

1993 TRENCHING and GEOCHEMICAL REPORT

on the

SUMMIT CAMP PROPERTY

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Simiklaheen Mining Division  
British Columbia

North Latitude 49° 25' West Longitude 121° 45'  
54

NTS 92H/6E

FILMED

Prepared for

**GOLDEN COAST MINERALS LTD.**

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Prepared by

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Vancouver, B.C. V6B 4N9

September, 1993

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

23,036

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## SUMMARY

The Summit Camp property is comprised of 34 units located in the Similkameen Mining Division, 27 km east-northeast of Hope, British Columbia on map sheet 92H/6E. The area has received significant exploration and development since 1894, with minor production in the 1920's and again in the 1950's.

The property is underlain by tuffaceous and pelitic sediments of the Upper Jurassic Dewdney Creek Group. The predominant strike of the bedding is northwest-southeast. There are several structural breaks that cross-cut the stratigraphy and that vary in strike from northeast-southwest to east-west.

Mineralization in the area consists of numerous, predominantly sub-parallel massive to semi-massive silver-bearing, sphalerite, galena  $\pm$  chalcopyrite sulphide veins. The veins vary in width from a few centimetres, up to 3 metres, the average width being 0.4 - 0.6 metres. The veins also vary in strike direction as does the faults and shear zones, from northeast-southwest to east-west.

This report describes the 1993 trenching and sampling program on a recently discovered semi-massive, Zn, Pb, Cu, Ag vein, referred to as the Cal-vein. It strikes northeast-southwest and varies in width from 6 cm to 40 cm over a strike length of 21 m, and is open in both directions. The Cal vein is located within the northeast corner of the property, on the Lulu claim (L92).

## **1.0 INTRODUCTION**

### **1.1 Location and Access**

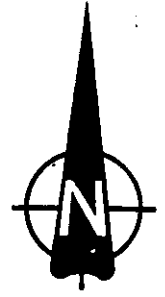
The property lies immediately west of Treasure Mountain, and 27 air kilometres east northeast of Hope, British Columbia, on N.T.S. map sheet no. 92H/6E, and at latitude 49° 25'N, longitude 121°45' W (Figure 1).

Access to the property is 38 km along a well-maintained logging road which intersects the Coquihalla highway 1.5 kilometres past the toll booth (54 kilometres north of Hope on Highway 5). The property is also easily accessible from the village of Tulameen approximately 20 kilometres to the east of the property.

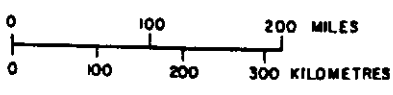
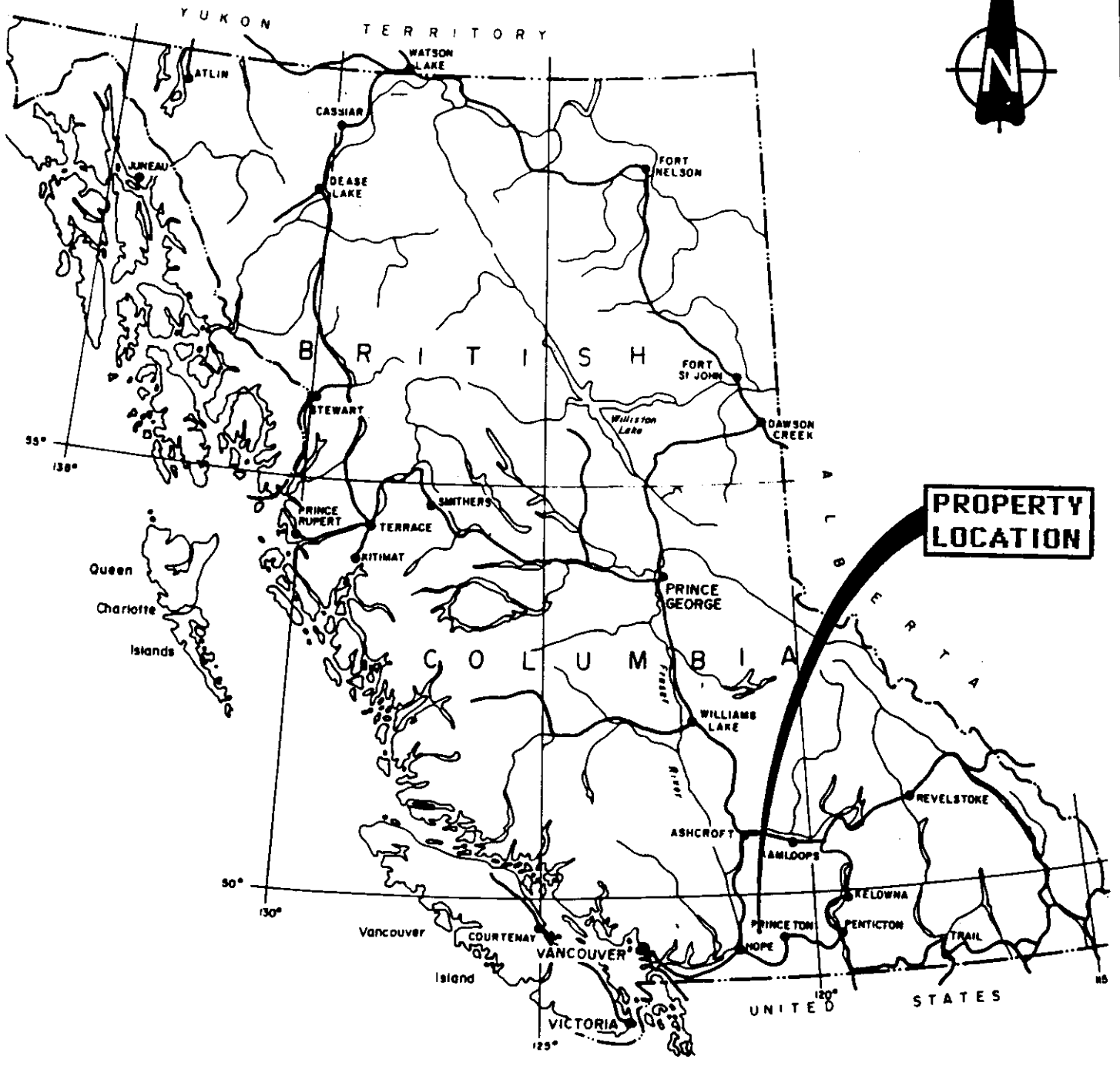
### **1.2 Physiography and Climate**

The western portion of the property straddles a prominent north-south ridge linking Mount Sutter and Tulameen Mountain. The eastern half covers the headwaters of Sutter and Amberty Creeks. The elevation ranges from 1400 m to 1860 m a.s.l.

The claims are well forested with a 30 year old second growth of fir, spruce, hemlock and some cedar with treeline at approximately 1830 metres. The area experiences heavy snowfall in the winter months. Exploration in snow-free conditions can normally be carried out from mid-June to mid-November.



**PROPERTY  
LOCATION**



|  |      |                |           |
|--|------|----------------|-----------|
| <b>GOLDEN COAST MINERALS LTD.</b>            |      |                |           |
| <b>SUMMIT CAMP<br/>PROPERTY LOCATION MAP</b> |      |                |           |
| <b>COAST MOUNTAIN GEOLOGICAL LTD.</b>        |      |                |           |
| Drawn by: JEM                                | NTS: | Date: SEPT '93 | Figure: 1 |

### 1.3 Property Description and Ownership

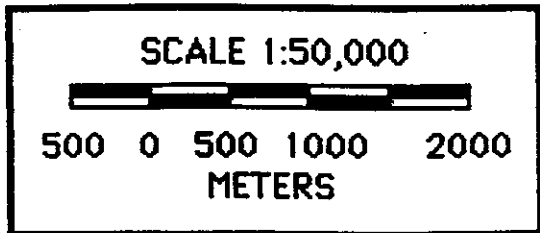
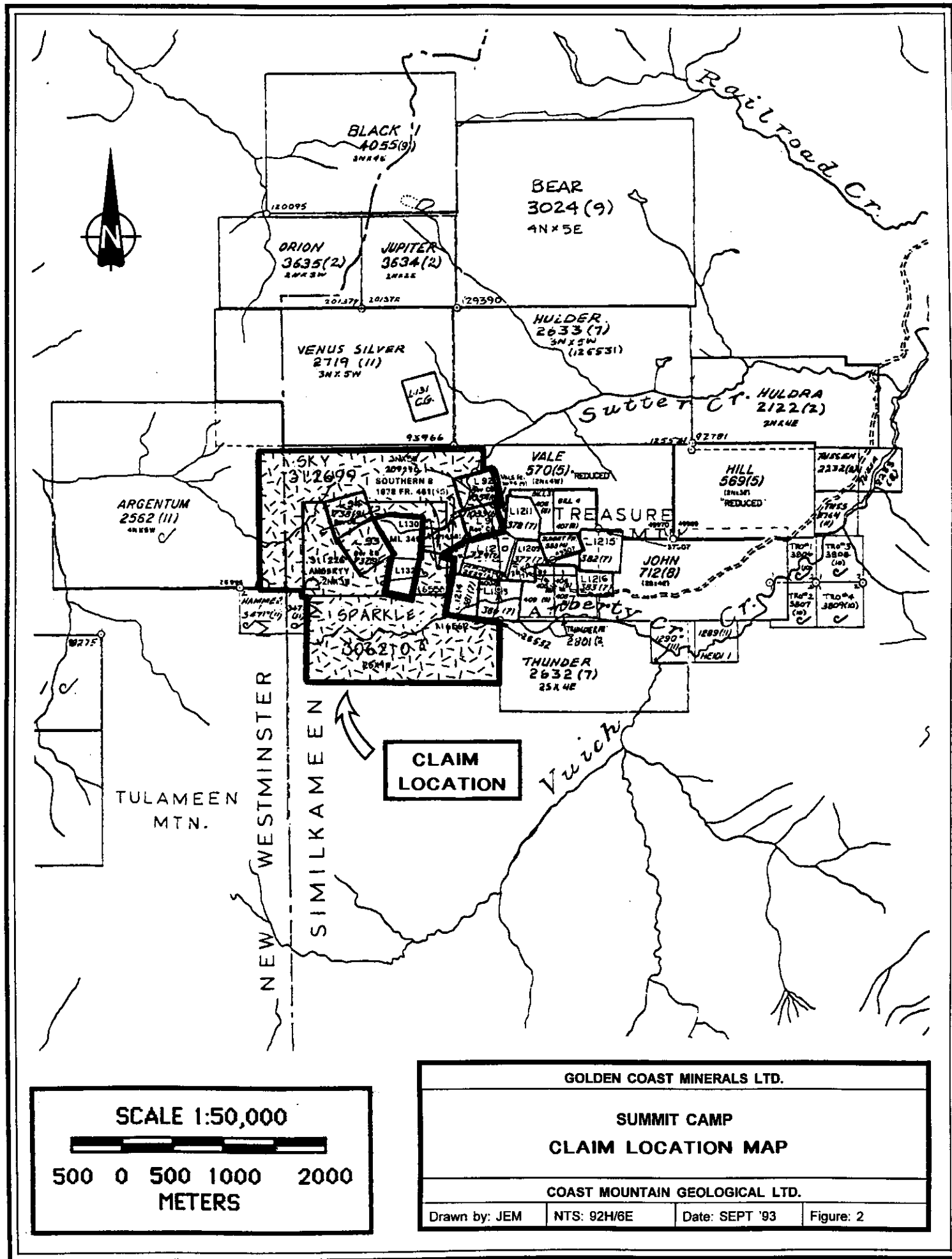
The Summit Camp group consists of one fractional claim, four reverted crown grants and three M.G.S. claims totalling 34 units, and is located in the Similkameen Mining Division of southern British Columbia (Figure 2). Golden Coast Minerals Ltd. of Vancouver holds 80% interest in the property. The following table summarizes pertinent claim data from records of the B.C. Ministry of Energy, Mines and Petroleum Resources:

**TABLE 1: CLAIM STATUS**

| <b>CLAIM NAME</b>                   | <b>RECORD NUMBER</b> | <b>SIZE (UNITS)</b> | <b>EXPIRY DATE*</b> |
|-------------------------------------|----------------------|---------------------|---------------------|
| Vigo (L91)                          | 248817               | 1                   | 25 Jun 1996         |
| Lulu (L92)                          | 248818               | 1                   | 25 Jun 1996         |
| Amberty                             | 311226               | 6                   | 10 Jul 1996         |
| Sky                                 | 312699               | 15                  | 20 Aug 1996         |
| Sutter (L93)                        | 248750               | 1                   | 27 Sep 1996         |
| Skyline (L94)                       | 248751               | 1                   | 27 Sep 1996         |
| Southern No. 8 1978                 | 248688               | 1                   | 12 Oct 1996         |
| Sparkle                             | 306210               | 8                   | 29 Oct 1996         |
| * Pending acceptance of this report |                      |                     |                     |

### 1.4 Property History

Mineral showings in the area were first discovered in 1894. Known as Treasure Mountain, Summit Camp, Silver Chief, or Silver Hill property, the area has seen significant exploration and development work. Ore was produced from 1920 to 1932 and again in the 1950's. Huldra Silver Inc. has recently carried out exploration and development in an area immediately east of the Summit Camp and southeast of the



|                                |             |                |           |
|--------------------------------|-------------|----------------|-----------|
| GOLDEN COAST MINERALS LTD.     |             |                |           |
| SUMMIT CAMP                    |             |                |           |
| CLAIM LOCATION MAP             |             |                |           |
| COAST MOUNTAIN GEOLOGICAL LTD. |             |                |           |
| Drawn by: JEM                  | NTS: 92H/6E | Date: SEPT '93 | Figure: 2 |

Venus Silver claim (owned by Golden Coast Minerals Ltd.). The 'C' vein developed by Huldra Silver encompasses the old Silver Chief Property.

In 1894 - 1896, Indiana Company worked on the Sutter, Skyline, Lulu and Vigo claims. Assays up to 200 oz/ton silver were obtained. Sporadic exploration continued to 1913 in the camp. Three parallel mineralized structures, 1 to 6 inches wide, with assays up to 0.08 oz/ton gold, 23.8 oz/ton silver and 3.6% lead, were discovered on the Indiana Claim. Brief descriptions of previous work can be found in the British Columbia Minister of Mines Annual Reports.

Treasure Mountain Mining Company carried out extensive development on two silver rich galena-sphalerite veins on the company's properties on Treasure Mountain. Assays up to 130 oz/ton silver were obtained. Similar veins were located on the Morning Star, Lulu and Vigo claims. In the period 1919 - 1920, Indiana Company drove 350 feet of cross-cuts and tunnels. On the Silver Chief property, lenses of galena and sphalerite mineralization over a width of 4 feet were developed (geological maps and descriptions of silver-lead-zinc mineralization on the recent work by Huldra Silver Inc. on the Silver chief Property is available). On the Eureka property, located west of Silver Chief property, 43 tons of silver rich ore were shipped to the smelter. The camp was intermittently active to 1932 when exploration and development virtually ceased. The camp was reactivated in 1954, with the installation of a 50 ton per day concentrator. Activity was short-lived, and production ceased in 1957. The total production, mainly from the Eureka and Silver Chief properties, consisted of 40,431 ounces of silver, 392,357 pounds of lead and 102,079 pounds of zinc.

In 1970, Copper Range Exploration Inc. conducted geochemical soil, rock and stream sediment surveys, and reopened the Nos. 1, 2 and 3 levels of the Silver King Mine.



Unicorn Resources Ltd. completed regional soil geochemical survey, underground geological mapping and sampling in 1982 (Hawkins and Lebel, 1983). The following year, MPH Consultants (on behalf of Unicorn Resources) carried out geological and geophysical surveys and limited diamond drilling. Several interesting silver soil anomalies and coincident VLF conductors were delineated. These anomalies are the Summit trend (north of the Indiana Fault), the Mountain View Trend (southeast of the Mountain View Adit) and the Queen Bess Trend, located southwest of the Mountain View Adit. The Bluebell workings form another trend to the south. Trenching of these anomalies produced values as high as 16.0 oz/ton silver, 1.7% lead and 10.6% zinc over a width of 1.22 metres.

Eight core drill holes were drilled below the upper Bluebell, Indiana and the Mountain View adits, resulting in sub-economic intersections. A drill hole located beneath the Indiana Adit returned 21.6 oz/ton silver, 4.4% lead, and 10.7% zinc over a width of 30 centimetres.

In 1987, Harrisburg-Dayton Resources Corp., Schellex Gold Corp.'s former joint venture partner, carried out VLF-EM, magnetometer and soil geochemical surveys on the Southern No. 8 claim. Subsequent trenching produced silver values as high as 88.38 oz/ton and 50.9 oz/ton over 0.5 and 0.9 metres respectively.

Harrisburg-Dayton Resources Corp. and Schellex Gold Corp. extended the VLF-EM and geochemical soil surveys to other parts of the property in 1988. This was followed up by road construction, trenching and chip and channel sampling. Several coincident VLF-EM and geochemical soil anomalies were delineated. The anomaly around the Indiana Adit and Summit Shaft was trenched. A total of 200 channel samples were collected; 40 from the Indiana trench and 160 from the Summit trench.

Assays as high as 0.95% copper 51.58% lead, 22.99% zinc, 119.80 oz/ton silver and 0.095 oz/ton gold were obtained from the Summit trench and 0.32% copper, 34.96% lead, 19.39% zinc, 60.28 oz/ton silver and 0.144 oz/ton gold were obtained from the Indiana trench. Subsequent diamond drilling consisting of 16 BQ drill holes, totalling 1317 metres, was conducted on the Summit zone between Summit Shaft and Indiana Adit. Several significant intercepts in lead, zinc and silver were obtained in the drill holes.

Harrisburg-Dayton Resources Corp. relinquished its interest in the Summit Camp property to Schellex Gold Corp. in January 1990, and therefore does not retain any further interest, direct or indirect, in the property.

In August 1991, a small program of hand trenching and rock sampling was carried out over anomalous soil sample sites collected in 1990. Schellex Gold Corp. changed its name to Golden Coast Minerals Ltd. in July, 1992.

## **2.0 GEOLOGY & GEOCHEMISTRY**

### **2.1 Regional Geology**

The Treasure Mountain area is underlain by tuffaceous and pelitic sediments of the Upper Jurassic Dewdney Creek Group in the west and the conglomerates, sandstones and pelitic sediments of the Lower Cretaceous Paseyten Group towards the northeast. The Chuwanten Fault separates the two groups (Figure 3). The Dewdney Group is underlain to the west by pelites and volcanoclastic sandstones of Lower and Middle Jurassic Ladner Group. Hozameen Fault separates Devonian Hozameen Group from the Ladner Group to the west.

**LEGEND**

**TERTIARY**

**MIOCENE AND EARLIER**

**24** Granodiorite, quartz diorite

**EARLY TERTIARY AND/OR LATE CRETACEOUS**

**20** Foliated granodiorite, quartz diorite

**CRETACEOUS**

**UPPER CRETACEOUS OR (?) OLDER**

**19** Quartz diorite

**LOWER CRETACEOUS KINGSVALE GROUP**

**18** Basalt, andesite, agglomerate, tuff

**PASAYTEN GROUP**

**17** Sandstone, conglomerate, pelite

**JACKASS MOUNTAIN GROUP**

**16** 16a; sandstone pelite, and conglomerate; 16b; sandstone, minor conglomerate

**JURASSIC AND/OR LOWER CRETACEOUS**

**13** Foliated granodiorite

**JURASSIC**

**UPPER JURASSIC DEWDNEY CREEK GROUP**

**12** 12a; sandstone, pelite; 12b; tuff, pelite

**LOWER AND MIDDLE JURASSIC LADNER GROUP**

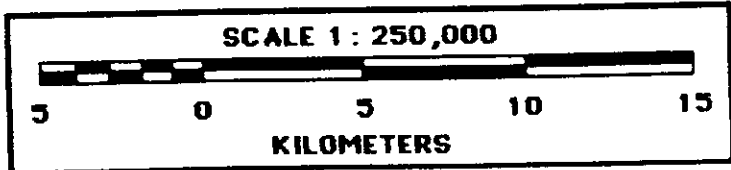
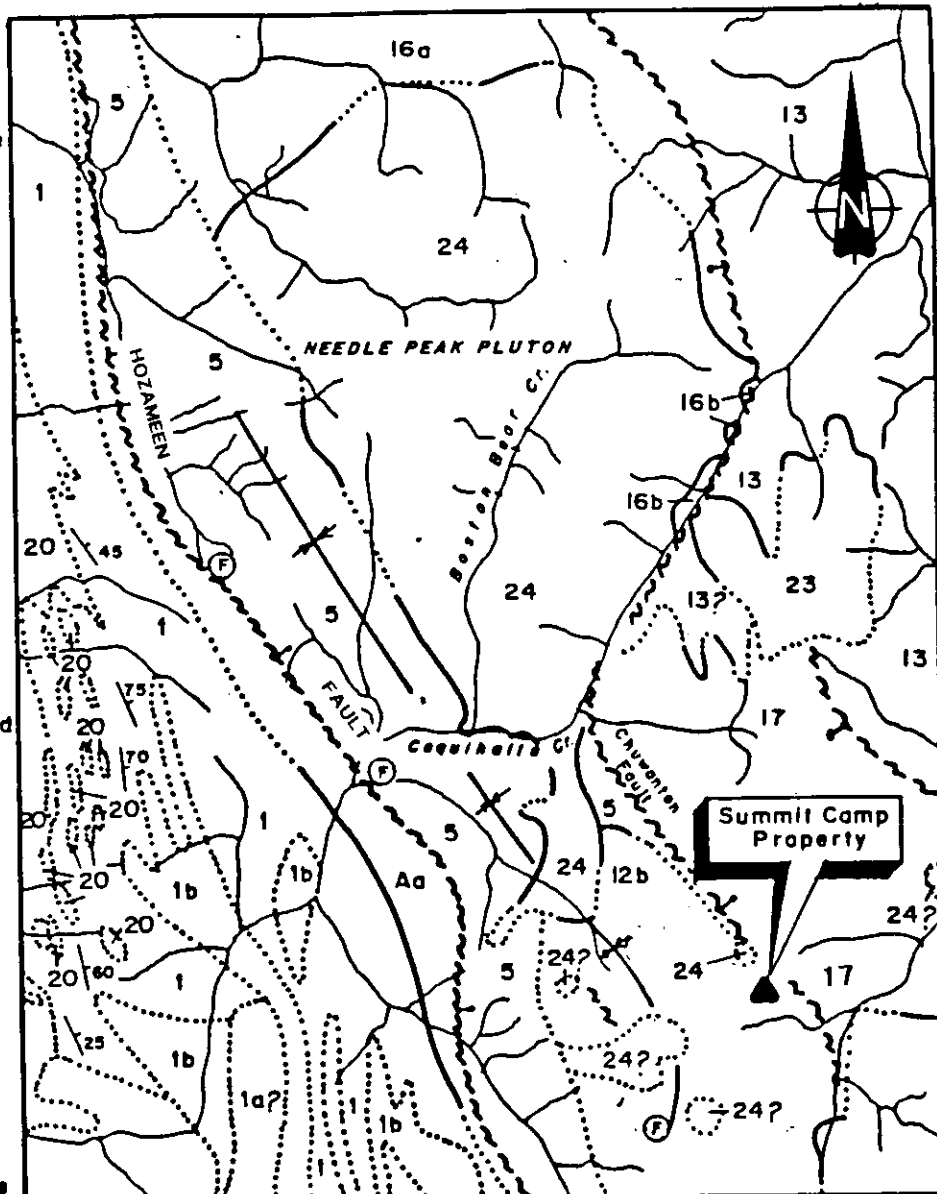
**5** Pelite, volcanic sandstone

**DEVONIAN (?), CARBONIFEROUS (?), AND PERMIAN (?) HOZAMEEN GROUP**

**1** 1; pelite, chert, basic volcanic rock, minor limestone; 1a; chert, basic volcanic rock; 1b; basic volcanic rock; 1c; chert, pelite; 1d; basic volcanic rock, chert, pelite; 1e; limestone

**ULTRAMAFIC ROCK**

**A** Aa; serpentine, serpentized peridotite, includes some Upper Paleozoic volcanic rocks in broad belt northeast of Hope; Ab; pyroxenite; Ac; hornblende



|                                |          |                |           |
|--------------------------------|----------|----------------|-----------|
| GOLDEN COAST MINERALS LTD.     |          |                |           |
| <b>SUMMIT CAMP</b>             |          |                |           |
| <b>REGIONAL GEOLOGY MAP</b>    |          |                |           |
| COAST MOUNTAIN GEOLOGICAL LTD. |          |                |           |
| Drawn by: JEM                  | NTS: 92H | Date: SEPT '93 | Figure: 3 |

Note: After G.S.C. Map 12, 1969

Structurally the Ladner Group forms the core of a broad north/northwesterly trending syncline and is bounded on the west by north-northwest trending Hozameen Fault system. Ultramafic rocks consisting of serpentinite, peridotite, dunite and pyroxenite bodies occur along the Hozameen Fault system.

Stocks and plugs of quartz diorite and granodiorite composition belonging to Cretaceous to Tertiary age intrude all other formations along the Belt.

## **2.2 Property Geology**

The property is mainly underlain by the northwest trending volcanoclastic conglomerates and sandstones, argillites and tuffs belonging to Upper Jurassic Dewdney Creek Group. The Lower Cretaceous Paseyten Group argillites are exposed in the northeast portion of the property, on the Sky Claim, and Lulu and Vigo crown grants.

Both the Paseyten and Dewdney Creek groups are intruded by intrusive rocks of gabbroic to dioritic composition of Tertiary age. The plutonic body exposed on the Vigo Crown Grant appears to have intruded into the core of the anticline formed by the Paseyten and Dewdney Creek groups.

Regional faulting with east-northeast trends is dominant in the area. The dominant faults, subparallel to the regional trends, are the Treasure Mountain Fault, Ridge Fault, Queen Bess Fault, Indiana Fault and the Sutter slope Fault. Mapping by Black (1952), suggests a left lateral movement is associated with these faults.

### **2.3 Mineralization and Alteration**

Mineralization discovered to date on the property consists of sphalerite, argentiferous galena, arsenopyrite, tetrahedrite, pyrite and pyrrhotite present in quartz ± carbonate veins. Minor marcasite, chalcopyrite and stibnite also occurs.

The veins often occur along moderate to steeply dipping east-northeast trending faults including Treasure Mountain, Queen Bess, Indiana and the Ridge Faults. These veins are on the average 0.6 metres wide, but widen out to 3 metres in places. Most of the veins consist of a central core of massive sulphides with disseminations and veinlets along margins.

Trenching on the Southern No. 8 Claim in 1987 exposed narrow quartz-carbonate veins over a strike length of 120 metres. The average width of the veins is approximately 0.45 metre. The various segments of the vein are named as Vigo Vein, Falls Vein, Lower Creek Vein, Middle Creek Vein and Upper Creek Vein.

The surface exposures of the 'C' Vein on Huldra Silver's Treasure Mountain property were mapped in detail by Mohan Vulimiri, who also logged their diamond drill core. He was partially responsible for the structural interpretation of the mineralized zones on the property as well. Data collected by Mr. Vulimiri suggests the zones occur at the intersection of the Treasure Mountain Fault with the favourable argillites of the Lower Cretaceous Paseyten Group. It is interesting to note that two mineralized argillite bands were exposed on the property by trenching. The argillite banks are variable mineralized with bands of sphalerite, pyrite, chalcopyrite, marcasite and pyrrhotite. The mineralization described by the previous workers appears to be stratiform. Mr. Vulimiri also observed stratiform mineralization in argillites on Huldra Silver's Treasure Mountain ground.

Subsequent diamond drilling in the Summit Zone returned significant values, but the assays were lower than those values obtained in the trenches (Chung, 1989).

### **3.0 1993 EXPLORATION PROGRAM**

The focus of the 1993 program, using a backhoe was to extend and enlarge a 1991 hand-dug trench. Twenty-one metres of a quartz, sphalerite, galena, chalcopyrite vein was exposed. A geologist and field technician employed by Coast Mountain Geological Ltd. spent 12 mandays on the property between August 5-12, 1993.

This site initially generated interest because of an anomalous soil sample. The property grid (established in 1988) was extended and sampled to the east in 1990. From this extended sampling came 3 highly anomalous soil samples. In 1991, a geologist and two field technicians inspected and attempts were made to hand trench these soil sample sites. Two of the three sites were too deeply buried by overburden to facilitate trenching by hand. The third site was hand trenched and sampled and is the location of the 1993 trenching and sampling program. The first two sites require approximately 500 metres of road building along a moderate slope for backhoe access.

#### **3.1 Trenching**

An industrial tractor-backhoe was contracted out of Tulameen, British Columbia. The machine was on the property for two days, August 9, and 10, 1993 and operated for a total of 23 hours.

A trench 23 metres long by approximately 9 metres wide was excavated. The long axis of the trench trends NE-SW and is located east of the small pond on L92 (Lulu claim), (Figure 4).

### **3.2 Geology & Mineralization of the Trench**

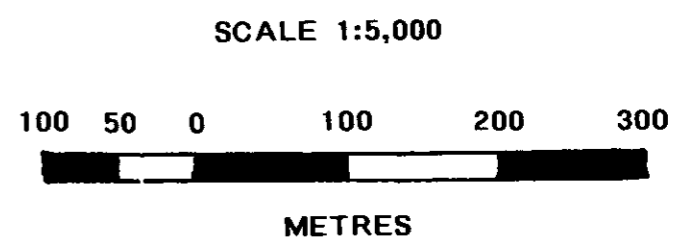
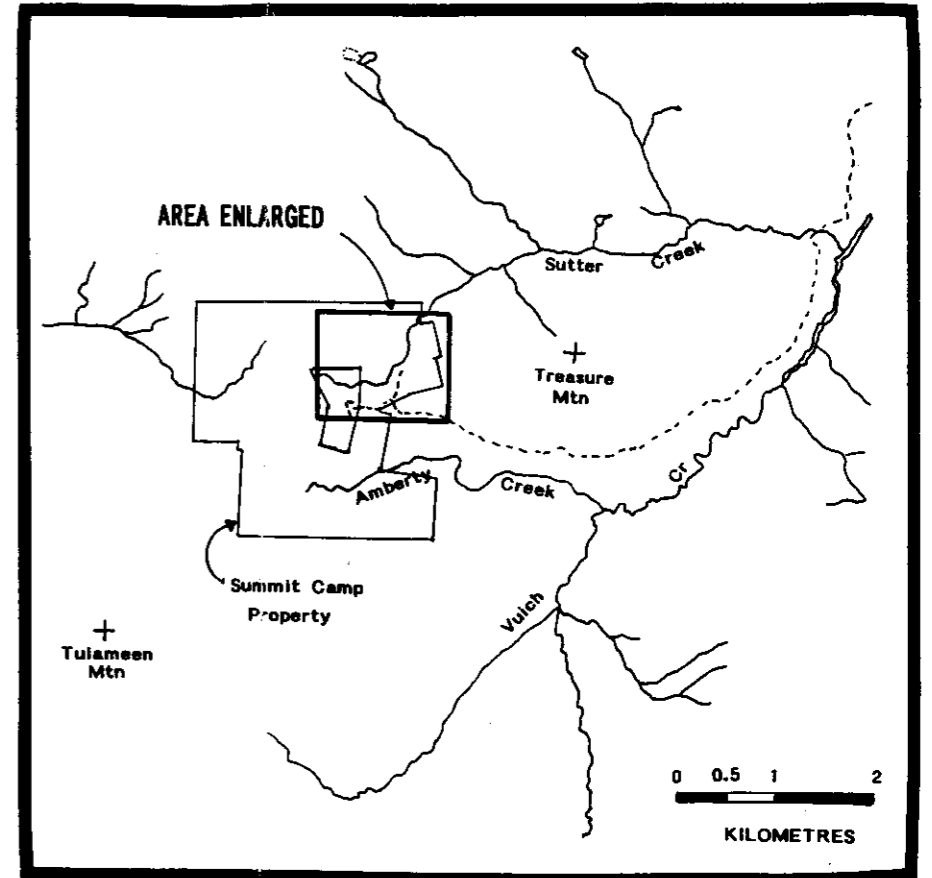
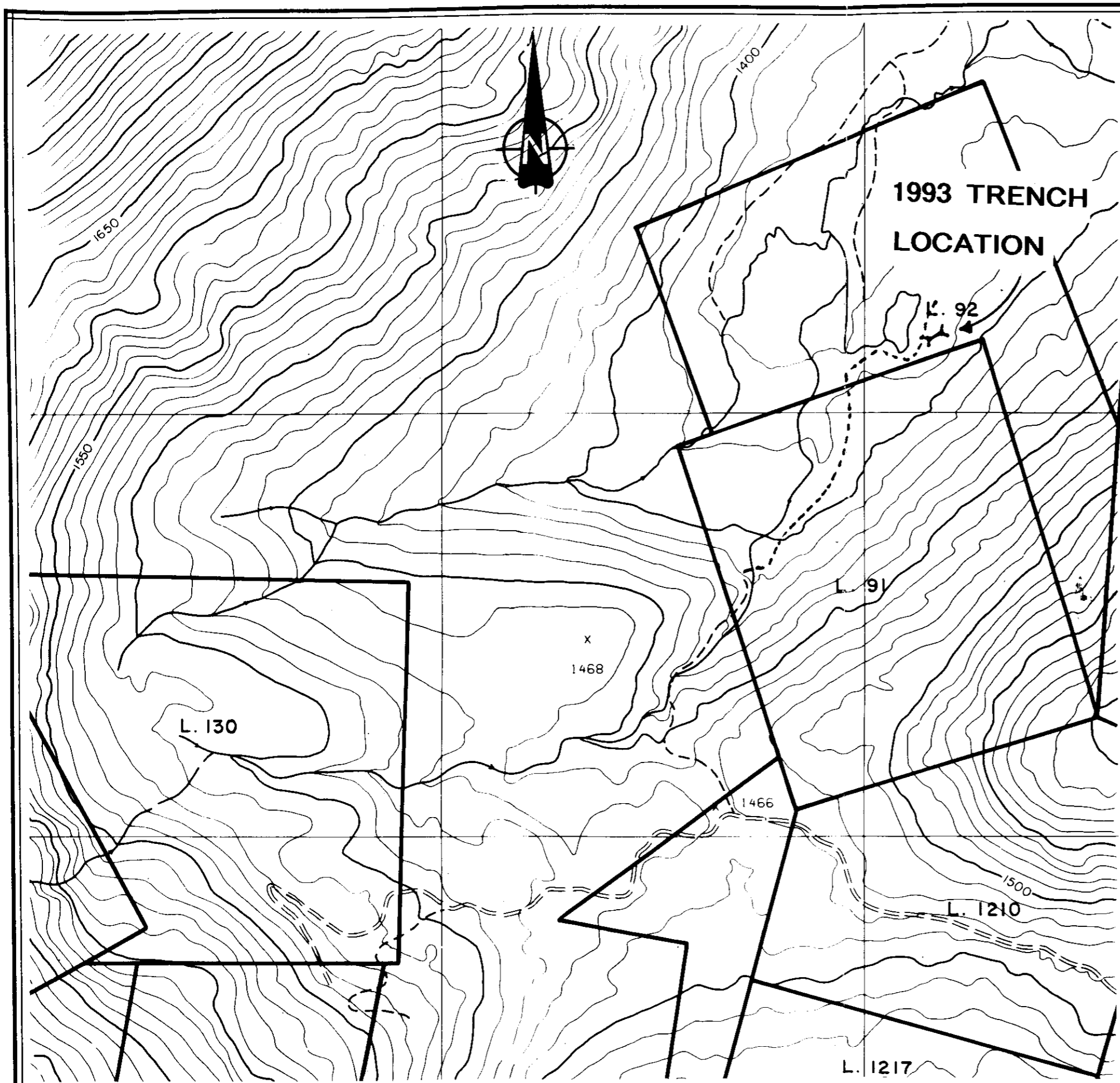
The trenching exposed 21 meters of a sphalerite, galena, chalcopyrite vein. The Cal-vein is still open in all directions. The vein varies in width over the 21 meters from 6 to 40 cm with an approximate average width of 10-20 cm. Its' strike and dip has small fluctuations, from 40° - 72° (strike) and vertical to 80° SE (dip). Overall the Cal-vein strikes 58° and dips steeply to the southeast (Figure 5).

The mineralogy of the vein is not homogeneous throughout. The presence and quantity of quartz varies. For example, near the original exposure the quartz is clear and forms euhedral crystals. Proximal to sample site 93S-TR-3,4 the vein contains massive pegmatic galena crystals with no quartz. No calcite was observed within the vein.

The order of quantity between the metalliferous elements remained fairly consistent; Zn > Pb > Cu > Ag. Generally, the sphalerite, galena, and chalcopyrite is fine to medium grained and massive.

Proximal to sample site 93S-Tr-5&6, the vein contains xenoliths of the country rock. These xenoliths are approximately 2-3 cm across and exhibit moderate alteration with slightly absorbed edges.

Mineralization is not restricted to the vein, and often occupies small discontinuous hairline fractures within the host rock. This type of mineralization is of interest, for



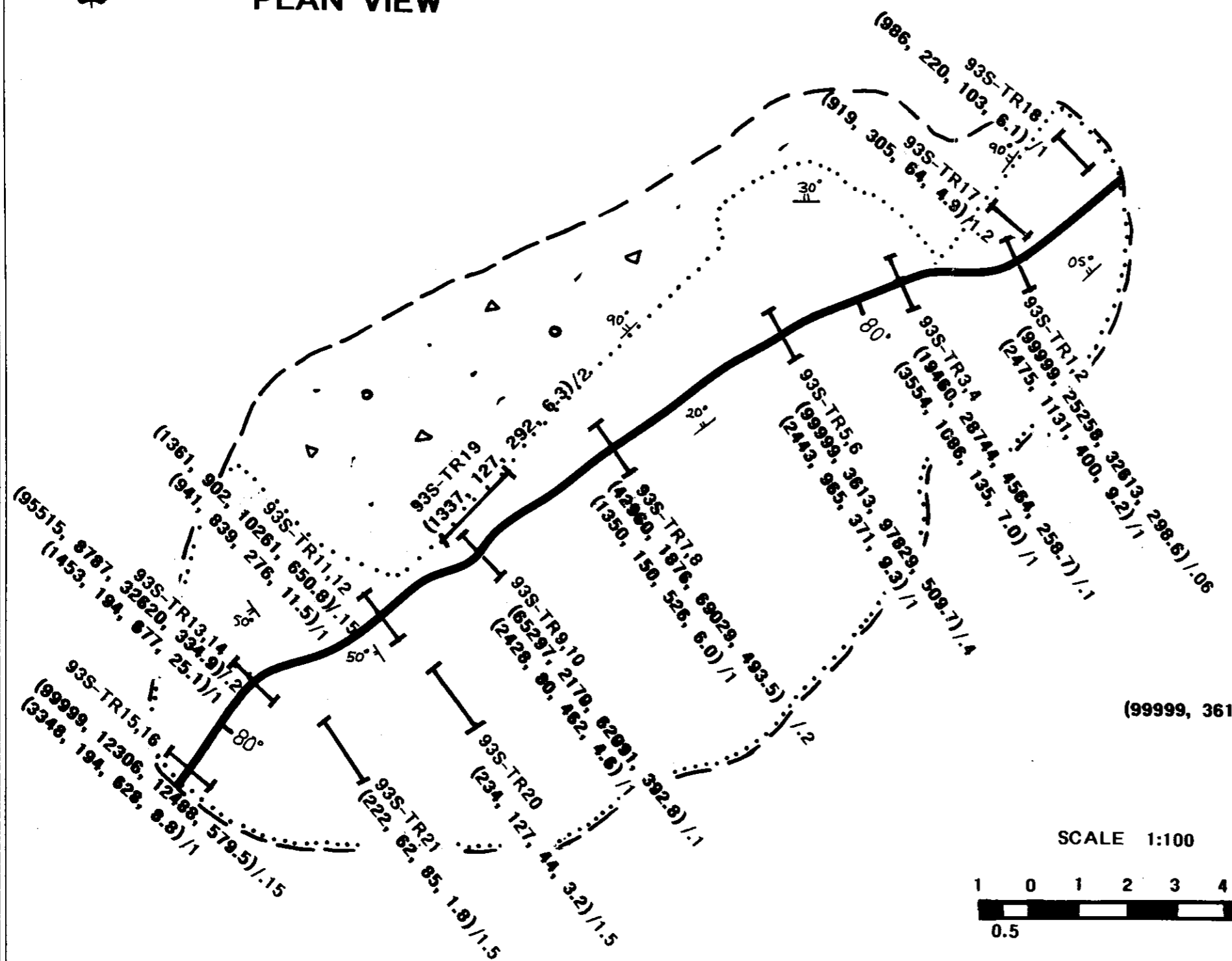
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| GOLDEN COAST MINERALS LTD.     |             |                |           |
| SUMMIT CAMP<br>TRENCH LOCATION |             |                |           |
| COAST MOUNTAIN GEOLOGICAL LTD. |             |                |           |
| Drawn by: JEM                  | NTS: 92H/6E | Date: SEPT '93 | Figure: 4 |





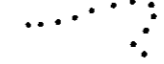
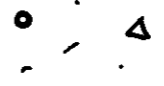






# CAL - VEIN TRENCH

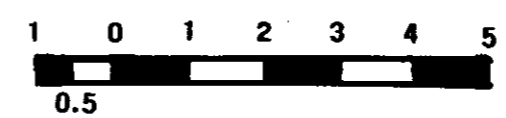
## PLAN VIEW



### LEGEND

-  CAL-VEIN  
(massive to semi-massive sp, gn, cpy)
-  TRENCH OUTLINE
-  OUTCROP OUTLINE
-  OVERBURDEN
-  SLOPE OF OUTCROP
-  DIP OF VEIN
-  93S-TR21
- ROCK CHIP SAMPLE, SAMPLE NUMBER
-  (99999, 3613, 97829, 509.7)/.4
- RESULTS in ppm (Zn, Pb, Cu, Ag)/ METRES

SCALE 1:100



|                                |             |                |           |
|--------------------------------|-------------|----------------|-----------|
| GOLDEN COAST MINERALS LTD.     |             |                |           |
| SUMMIT CAMP                    |             |                |           |
| CAL-VEIN TRENCH                |             |                |           |
| COAST MOUNTAIN GEOLOGICAL LTD. |             |                |           |
| Drawn by: JEM                  | NTS: 92H/6E | Date: SEPT '93 | Figure: 5 |

it may have the potential to increase into a stockwork and thus become economical. Samples 93S-TR-17 & 18 were collected over an area of this description (Figure 5).

The Cal-vein is hosted by a massive fine grained ash to lapilli tuff. Fresh surface is light green and weathered surface is grey-green. Locally this volcanoclastic rock is chloritized and/or silicified. Numerous hairline fractures were observed with manganese and  $\pm$  limonitic coating on the fracture surfaces. Proximal to sample site 93S-TR-21 the host rock contains <1% fine-grained disseminated pyrite.

### 3.3 Geochemistry

A total of 21 rock samples were collected and analyzed. See Appendix D for results and rock sample description and figure 5 for sample location. The rocks were analyzed by Acme Analytical laboratories out of Vancouver using 30 element ICP plus atomic absorption for gold. Odd number samples between 93S-TR-1 to 93S-TR-16 are samples of the vein material. Even number samples between 93S-TR-1 to 93S-TR-16 are chip samples of the wall rock adjacent to the vein sample. A half a metre chip sample was collected from the hanging wall and footwall to combine into a metre chip of the host rock. These samples suites (vein, wallrock) were collected approximately every 2 m along the exposed vein. Samples 93S-TR-17 thru 93S-TR-21 are chip samples from the host rock at various locations within the trench.

The vein samples returned very high results in Zn, Pb, Cu, Ag, Cd, Sb, and range in the several precentile. Assays are required to determine upper limits in some of the samples. The highest gold value is 1180 ppb from sample 93S-TR-9 and the highest silver value is 650.8 ppm from sample 93S-TR-11. The samples from the wall rock (hanging and footwall) are anomalous and are higher than wall rock without adjacent vein rock.

#### **4.0 DISCUSSION AND RECOMMENDATIONS**

The continuity of the veins and the high base metal and silver values is very encouraging. However, more width to a vein is required to become economical. Other economic models possible on this property is that of a stockwork, or a series of parallel veins.

This program reconfirmed that sulphide vein systems underlie anomalous soil sample sites. Soil sampling is proven to be an effective tool in locating these sulphide veins. However the width of vein is unknown until its trenched or drilled. A horizontal loop EM (HLEM) survey would assist in determining the extent and continuity of the unexposed sulphide veins. Thereby if one was to couple a HLEM survey with the anomalous soil sample areas, this would generate a prioritized target list, for followup (trenching, drilling). If at all possible this HLEM survey should be implemented using the 1988 grid lines and stations, so the soil geochemistry results from previous work may be utilized.

**APPENDIX A**


**STATEMENT OF QUALIFICATIONS**

## STATEMENT OF QUALIFICATIONS

I, JOAN E. McCORQUODALE, of 942 W. 15th Avenue, Vancouver, in the Province of British Columbia, DO HEREBY CERTIFY:

1. THAT I am a Geologist in the employment of Coast Mountain Geological Ltd. with offices at 1410 - 650 West Georgia Street, Vancouver, British Columbia.
2. THAT I am a graduate of the University of Alberta with a bachelor of Science degree, Specialization in Geology, (1988).
3. THAT my primary employment since graduation has been in the field of mineral exploration.
4. THAT this report is based on field work conducted by Coast Mountain Geological Ltd. on the Summit Camp Property during August, 1993, and on information from government publications and reports filed with the Government of British Columbia.
5. THAT I do not own or expect to receive any interest in the property described herein, nor in any securities of any company rendered in the preparation of this report.

DATED at Vancouver, British Columbia, this 17 day of September, 1993.

  
\_\_\_\_\_  
Joan E. McCorquodale, B.Sc.  
Geologist

**APPENDIX B**  
**STATEMENT OF EXPENDITURES**

## STATEMENT OF EXPENDITURES

### PERSONNEL

#### *Field*

|                              |            |
|------------------------------|------------|
| Geologist ( J. McCorquodale) |            |
| 6 days a@ \$325/day          | \$1,950.00 |
| Field Technician ( C.Huey)   |            |
| 6 days @ \$275/day           | 1,650.00   |

#### *Project Preparation*

|  |               |
|--|---------------|
| Geologists (J.McCorquodale/W. Kushner) |               |
| 3 days @ \$325/day                     | <u>975.00</u> |

### WAGES

**\$4,575.00**

### ASSAYS

|                               |          |
|-------------------------------|----------|
| 21 Rock samples @ \$15/sample | \$315.00 |
|-------------------------------|----------|

### TRANSPORTATION

|                      |          |
|----------------------|----------|
| Truck 4x4            |          |
| 8 days @ \$50/day    | \$400.00 |
| 1,686 km @ \$0.35/km | 590.00   |

### EXACAVATOR

|                  |          |
|------------------|----------|
| 23 HRS @ \$65/hr | 1,495.00 |
|------------------|----------|

### FOOD & ACCOMMODATION

|                    |        |
|--------------------|--------|
| 12 days @ \$60/day | 720.00 |
|--------------------|--------|

### SUPPLIES AND CONSUMABLES

|                                     |        |
|-------------------------------------|--------|
| (Flagging, bags, phone calls, maps) | 250.00 |
|-------------------------------------|--------|

### REPORT AND DRAFTING

1,500.00

#### Subtotal

**5,270.00**

#### 15% Management

790.50

#### TOTAL

**\$10,635.50**

**APPENDIX C**  
**REFERENCES**



## REFERENCES

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**APPENDIX D**

**CERTIFICATE OF ANALYSIS**  
**and**  
**ROCK SAMPLE DESCRIPTIONS**



## GEOCHEMICAL ANALYSIS CERTIFICATE



Coast Mountain Geological Ltd. File # 93-1968

P.O. Box 11604, 1410 - 65, Vancouver BC V6B 4N9

| SAMPLE#         | Mo<br>ppm | Cu<br>ppm | Pb<br>ppm | Zn<br>ppm | Ag<br>ppm | Ni<br>ppm | Co<br>ppm | Mn<br>ppm | Fe<br>% | As<br>ppm | U<br>ppm | Au<br>ppm | Th<br>ppm | Sr<br>ppm | Cd<br>ppm | Sb<br>ppm | Bi<br>ppm | V<br>ppm | Ca<br>% | P<br>% | La<br>ppm | Cr<br>ppm | Mg<br>% | Ba<br>ppm | Ti<br>% | B<br>ppm | Al<br>% | Na<br>% | K<br>% | W<br>ppm | Au*<br>ppb |
|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|---------|--------|-----------|-----------|---------|-----------|---------|----------|---------|---------|--------|----------|------------|
| 93S-TR-1        | 8         | 32613     | 25258     | 99999     | 298.6     | 31        | 42        | 4542      | 21.02   | 6         | <5       | <2        | <2        | 3         | 1374.4    | 493       | 456       | 28       | .04     | .011   | <2        | 8         | .41     | 20        | .01     | <2       | 1.13    | .01     | .08    | <1       | 170        |
| 93S-TR-2        | <1        | 400       | 1131      | 2475      | 9.2       | 18        | 29        | 6891      | 13.30   | <2        | <5       | <2        | <2        | 5         | 23.6      | 2         | 2         | 119      | .27     | .041   | 2         | 20        | 2.56    | 47        | .02     | 3        | 5.29    | <.01    | .24    | <1       | 4          |
| 93S-TR-3        | 3         | 4564      | 28744     | 19460     | 258.7     | 16        | 23        | 5898      | 11.80   | 6         | <5       | <2        | <2        | 3         | 247.0     | 873       | 117       | 81       | .06     | .016   | <2        | 24        | 1.62    | 27        | .01     | 2        | 3.72    | <.01    | .09    | 2        | 110        |
| 93S-TR-4        | 3         | 135       | 1086      | 3554      | 7.0       | 32        | 43        | 9556      | 18.42   | <2        | <5       | <2        | <2        | 3         | 40.1      | <2        | 6         | 138      | .08     | .028   | <2        | 40        | 3.19    | 70        | .01     | <2       | 6.48    | <.01    | .13    | <1       | 5          |
| RE 93S-TR-4     | <1        | 145       | 1065      | 3617      | 7.4       | 32        | 43        | 9685      | 18.86   | <2        | <5       | <2        | <2        | 3         | 39.8      | <2        | 2         | 142      | .08     | .029   | <2        | 40        | 3.25    | 71        | .01     | <2       | 6.62    | <.01    | .13    | <1       | 3          |
| 93S-TR-5        | 3         | 97829     | 3613      | 99999     | 509.7     | 26        | 84        | 5580      | 23.51   | 16        | <5       | <2        | <2        | 1         | 1579.0    | 968       | 124       | 7        | .04     | <.001  | <2        | 3         | .10     | 13        | <.01    | <2       | .29     | <.01    | .04    | <1       | 250        |
| 93S-TR-6        | 2         | 371       | 965       | 2443      | 9.3       | 21        | 30        | 7739      | 9.90    | 4         | <5       | <2        | <2        | 15        | 23.9      | 3         | 4         | 109      | 1.36    | .045   | 2         | 20        | 2.15    | 70        | .02     | 3        | 3.97    | .02     | .20    | <1       | 10         |
| 93S-TR-7        | <1        | 69029     | 1876      | 42960     | 493.5     | 23        | 44        | 5145      | 19.77   | 10        | <5       | <2        | <2        | 7         | 423.6     | 535       | 58        | 31       | .10     | .006   | 2         | 11        | .39     | 44        | .01     | <2       | 1.36    | <.01    | .09    | 3        | 280        |
| 93S-TR-8        | <1        | 526       | 150       | 1350      | 6.0       | 21        | 32        | 6320      | 8.79    | <2        | <5       | <2        | <2        | 35        | 13.9      | 2         | <2        | 98       | 1.34    | .037   | 2         | 27        | 2.37    | 112       | .10     | <2       | 3.88    | .02     | .19    | <1       | 16         |
| 93S-TR-9        | 1         | 62091     | 2170      | 65297     | 392.8     | 9         | 73        | 1990      | 23.01   | 16        | <5       | <2        | <2        | 4         | 594.0     | 1397      | 176       | 20       | .06     | .002   | <2        | 7         | .18     | 25        | .01     | <2       | .69     | <.01    | .04    | 4        | 1180       |
| 93S-TR-10       | <1        | 462       | 80        | 2428      | 4.6       | 8         | 28        | 5541      | 10.02   | <2        | <5       | <2        | <2        | 15        | 22.7      | <2        | <2        | 155      | 1.13    | .031   | <2        | 6         | 2.74    | 40        | .04     | <2       | 4.49    | .03     | .16    | <1       | 6          |
| 93S-TR-11       | 2         | 10261     | 902       | 1361      | 650.8     | 8         | 15        | 3263      | 26.25   | 7         | <5       | <2        | <2        | 1         | 2.9       | 1142      | 40        | 98       | .02     | .023   | <2        | 22        | .87     | 10        | .01     | <2       | 3.01    | <.01    | .04    | <1       | 130        |
| 93S-TR-12       | 1         | 276       | 839       | 941       | 11.5      | 15        | 26        | 8813      | 13.42   | 4         | <5       | <2        | <2        | 2         | 4.0       | 15        | 2         | 142      | .06     | .034   | <2        | 34        | 2.35    | 34        | .01     | <2       | 4.90    | <.01    | .19    | <1       | 10         |
| 93S-TR-13       | 3         | 32620     | 8787      | 95515     | 334.9     | 22        | 31        | 6270      | 15.13   | 18        | <5       | <2        | <2        | 7         | 883.4     | 408       | 60        | 65       | .12     | .015   | 2         | 25        | 1.11    | 38        | .02     | 2        | 2.43    | .01     | .07    | 3        | 82         |
| 93S-TR-14       | <1        | 677       | 194       | 1453      | 25.1      | 37        | 30        | 5592      | 8.78    | <2        | <5       | <2        | <2        | 19        | 12.5      | 30        | 6         | 114      | 1.10    | .025   | 2         | 81        | 2.72    | 52        | .04     | <2       | 4.08    | <.01    | .14    | <1       | 9          |
| 93S-TR-15       | 5         | 12488     | 12306     | 99999     | 579.5     | 14        | 48        | 22481     | 13.45   | 15        | <5       | <2        | <2        | 16        | 1787.0    | 1773      | 131       | 26       | .18     | .009   | <2        | 21        | .46     | 51        | .01     | <2       | .93     | .01     | .10    | <1       | 300        |
| 93S-TR-16       | 1         | 628       | 194       | 3348      | 8.8       | 47        | 33        | 7114      | 11.34   | <2        | <5       | <2        | <2        | 7         | 22.2      | 4         | 3         | 142      | .30     | .023   | <2        | 92        | 2.90    | 64        | .01     | <2       | 4.86    | <.01    | .13    | <1       | 11         |
| 93S-TR-17       | 2         | 64        | 305       | 919       | 4.9       | 17        | 21        | 7723      | 11.14   | <2        | <5       | <2        | <2        | 17        | 11.0      | <2        | 2         | 85       | 1.03    | .037   | 2         | 19        | 1.57    | 82        | .07     | <2       | 4.17    | .01     | .20    | <1       | 5          |
| 93S-TR-18       | 2         | 103       | 220       | 986       | 6.1       | 19        | 16        | 2584      | 4.82    | 4         | <5       | <2        | <2        | 30        | 9.6       | 2         | 2         | 85       | .66     | .036   | 3         | 29        | 1.81    | 40        | .11     | 2        | 2.69    | .04     | .08    | <1       | 17         |
| 93S-TR-19       | <1        | 292       | 127       | 1337      | 6.3       | 22        | 38        | 9929      | 13.49   | 11        | <5       | <2        | <2        | 5         | 16.1      | <2        | 9         | 126      | .14     | .030   | <2        | 18        | 2.12    | 68        | .02     | <2       | 5.14    | .01     | .09    | <1       | 11         |
| 93S-TR-20       | <1        | 44        | 127       | 234       | 3.2       | 13        | 20        | 4182      | 10.09   | 14        | <5       | <2        | <2        | 15        | .2        | <2        | <2        | 152      | .49     | .033   | <2        | 31        | 2.58    | 28        | .15     | <2       | 4.36    | .03     | .12    | <1       | 3          |
| 93S-TR-21       | <1        | 85        | 62        | 222       | 1.8       | 11        | 28        | 1962      | 7.28    | <2        | <5       | <2        | <2        | 13        | .7        | 2         | <2        | 106      | .54     | .034   | <2        | 17        | 2.16    | 44        | .26     | 2        | 3.37    | .03     | .12    | <1       | 3          |
| STANDARD C/AU-R | 18        | 62        | 38        | 123       | 7.4       | 68        | 31        | 1102      | 3.97    | 41        | 19       | 8         | 37        | 53        | 18.5      | 13        | 19        | 55       | .49     | .087   | 38        | 61        | .93     | 186       | .09     | 33       | 1.88    | .06     | .14    | 11       | 490        |

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL.  
 ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB  
 - SAMPLE TYPE: ROCK AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE. Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: AUG 13 1993

DATE REPORT MAILED: Aug 17/93

SIGNED BY: *C. Long* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

## ROCK SAMPLE SHEET

Sampler J. MCCORQUODALE  
C. HUEYDate AUG 12, 1993Property SUMMIT CAMPNTS 92H6

| SAMPLE NO. | Sample Width | DESCRIPTION               |                                     |                   | ADDITIONAL OBSERVATIONS  | ASSAYS (PPM) |        |        |       |          |
|------------|--------------|---------------------------|-------------------------------------|-------------------|--|--------------|--------|--------|-------|----------|
|            |              | Rock Type                 | Alteration                          | Mineralization    |  | Zn           | Pb     | Cu     | Ag    | Au (ppb) |
| 93S-TR1    | 6cm          | MASSIVE SULPHIDE VEIN     |                                     | sp>cpy>gn         | MASSIVE SULPHIDE WITH HIGHER CALCOPY. UP TO 15%                                | 9494         | 25.578 | 32.613 | 293.6 | 170      |
| 93S-TR2    | 1m           | WALL RK ASH/LAPILLI TUFF  | SILICIFIED                          | Minor sp, gn, cpy | MINOR MINERALIZATION WITHIN DISCONTINUOUS HAIRLINE FRACTURES                   | 2475         | 1131   | 400    | 9.2   | 4        |
| 93S-TR3    | 10cm         | MASSIVE SULPH. VN.        |                                     | gn>sp>>cpy        | LARGE EUHEDRAL GALENA CRYSTALS   | 14460        | 2874   | 4564   | 258.7 | 110      |
| 93S-TR4    | 1m           | WALL RK ASH/LAPILLI TUFF  | LOCALLY CHLORITIZED                 | Minor sp, gn      | STRINGERS OF Gn, SP $\approx$ 1-3mm wide with Qtz xtals. LOCALLY CHLORITIZED   | 3554         | 1086   | 135    | 7.0   | 5        |
| 93S-TR5    | 40cm         | SEMI MASSIVE SULPH. VN.   |                                     | sp>cpy>>gn        | MOTTLED TEXTURE - XENOLITHS OF WALLRK & MASSIVE QTZ. IRREGULAR WALL-VN CONTACT | 9449         | 3613   | 57.834 | 509.7 | 250      |
| 93S-TR6    | 1m           | WALL RK. ASH/LAPILLI TUFF | MINOR LIMONITE                      | Minor SP          | STRINGERS OF QTZ, SP. HEAVY MAGANESE STAINING ON FRACTURE SURFACE              | 2443         | 965    | 371    | 9.3   | 10       |
| 93S-TR7    | 20cm         | SEMI MASSIVE SULPH. VN.   |                                     | cpy>sp>>gn        | SULPHIDES FINE GRAINED WITH MASSIVE ANHEDRAL                                   | 42960        | 1876   | 69.029 | 493.5 | 280      |
| 93S-TR8    | 1m           | WALL RK. ASH/LAPILLI TUFF | MINOR BLEACHING, SILICIFICATION     | Trace pyrite      | MINOR EPIDOTE ALONG QUARTZ FLOODED HAIRLINE FRACTURES                          | 1350         | 150    | 526    | 6.0   | 16       |
| 93S-TR9    | 10cm         | MASSIVE SULPH. VN.        |                                     | sp>cpy>>gn        | VERY FRIABLE, FINE GRAINED MASSIVE SULPHIDE                                    | 65287        | 2170   | 6201   | 392.8 | 1180     |
| 93S-TR10   | 1m           | WALL RK ASH/LAP. TUFF     | LOCALIZED CHLORITE, SILICA          | Trace             | NUMEROUS QTZ STRINGERS WITH ALTERATION (BLEACHED) HALOS                        | 2428         | 80     | 462    | 4.6   | 6        |
| 93S-TR11   | 15cm         | SEMI MASSIVE SULPH. VN.   | LIMONITIC WEATHERD                  | cpy>>sp           | ORIGINAL OUTCROP (EXPOSED PRE TRENCH) LOCAL MASSIVE QTZ, WEATHERED SUPH.       | 1361         | 902    | 10261  | 650.8 | 130      |
| 93S-TR12   | 1m           | WALL RK ASH/LAP. TUFF     |                                     | No v.s.           | ORIGINAL O/C - SOME MAGANESE STAINING WITHIN HAIRLINE FRACTURES                | 276          | 834    | 941    | 11.5  | 10       |
| 93S-TR13   | 20cm         | MASSIVE SULPH. VN.        |                                     | sp>cpy            | very little quartz   | 95315        | 8787   | 22620  | 334.4 | 82       |
| 93S-TR14   | 1m           | WALL RK ASH/LAP. TUFF     | LOCAL SILICIFICATION CHLORITIZATION | MINOR MALACHITE   | NUMEROUS QTZ STRINGERS WITH MINOR MALACHITE                                    | 1453         | 194    | 677    | 25.1  | 9        |
| 93S-TR15   | 15cm         | MASSIVE SULPHIDE          |                                     | sp>>cpy           | VERY FRIABLE (CRUMBLY) FINE GR. SULPHIDE WITH MINOR QTZ                        | 9449         | 12306  | 12489  | 579.5 | 300      |



**APPENDIX E**  
**SAMPLING and ASSAY PROCEDURES**

## **Trenching, Sampling and Rock Chip Preparation**

Trenching was done by an Industrial Tractor-Backhoe. The exposed vein was swept and scrubbed clean, and chip samples of various lengths collected using hammers and chisels. All rock samples were taken from bedrock. The rock chips were collected in plastic bags and sent to Acme Labs Ltd. of Vancouver, B.C., for analysis. The rock chip samples were crushed to 3/16 of an inch. A 250 gram specimen was split out and pulverized to 995 minus 100 mesh using a ring mill pulverizer.

## **ICP Analysis**

A 0.50 gram sample of the prepared pulp is digested with 3 millilitres of 3:1:2 HCl-HNO<sub>3</sub>-H<sub>2</sub>O at 95°C for one hour, diluted to 10 millilitres with water, and then analyzed for 30 elements.

## **Gold Analysis (Fire Geochem)**

10 grams of pulp is ignited at 600°C for 4 hours and digested with aqua regia at 95°C on the water bath for one hour. 50 millilitres aliquot is extracted into 10 millilitres of MIBK and analyzed by graphite furnace AA.