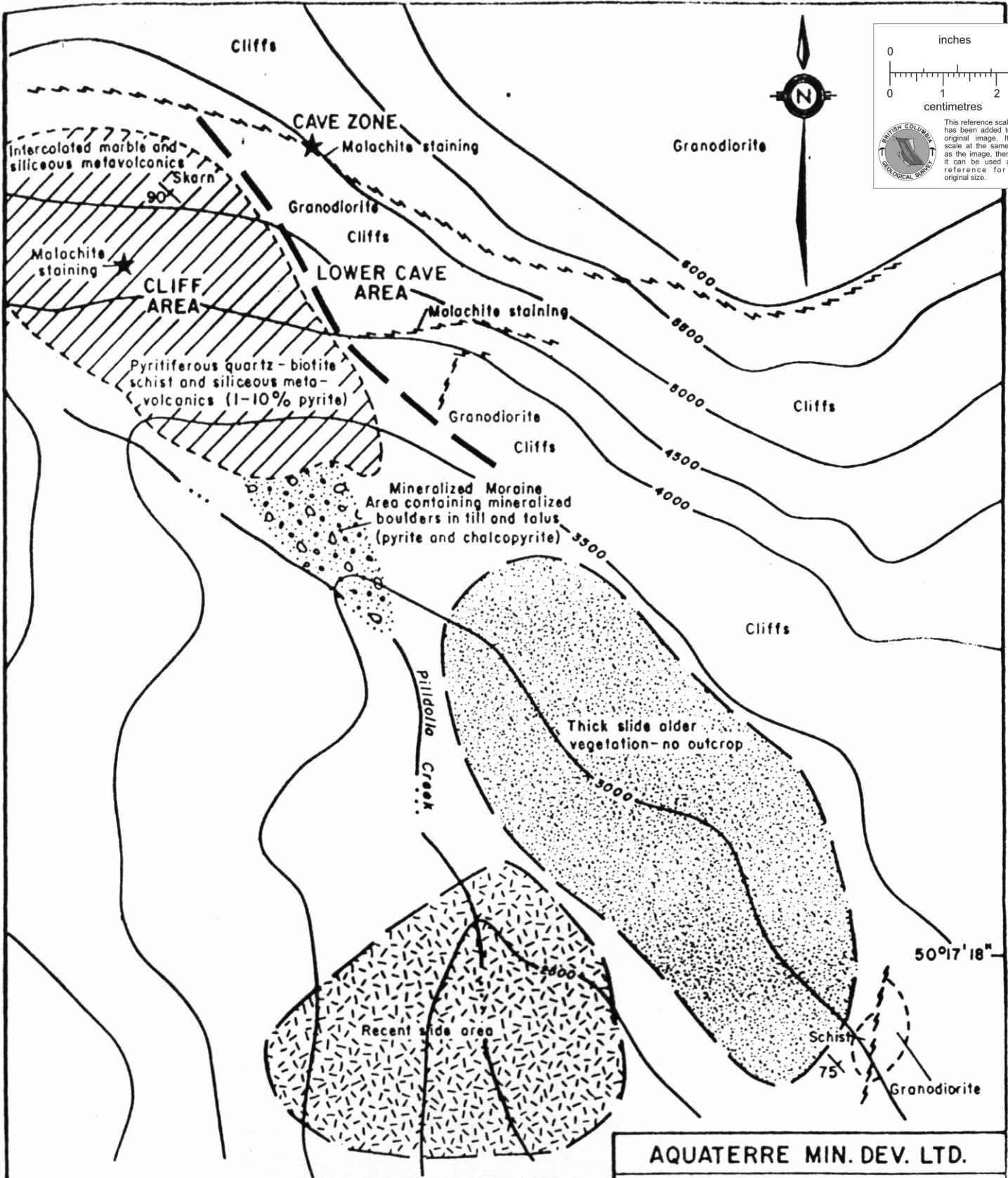
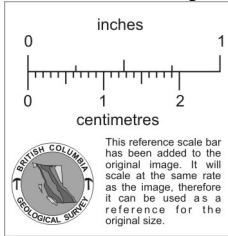
## 5.0 REGIONAL GEOLOGY

The regional data has been summarized on a compilation by Roddick et al (1979) which forms the basis for Figure 4 of this report. The Pildolla and JI (Caulder) "roof pendants" are two of several northwest-trending bodies of volcanic and sedimentary rocks enclosed by and in part metamorphosed by the late Cretaceous to early Tertiary Coast Plutonic Complex. The Britannia "roof pendant" is another such body (Payne et al, 1980).

The "roof pendants" consist of rocks of several different ages which have been subdivided (Roddick et al, 1979) into two lithologic units. The oldest (denoted as "ng" on Figure 4) consists of pre-Jurassic metamorphosed volcanic and sedimentary rocks, generally metamorphosed to greenschist or amphibolite rank, and with migmatitic borders with the enclosing plutonic rocks. The second unit (denoted as "IKG" on Figure 4) comprises Jurassic to Cretaceous volcanic and sedimentary rocks. This second unit includes rocks of the Pildolla, JI (Caulder), Mount Diadem and Britannia "roof pendants" which are underlain by volcanic and sedimentary rocks similar to the Lower Cretaceous Gambier Group from which Sutherland Brown (1970) reported ammonites of Albian (Lower Cretaceous) Age. The Gambier Group stratigraphy (Sutherland Brown, 1970) is composed mainly of pyroclastic rocks of andesitic to dacitic composition with intercalations near the top and overlain by dark marine shales and siltstones.

The older rocks are intruded by granitic rocks of the Coast Plutonic Complex. The Coast Complex contains older, commonly foliated, bodies ranging from diorite to granodiorite in composition and younger, massive bodies ranging from quartz diorite to quartz monzonite. The plutonic rocks have produced aureoles of contact metamorphism several tens of metres in width. Biotite is common in the aureoles and cordierite and actinolite near contact areas in some lithologies.

In the Pildolla Creek area, Roddick (1977) describes the region as part of a "roof pendant" containing marble, schist and metavolcanic rocks. Metavolcanic rocks consist of rhyodacite, andesitic volcanic breccia and chlorite schist. The siliceous volcanic rocks are commonly pyritiferous and rusty weathering. Pelitic schists are believed to be derived from shales and siltstones. Marble beds are up to 3 metres thick and are commonly intercalated with rhyolite and schist. On the east side of Pildolla Creek near its headwaters, there is considerable complexity in the relationship between the metavolcanic rocks and diorites of the coast Plutonic Complex.



PROFESSIONAL  
 PROVINCE OF  
 H. McMILLAN  
 BRITISH COLUMBIA  
 GEOSCIENTIST

**AQUATERRE MIN. DEV. LTD.**

**PILLDOLLA PROJECT**  
 VANCOUVER MINING DIVISION, B.C.

**GEOLOGICAL SKETCH MAP**  
**CLIFF AREA AND CAVE ZONES**

**FIGURE 6**

Date: FEB. 1994    NTS: 92K/8    Scale: 1:10000



Roddick and Woodsworth (1979) show the area of the JI property to be underlain by the northeasternmost of three narrow northwest-trending roof pendants of Gambier Group rocks surrounded by intrusive rocks of the Coast Plutonic Complex. Lithologies within the "roof pendants" consists of sedimentary strata which include argillite, siltstone and chert and volcanic rocks consisting of dacitic to andesitic tuffs and flows.

## 6.0 1993 WORK PROGRAM

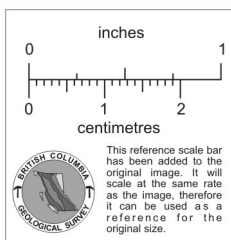
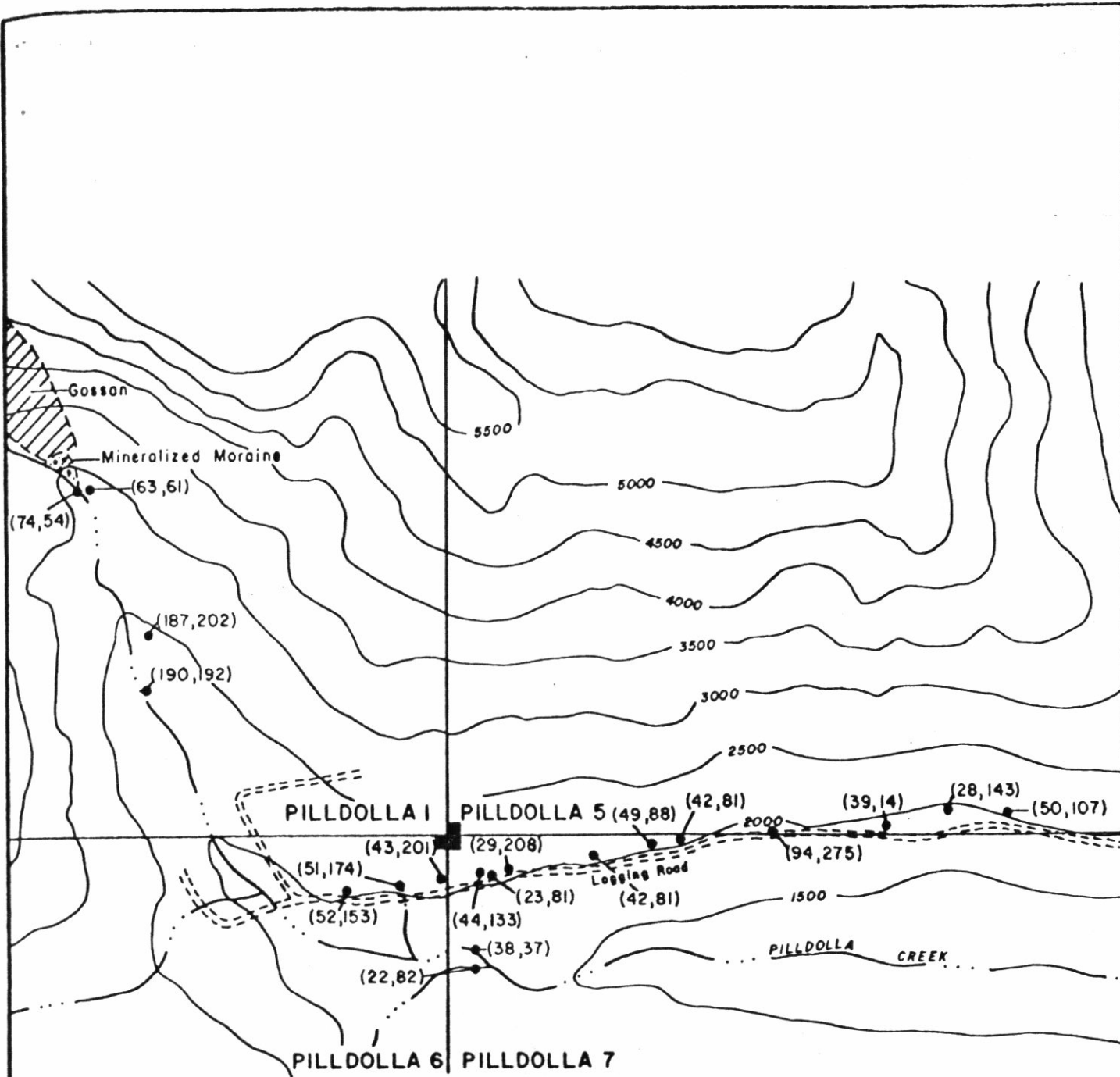
A total of \$41,742.72 was spent on the 1993 field program on the Pildolla Project (Todoruk and Schatten, 1993a). Thirty nine man days were spent preparing for, carrying out and reporting on the field program. Field work were undertaken in two campaigns; the first between July 31 and August 21 and the second between September 27 and October 6. A total of 236 rock samples, 42 soil samples and 21 silt samples was collected from the claims. The majority of work was directed towards the strongly gossanous cliff area on the Pildolla 1 claim, where a significant number of well mineralized boulders were discovered early in the program. The work program included geological mapping, prospecting, soil sampling and rock saw channel sampling. Trained mountain climbers were employed during the project to map and sample the extremely steep cliff areas.

On the JI Project, \$67,058.10 was spent during 1993 (Todoruk and Schatten, 1993b) -- a total of 107 man-days were spent on the project. Field programs were undertaken in two campaigns; the first between July 31 and August 21 and the second between September 27 and October 6. A total of 123 rock samples, 407 soil samples and 4 silt samples was collected from within the claims area. The majority of work was directed at re-establishing the 1974 copper soil anomaly on the JI 3 & 5 claims and attempting to locate a bedrock source for the anomalous values. Geological mapping, prospecting, soil sampling, hand trenching and limited VLF-EM and magnetometer geophysical surveys were incorporated into the program.

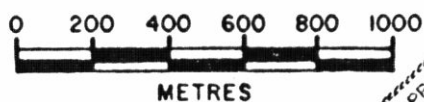
## 7.0 PROPERTY GEOLOGY

### 7.1 Geology – Pildolla Property

Geological mapping by Aquaterre (Todoruk and Schatten, 1993a) has documented several lithologies within the "roof pendant", which is believed to be correlative with the Lower Cretaceous Gambier Group (Roddick et al, 1979). Quartz-mica schist, quartz-chlorite schist, marble, limestone as well as metavolcanic and tuffaceous metasedimentary rocks are present (Figure 5). Unfortunately a comprehensive geological map was not completed during the 1993 program due to time restraints and the precipitous topography.



● (190,192) Silt Sample Location (ppm Cu, ppm Zn)



Contour Level in Feet



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VANCOUVER MINING DIVISION, B.C.

SILT SAMPLE LOCATION MAP

FIGURE 7

Date: FEB. 1994

NTS: 92 K/8

Scale: 1:20000

Quartz mica schist outcrops along the east side of the "roof pendant" adjacent to granodiorite of the Coast Plutonic Complex. The schist is ubiquitously pyritic and forms a prominent gossan. The pyrite forms stringers, veinlets, blebs and disseminations. Chalcopyrite is less common and occurs as blebs and disseminations. Quartz-chlorite schist occurs as narrow bands within the quartz-mica schist – generally the quartz-chlorite schist is sulphide-free.

Bands of siliceous metavolcanic and tuffaceous metasedimentary rocks suggested by Roddick (1977) to be rhyolitic in composition are intercalated with the quartz-mica schist. Extending east from the headwaters of Pilledolla Creek these rocks are commonly strongly pyritic and gossanous.

Marble and limestone underly an extensive area at higher elevations in the northwestern portion of the Pilledolla 1 Claim. Narrow bands of siliceous metavolcanic and tuffaceous metasedimentary rocks are intercalated within the carbonates. The unit is "skarnified" with development of calc-silicate minerals in contact areas adjacent to the Coast Range granodiorite. Epidote, garnet, diopside and local magnetite and chalcopyrite have been documented.

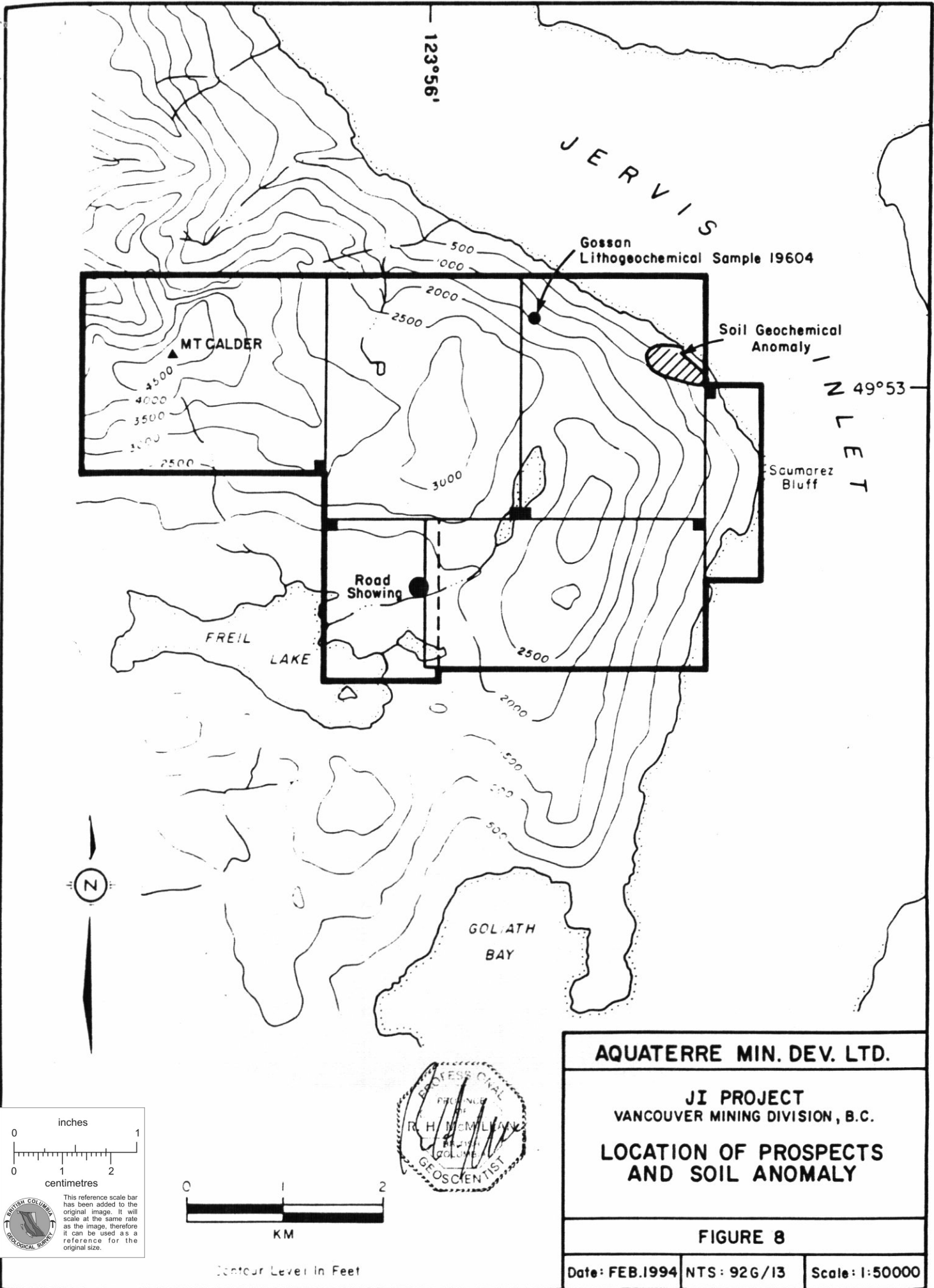
Coast Plutonic Complex intrusive rocks of granodiorite to quartz monzonite composition enclose the metamorphic rocks of the "roof pendant".

Structure on the Pilledolla property is complex and difficult to understand because of the precipitous terrane in key areas. Schistosity and bedding trend west-northwest, with steep dips. The marble-limestone unit appears to pinch out to the southeast in the Cliff Area where it is succeeded to the southeast by the quartz mica schist unit. It is not yet clear whether this is due to a facies change or to an interpreted west-northwesterly trending fault zone (Todoruk and Schatten, 1993a) in the centre of the Pilledolla 1 claim.

## 7.2 Geology – JI Property

The Saumarez-Mount Calder peninsula (Figure 4) is traversed by three northwest-trending "roof pendants" of metasedimentary and metavolcanic rocks believed to be correlative with the Lower Cretaceous Gambier Group (Figure 4; Roddick et al, 1979). The central and eastern "roof pendants" traverse the JI Property. These "roof pendants" are enclosed by granodiorite to quartz monzonite of the Coast Plutonic Complex. Dykes of several different compositions intrude both the Gambier Group rocks and the granitic rocks of the Coast Plutonic Complex.

The metavolcanic rocks are mainly andesitic in composition and tuffaceous in nature. They are generally fine-grained, greenish-grey in colour. Layering believed to be bedding is evident in many outcrops, however some outcrops are massive. Chlorite and



epidote are common alteration minerals, and possibly result from low-grade regional metamorphism. Stockworks of quartz veinlets were observed at several locations on the property. A quartz-hematite stockwork was observed at one location (Todoruk and Schatten, 1993).

Pale grey siltstone and dark green to black cherty argillite are interbedded with the metavolcanic rocks. The metasedimentary rocks are weakly foliated and pyrite is generally found as disseminations, blebs, stringers and veinlets. Hematite and magnetite occur locally as wisps and disseminations. Bedding generally strikes northwest with dips steeply to the northeast and southwest.

Bedding and schistosity in the metavolcanic and metasedimentary rocks trend north-northwest, generally dipping steeply to the northeast and in a few cases southwest.

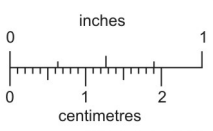
Diorite and quartz diorite of the Coast Plutonic Complex intrude and enclose the metavolcanic and metasedimentary rocks. The granitic rocks are typically medium to coarse grained and free of alteration, other than only locally weak sericite and patchy epidote. Pyrite is the only sulphide which was observed (Todoruk and Schatten, 1993) within the Coast-type intrusive rocks.

Five varieties of dike were distinguished in the geological mapping (Todoruk and Schatten, 1993). They include quartz trachyte, trachyandesite, porphyritic andesite, quartz monzonite and feldspar porphyry. Most dykes trend northwest, crosscutting the regional foliation trends. Most of the dykes are relatively free of alteration, however the porphyritic andesite dykes generally show moderate to strong alteration of plagioclase and mafic minerals and contain up to 5% pyrite. The feldspar porphyry dykes are the most common and youngest type -- they have various orientations and show little or no alteration.

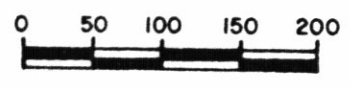
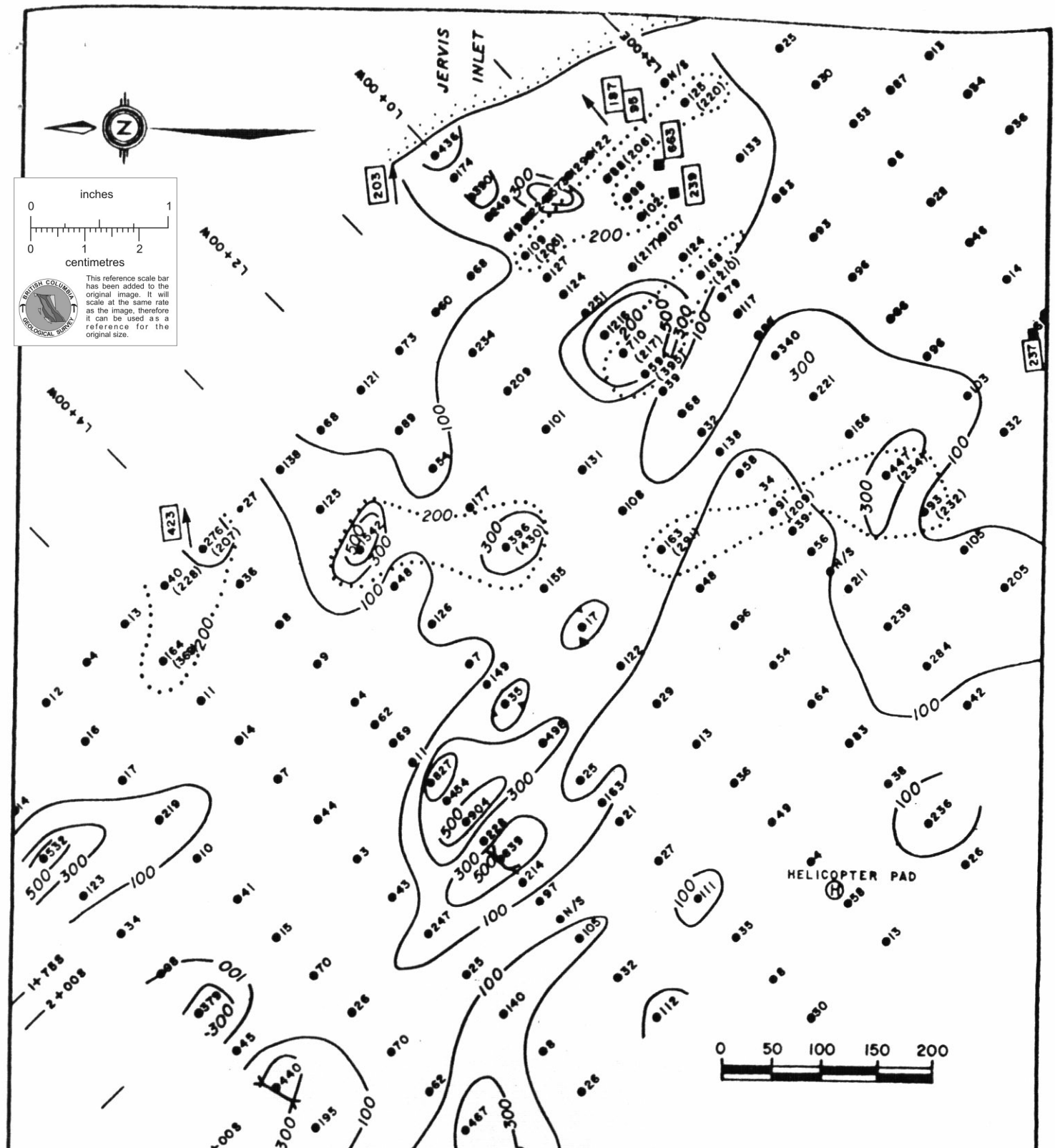
## **8.0 GEOCHEMISTRY**

### **8.1 Stream and Soil Geochemical Surveys – Pilldolla Property**

Twenty one silt samples were collected from the small streams which drain into Pilldolla Creek from the north side. Most of the sample sites are shown in Figure 7. The sampling extended from the mineralized moraine down Pilldolla Creek for 3.8 kilometres – the lower 2.3 kilometres is traversed by a new logging road. Although most samples were not particularly elevated in base or precious metals, if samples greater than 100 ppm are assumed to be anomalous, samples from two creeks located 500 and 600 metres southeast of the mineralized moraine yielded anomalous results respectively of: 187 ppm



This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.



- 231 (131) Sample Location, Cu Content ppm  
Zn Content > 100ppm
- - - 100 - - - Isogeochemical Contours (Cu)
- - - 200 - - - Isogeochemical Contour (Zn)
- ▲ Silt Sample Location
- ▣ 203 ppm Cu
- Lithogeochemical Sample Site > 100 ppm Cu
- ▣ 237 ppm Cu
- ⌘ Location Of Hand Trench



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<b>JI PROJECT</b> VANCOUVER MINING DIVISION, B.C.		
<b>STREAM, SILT AND SOIL</b> <b>GEOCHEMISTRY</b> <b>SAUMAREZ BLUFF GRID</b>		
<b>FIGURE 9</b>		
Date: FEB. 1994	NTS: 92 K/8	Scale: 1:5000

Cu, 202 ppm Zn and 190 ppm Cu, 192 ppm Zn. Nine other stream silt samples located between one and three kilometres to the southeast, yielded results greater than 100 ppm Zn.

Forty two soil samples were collected by Aquaterre (Todoruk and Schatten, 1993a) from several locations on the Pildolla Property. Most sample locations were from elevations below the mineralized talus and moraine -- none of the samples are anomalous in base or in precious metal content. The locations of the samples are not shown in this report.

## 8.2 Stream and Soil Geochemical Surveys – JI Property

Four silt samples were collected on the JI property. The locations and copper analyses are shown in Figure 9. Arbitrarily assigning samples with greater than 100 ppm Cu as anomalous, the results range from elevated to strongly anomalous. The highest sample at 432 ppm Cu is located below a strong copper-in-soil anomaly of up to 904 ppm Cu.

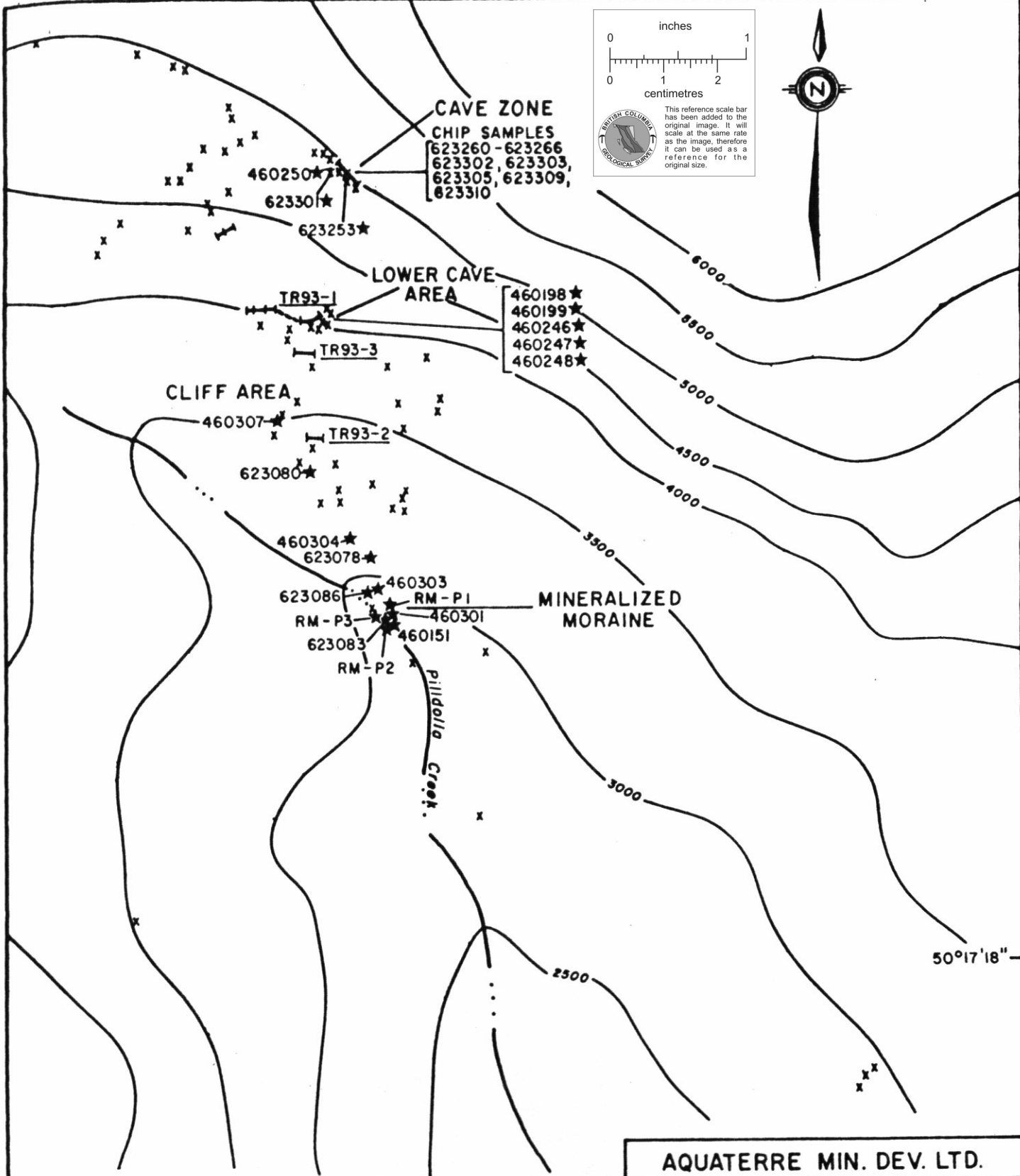
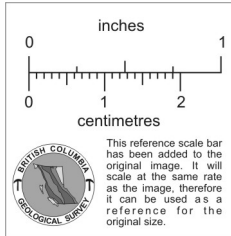
Soil geochemical surveys by a previous exploration company (Folk, 1975) and in 1993 by Aquaterre have defined a significant copper-in-soil anomaly over the Saumarez Bluff Grid. An area 350 x 800 metres (Figure 9) is highly anomalous in copper, with samples up to 1542 ppm Cu. Several areas of relatively higher zinc appear to correlate quite well with the anomalous copper samples. The anomaly trends east-southeast; it is open to the west, and the eastern edge of the anomaly bounds the waters of Jervis Inlet.

## 9.0 MINERALIZATION

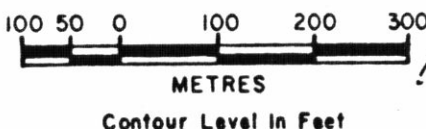
### 9.1 Float Mineralization – Pildolla Property

The 1993 Aquaterre prospecting program has located three separate areas with concentrations of sulphide-rich float with high copper-gold assays. These are termed the Cave Zone Area, Lower Cave Area and the Mineralized Moraine and are shown on Figure 6. Copper mineralization has been found in place at the Cave Area and malachite staining has been observed from the helicopter in the heavily iron-stained gossanous area called the Cliff Area (Figure 6) -- because it is necessary to employ experienced mountain climbers to complete much of the geological work and sampling, there was no opportunity to inspect the malachite-stained outcrop at the Cliff Area in 1993.

The most interesting result of the 1993 program has been the discovery of abundant gold-rich sulphide float in a drumlin or lateral moraine termed the "Mineralized Moraine". Nine highly anomalous samples collected by Aquaterre (Todoruk and Schatten, 1993a) are



- x Grab Sample (Float)
- ★ Anomalous Sample (Float)
- |— Chip Sample (Bedrock)



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<b>SAMPLE LOCATION MAP CLIFF AREA AND CAVE ZONES</b>		
<b>FIGURE 10</b>		
Date: FEB. 1994	NTS: 92 K/8	Scale: 1:10000

50°17'18"



listed below and three more subsequently collected by the author are also tabulated. The sample locations are shown on Figure 10. Eight of the samples were collected from a northwest-trending drumlin approximately 150 metres in length, and the remaining four from the area immediately above the moraine to the northwest. The samples are from angular boulders ranging in size up to 1 metre containing up to 20% disseminated pyrite, pyrrhotite and chalcopyrite. A few specimens could be termed "semi-massive sulphides". Minor magnetite, sphalerite and galena have also been identified. The hostrocks are schist and a mafic gneiss with amphibole porphyroblasts, and are probably metavolcanic in nature. The sulphides show features characteristic of thermal metamorphism and deformation. The mineralized boulders appear to define a "float train" that extends towards the malachite-stained area within the gossanous "Cliff Area".

#### Aquaterre Samples of Gold-rich, Chalcopyrite Float – Mineralized Moraine

<u>Sample Number</u>	<u>Type</u>	<u>Au (ppb)</u>	<u>Ag (ppm)</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
623078	grab	5,869	20.4	7,094	25	174
623080	grab	4,615	49.7	6,764	144	1001
623083	grab	1,158	43.2	2,562	4,849	373
623086	grab	1,055	20.3	1,782	121	182
460151	grab	1,452	33.7	2,632	93	1425
460301	grab	2,853	299.3	2,817	1.34%	294
460303	grab	1,560	18.1	6,339	73	162
460304	grab	6,882	25.3	9,111	17	121
460307	grab	1,648	45.6	4,847	80	827

#### R.H.M. Samples of Gold-rich, Chalcopyrite Float – Mineralized Moraine

RM-P1	grab	5.4 g/t	33.0	1.1%	23	277
RM-P2	grab	61.0 g/t	118.6	1.3%	233	1397
RM-P3	grab	1.8 g/t	21.8	0.7%	3	104

A second area of mineralized float is located higher and approximately 800 metres north of the Mineralized Moraine. As yet no proximal source is evident for these float boulders -- the Cave Zone located 350 metres to the north appears to be the most probable source at this time. This second area has been termed the "Lower Cave Area". Five of the samples (Todoruk and Schatten, 1993) with high precious and base metals are tabulated below.

### Aquaterre Samples of Mineralized Float – Lower Cave Area

<u>Sample Number</u>	<u>Type</u>	<u>Au (ppb)</u>	<u>Ag (ppm)</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
460198	talus	815	9.8	2,086	56	3,034
460199	talus	2,580	40.5	3,033	193	969
460246	talus	1,005	21.2	2,692	69	854
460247	talus	3,220	47.3	4,971	179	310
460248	talus	1,027	20.6	4,853	64	1,017

The third area containing mineralized float is 350 metres north of the Lower Cave Area, immediately below the Cave Zone. Three of the more anomalous samples collected by Aquaterre (Todoruk and Schatten, 1993) are listed below.

### Aquaterre Samples of Mineralized Talus and Float – Cave Zone

<u>Sample Number</u>	<u>Type</u>	<u>Au (ppb)</u>	<u>Ag (ppm)</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
460250	talus	2,920	34.2	2,674	94	1,448
623253	talus	12,650	108.0	2.15%	446	1,374
623301	talus	1,068	9.7	1,501	19	61

## 9.2 Bedrock Mineralization – Pildolla Property

The most obvious feature of the Pildolla Property is the prominent strata-controlled gossan caused by iron sulphide minerals – the gossan appears to be most intense near the contact area of the metasedimentary rocks with the metavolcanic rocks and extends for several kilometres. As mentioned above (Section 9.1) Todoruk (personal communication, 1993) has observed a malachite-stained area in the Cliff Area within the gossan.

Again, due to the precipitous nature of the topography at the Cave Area, the author was unable to inspect the showings. However, according to Todoruk and Schatten (1993a), the mineralization at the Cave Zone consists of fine to coarse grained pyrite within a west-northwesterly trending, moderately-dipping, fracture zone which varies in width from 1.0 metre at its west end to 3.0 metres at the east end. Hostrocks are granodioritic to quartz dioritic intrusive rocks of the Coast Plutonic Complex. A cliff at the east end prevented further sampling in this direction. The results (Todoruk and Schatten, 1993) from twelve of the higher channel-chip samples are listed below.

<u>Sample Number</u>	<u>Type</u>	<u>Au (ppb)</u>	<u>Ag (ppm)</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
623260	chip-1.0m	204	1.1	938	21	187
623261	chip-1.0m	184	1.7	799	37	244
623262	chip-1.0m	174	1.4	463	31	195
623263	chip-1.0m	195	2.4	781	33	173
623264	chip-1.0m	59	0.2	446	17	116
623265	chip-0.3m	190	0.3	1,045	14	94
623266	chip-1.0m	102	0.4	675	7	89
623302	chip-0.65m	755	0.2	499	15	127
623303	chip-0.65m	98	0.2	561	20	255
623305	chip-0.50m	126	0.2	371	6	234
623309	chip-0.70m	295	3.7	529	25	176
623310	chip-0.80m	136	0.2	585	19	480

The above samples were collected across the width of the structure and represent a strike length of 37 metres on the structure. These assay results are considerably lower than those for the talus and float samples which were collected immediately below the showing and from the Lower Cave area. Several gossanous and malachite-stained areas are apparently visible from the area that has already been sampled and more effort should be directed to sample some of these areas.

### 9.3 Bedrock Mineralization – JI Property

Of the 123 lithogeochemical samples collected on the JI Property, three returned anomalous values in copper in the Saumarez Bluff Grid. Three samples returned values of 237, 663 and 239 ppm Cu respectively (Figure 9). Approximately 500 metres west of L7+00W, along the trend of the soil anomaly, a sample collected during a reconnaissance prospecting traverse over a gossanous area produced a value of 767 ppm Cu (sample 19604, Figure 8).

At the Road Showing Prospect (Figure 8) concentrations of up to several percent pyrite are present in fractures and as disseminated grains in diorite of the Coast Plutonic Complex adjacent to a 6 metre wide feldspar porphyry dyke. Some initial selected grab samples which assayed several percent copper proved to be unrepresentative, with follow-up assays on re-sampled material yielding only trace amounts of copper.

## 10.0 DISCUSSION AND CONCLUSIONS

### 10.1 Pilldolla Property

Aquaterre's 1993 program has resulted in the discovery of the "Mineralized Moraine" (Figures 6,7 and 10), a float train with gold-rich, chalcopyrite-bearing boulders. The deformed nature of the sulphides in the float boulders together with the unusually high Au/Cu ratios, are characteristics shared with some gold-rich massive sulphide deposits such as Doyon and Dumagami near Cadillac, Quebec where Lac Minerals and Agnico Eagle Mines operate large and profitable gold mines with associated base metals. The float train trends towards a precipitous alder-covered gossanous zone called the Cliff Area, where an area of malachite staining was observed (see section 9.2) in what are believed to be Lower Cretaceous Gambier Group metasedimentary and metavolcanic rocks (Todoruk and Schatten, 1993a). The coincidence of the above features in the Cliff Area is highly positive and suggestive of an environment with potential for the discovery of VMS-style mineralization. This area is the most promising area of the Pilldolla Property.

The mineralized talus immediately below the Cave Zone and the float in the Lower Cave Area, appears to have originated from the Cave Zone. Although the results from rock-chip sampling at the Cave Zone have not been highly encouraging to date, additional sampling of other iron-stained outcrops in the area might raise the priority of the area.

The significance of the anomalous Cu and Zn in silt samples from the two creeks located 500 and 600 metres southeast of the Mineralized Moraine is uncertain (see section 8.1). These moderately anomalous results suggest that: (a) there could be mineralization in bedrock in the upstream areas to the north or (b) till boulders derived from bedrock mineralization higher in the valley could be the source of the "anomalies". While the present results are of ambiguous significance, additional more detailed sampling might yield results which will help in evaluating this heavily timbered area southeast and on the strike-extension of the favourable stratigraphy which outcrops above the "Mineralized Moraine" higher on Pilldolla Creek.

### 10.2 JI Property

The favourable geological environment within Lower Cretaceous Gambier Group metasedimentary and metavolcanic rocks correlative with similar rocks at the Britannia Mine and the Mount Diadem Deposits confirms the JI Property as a highly prospective VMS target area. The main feature of interest remains the strong copper-in-soil anomaly on Saumarez Bluff described in Section 8.2. A weak zinc anomaly co-incides with the copper anomaly. Although some low concentrations of copper have been found in bedrock (see Section 9.2), there has not been a sufficiently high concentration of copper mineralization found in bedrock to explain the strong copper-in-soil anomaly.

During the 1993 program, Aquaterre completed two VLF-EM test lines on Line 4+00W and Line 7+00W which traverse the geochemical anomaly and did not detect any significant response. They also dug two hand trenches on Lines 4+00W and 7+00W in an attempt to reach bedrock. The hand trenches encountered hardpan and sections of thick overburden and again the results were indeterminate. To test the copper-in-soil geochemical anomaly it will be necessary to utilize a diamond drill. A relatively narrow target such as a massive sulphide orebody will likely underlie a depression and it is very unlikely to be found in a limited hand trenching program -- in addition, there is a strong likelihood that the geochemical anomaly could have "migrated" both downslope due to hydromorphic transport and southeast due to "smearing" by glacial transport. Consequently, the drill program should be preceded by geophysical surveys which should include an induced polarization survey -- cordilleran VMS deposits are generally relatively pyrrhotite-poor, consequently deposits such as Britannia and Westmin are poor EM conductors.

Prior to diamond drilling, and to the preceding induced polarization survey, the soil geochemical grid should be extended at least 500 metres to the west. A rock chip sample (Sample 19604 shown on Figure 8) returned 767 ppm Cu in a gossanous area that has not been mapped or prospected in detail. The current geochemical anomaly remains strong and is open at the west end. In addition, VLF-EM, magnetic and possibly Max-Min EM surveys should be completed.

## 11.0 RECOMMENDATIONS

### 11.1 Pilldolla Property

The following program is recommended for 1994:

PHASE I - Detailed and reconnaissance geological mapping, bedrock prospecting, boulder prospecting, rock chip sampling, stream silt geochemical sampling and drill site selection. Based from a two man fly camp on the property.

Crew cost - 24 days @ 450/day	\$ 10,800
Helicopter costs - 10 hrs. @ 800/hr.	\$ 8,000
Room and board	\$ 1,600
Travel	\$ 2,400
Analyses	\$ 7,000
Equipment rental and miscellaneous	\$ 3,000
Compilation	\$ 5,200
Contingency	\$ 6,000
TOTAL Phase 1	\$ 44,000

**Phase 2 - Exploration diamond drilling (NQ), 4-6 holes, each hole 100 to 200 metres deep and contingent upon the results from the Phase 1 program.**

Diamond drilling (approximately 750 metres at \$ 80/metre	\$ 60,000
Mob/demob	\$ 15,000
Helicopter costs - 6 hrs @ \$2,500/hr. - 30 hrs @ \$ 800/hr.	\$ 39,000
Supervision	\$ 10,000
Analyses	\$ 4,500
Room and board	\$ 2,500
Vehicle rental and travel	\$ 5,000
Data compilation and report	\$ 10,000
Contingency	\$ 21,000
<b>TOTAL Phase 2</b>	<b>\$ 169,000</b>

## 11.2 JI Property

The following work is recommended for 1994:

**PHASE I- Geochemical, magnetic, VLF-EM and Induced Polarization survey, trenching, detailed geological mapping and sampling of the grid area.**

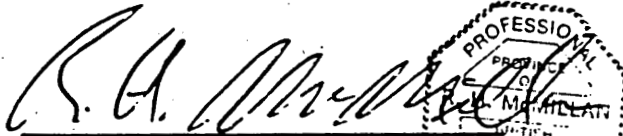
I. P. Survey - 10 km. @ 2000/km.	\$ 20,000
Linecutting	\$ 5,000
Geology, sampling and supervision	\$ 4,000
Analyses	\$ 1,000
Room and board	\$ 2,500
Boat and vehicle rental	\$ 1,500
Equipment rental and miscellaneous	\$ 1,000
Data compilation and report	\$ 4,000
	\$ 4,000
<b>TOTAL Phase 1</b>	<b>\$ 43,000</b>

**PHASE 2** - Contingent upon the results from Phase I, and including exploration NQ diamond drilling (3 holes, 200 to 300 metres each).

Approximately 750 metres (@ \$ 160/m, total cost including mob/demob, supervision, assaying etc.)

\$ 120,000

Respectfully Submitted

  
R. H. McMillan Ph.D., P. Geo.



## APPENDIX I

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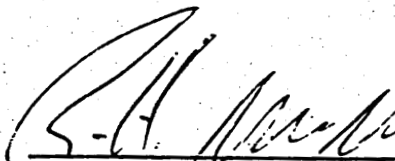
Todoruk Steve L. and Schatten Myra (1993b): 1993 Geological, Geochemical and Prospecting Report on the JI Project. Private Report, Aquaterre Mineral Development Ltd. 15 pages.


APPENDIX II

CERTIFICATE

I, RONALD HUGH McMILLAN, of 4026 Locarno Lane, Victoria,  
British Columbia (V8N 4A1), do hereby certify that:

1. I am a Consulting Geologist, registered with the Association of Professional Engineers and Geoscientists of British Columbia since 1992, and with the Association of Professional Engineers of Ontario since 1981.
2. I am a graduate of the University of British Columbia with B.Sc. (Hon. Geology, 1962), and the University of Western Ontario with M.Sc. and Ph.D. (1969 and 1972) in Mineral Deposits Geology.
3. I have practiced my profession throughout Canada, as well as in other areas of the world continuously since 1962.
4. The foregoing report on the Pildolla and JI Properties is based on a review the results of the 1993 field work carried out in August and September, as well as a review of published and unpublished information regarding the geological setting, styles of mineralization and results of previous exploration programs within and adjacent to the subject property. A one-day visit was made to both the Pildolla and JI Properties on October 21, 1993 accompanied by John Kerr, Steve Todoruk, Tom Waterland and Les Knight.
5. I have no interest, financial or otherwise, in any of the Mineral Claims which constitute either the Pildolla or JI Properties, nor in Aquaterre Mineral Development Ltd. or any related corporation.
6. Permission is hereby granted to Aquaterre Mineral Development Ltd. to use the foregoing report in support of a Prospectus, Statement of Material Facts or Filing Statement to be filed with the British Columbia Securities Commission and the Vancouver Stock Exchange.

  
\_\_\_\_\_  
Ronald H. McMillan



Victoria, B. C.  
28 February 1994



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SMITHERS, B.C. CANADA V0J 2N0  
TELEPHONE (604) 847-3004  
FAX (604) 847-3005

Assay Certificate

3V-0791-PA1

Company: JOHN KERR  
Project:  
Attn: J. Kerr / R.A. McMillan

Date: DEC-08-93  
Copy 1. John Kerr, Vancouver, B.C.

We hereby certify the following Assay of 3 pulp samples  
submitted NOV-17-93 by J. Kerr.

Sample Number	Au-Fire g/tonne	Au-Fire oz/ton
P1*	5.39	.157
P2*	60.96	1.778
P3*	1.82	.053

\*These sample have metallic Au

Certified by

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TELEPHONE (604) 847-3004  
FAX (604) 847-3005

Assay Certificate

3V-0791-RA1

Company: JOHN KERR  
Project:  
Attn: J. Kerr / R.A. McMillan

Date: DEC-08-93  
Copy 1. John Kerr, Vancouver, B.C.

We hereby certify the following Assay of 3 rock samples  
submitted NOV-17-93 by J. Kerr.

Sample Number	Ag g/tonne	Ag oz/ton	Cu %
P1	33.0	.96	1.050
P2	118.6	3.46	1.288
P3	21.8	.64	.749

Certified by

MIN-EN LABORATORIES



R.H. McMillan Ph.D.  
Consulting Geologist  
4026 Locarno Lane  
Victoria, B.C., V8N 4A1

17 June 1994

B.C. Securities Commission  
#1100-865 Hornby St.  
Vancouver, B.C., V6Z 2H4

Gentlemen:                      Re: Aquaterre Mineral Development Ltd.,  
File #X02-3555-4,  
your Memorandum of 16 June 1994

Aquaterre has received your comments regarding the "deficiencies" in the two technical reports which accompany their preliminary prospectus and have asked me to respond. Report #1 concerns the Ashwood Property and Report #2 concerns the Pilldolla and JI Properties. Some of the "deficiencies" are errors and the resulting corrections have indeed improved the two reports. Some other comments seem to have arisen in misunderstanding. I have responded in a similar format to that in Mr. Macaulay's memorandum.

Report #1

1(a) The total number of samples taken in the 1993 work program is stated on page 6 of the report. However to recapitulate, a total of 291 rock, 232 soil, 5 silt and 5 heavy mineral samples were collected and analyzed.

(b) Ridge Zone: A total of 35 rock samples were taken in the Ridge Zone Area. Of these, 13 were character samples of bedrock material and 22 were samples of float or talus material. The results of the gold analyses can be summarized as follows:

		No. of Samples	
		<u>float</u>	<u>bedrock</u>
Below background	< 5 ppb	1	0
Background	6 to 40 ppb	12	3
Weakly Anomalous	41 to 100 ppb	4	2
Anomalous	101 to 200 ppb	0	3
Mod. Anomalous	201 to 1000 ppb	5	3
Highly Anomalous	> 1000 ppb	2	0

I have made no attempt to calculate an "average" from the analyses because the results would have no meaningful use from either an engineering or from a statistical point of view and could actually be misleading. However, the data as presented in the above table should provide the reader an estimate of the tenor and the distribution of the sample results.

- (c) 1100 Zone: A total of 27 rock samples were taken in the 1100 Zone Area. Of these, 21 were character samples taken from outcrop and 6 were float. The distribution of gold analyses are summarized below:

		No. of Samples	
		<u>float</u>	<u>bedrock</u>
Below background	< 5 ppb	0	4
Background	6 to 40 ppb	1	7
Weakly Anomalous	41 to 100 ppb	0	4
Anomalous	101 to 200 ppb	2	2
Mod. Anomalous	201 to 1000 ppb	2	3
Highly Anomalous	> 1000 ppb	1	1

A revised Figure 5 has been prepared showing the outline of the soil anomaly and has been enclosed herewith. It occupies the northwestern portion of the box outlined in Figure 5.

- (d) N and Tat Zones: A total of 95 rock samples were collected from the N and Tat Zones over a strike length of 3.5 km. and a width of 400 metres. Of these, 26 were float samples, 22 were representative chip samples ranging from 0.2 to 2 metres in width. Forty seven (47) character samples were taken. The distribution of gold analyses is summarized below:

		No. of Samples
		<u>all samples</u>
Below background	< 5 ppb	5
Background	6 to 40 ppb	47
Weakly Anomalous	41 to 100 ppb	14
Anomalous	101 to 1000 ppb	26
Highly Anomalous	> 1000 ppb	3

As the N and Tat Zones are multi-element in nature, four additional samples would be anomalous to highly anomalous based on their Zn, Pb, Cu or Ag contents.

2. At the present stage of exploration, no specific sites have been recommended for drilling within the N and Tat Zones. What has been demonstrated to date is the presence of an extremely favourable structural and stratigraphic setting for the occurrence of volcanogenic massive sulphide deposits -- the contact area of the Salmon River and Betty Creek Formations. In addition, there has been extensive and strong hydrothermal activity evidenced by the highly anomalous base and precious metal assays in the exhalative-style sulphide mineralization observed on the property. Given that most of the recommended drilling that will take place during the Stage 1 program will be 500 to 1000 metres to the south on the 1100 Zone anomaly, I am confident that high-priority drill targets



will result from the geophysical survey which is to be part of the Stage 1 work. Final selection of specific drill sites will be based on interpretation of the geophysics, geochemistry and geology.

3. The helicopter-mounted geophysical survey which is planned for the property will utilize both a radar-controlled and satellite-based GPS navigation system which will allow location of anomalies within 5 to 30 metres on the ground. Approximately 500 kilometres will be flown utilizing a five frequency EM system (865, 935 and 33,000 Hz utilizing both a co-axial and co-planar orientation), a high-sensitivity cesium vapour magnetometer and a two frequency VLF-EM system. Specific sites for drill testing for volcanogenic massive sulphide targets will be based on the strength of the conductive response. Targets with an associated magnetic response will be rated as higher in priority for drilling. The cost per line kilometre is estimated at approximately \$100.

The cost of ground geophysical surveys is included as part of the crew cost of the field program on page 13 and will be done prior to diamond drilling.

Report #2

1. Figures 3 and 8 have been corrected as suggested by Mr. Macaulay and the amended versions have been included herewith.

I trust that these modifications and explanations rectify the "deficiencies" and remain:

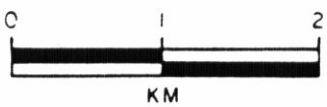
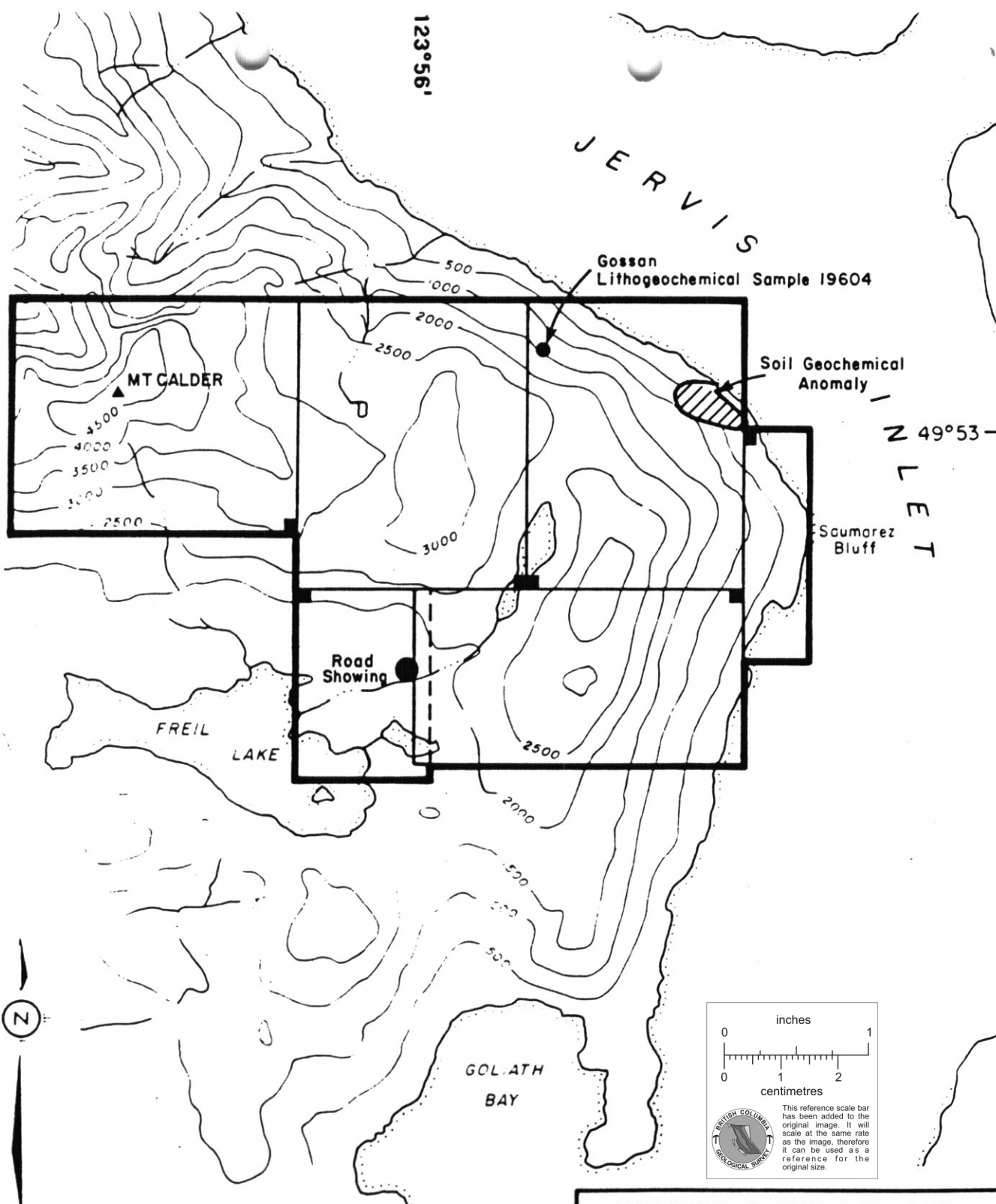
Yours Truly

  
R.H. McMillan P. G. E. N. T.

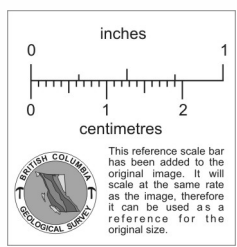


cc: Mr. John Kerr  
Aquaterra Mineral Development Ltd.

Ms. Pamela Joe  
Tupper, Jonsson and Yeadon  
#1710-1177 W. Hastings St.  
Vancouver, B.C., V6E 2L3



Contour Level in Feet



<b>AQUATERRE MIN. DEV. LTD.</b>		
<b>JI PROJECT</b> <b>VANCOUVER MINING DIVISION, B.C.</b>		
<b>LOCATION OF PROSPECTS</b> <b>AND SOIL ANOMALY</b>		
<b>FIGURE 8</b>		
<b>Date: FEB.1994</b>	<b>NTS: 92G/13</b>	<b>Scale: 1:50000</b>