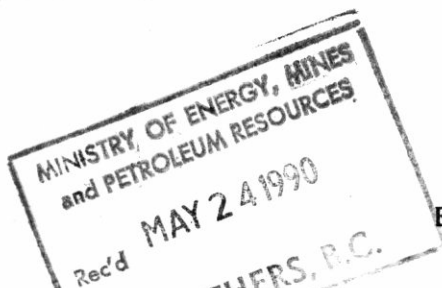


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1046/03  
104G 50,53  
✓  
SUPERINTENDENT OF BROKERS  
AND  
VANCOUVER STOCK EXCHANGE  
(Venture Company)STATEMENT OF MATERIAL FACTS #22/90  
EFFECTIVE DATE: Friday, April 27, 1990

## GIGI RESOURCES LTD.

11th Fl., 808 West Hastings St., Vancouver, B.C., V6C 2X4  
NAME OF ISSUER, ADDRESS OF HEAD OFFICE AND TELEPHONE NUMBER

Telephone: 604-687-7463

#100 - 200 Granville Street, Vancouver, B.C., V6C 1S4  
ADDRESS OF REGISTERED AND RECORDS OFFICES OF ISSUERCentral Guaranty Trust Company, 800 West Pender Street, Vancouver, British Columbia  
NAME AND ADDRESS OF REGISTRAR & TRANSFER AGENT FOR ISSUER'S SECURITIES IN BRITISH COLUMBIA

The securities offered hereunder are speculative in nature. Information concerning the risks involved may be obtained by reference to this document; further clarification, if required, may be sought from a broker.

## OFFERING : 1,000,000 UNITS

The Offering may be increased by up to 150,000 Units (15% of Offering) to meet over-subscriptions. See "Plan of Distribution".

Each Unit consists of One Common Share and Two Series "B" Warrants, two such Warrants entitling the holder thereof who exercises such warrants to purchase one additional common share of the Issuer at any time up to the close of business within one year following the Offering Day at the Offering Price.

|          | Offering Price<br>(estimated)* | Commission | Estimated Net Pro-<br>ceeds to be Received<br>by the Issuer |
|----------|--------------------------------|------------|---|
| Per Unit | \$1.00                         | \$0.075    | \$0.925   |
| Total    | \$1,000,000                    | \$75,000   | \$925,000   |

\* To be calculated in accordance with the Rules of the Vancouver Stock Exchange.

## ADDITIONAL OFFERING

The Agents have agreed to purchase (the "Guarantee") any of the Units offered hereby which are unsubscribed for on the Offering Day (see "Consideration to Agents"). Any Units acquired by the Agents under the Guarantee will be distributed under this Statement of Material Facts through the facilities of the Vancouver Stock Exchange at the market price at the time of sale.

## AGENTS

L.O.M. Western Securities Ltd.  
#2200 - 609 Granville St.  
Vancouver, B.C. V7Y 1H2Yorkton Continental Securities Inc.  
10th Floor, IV Bentall Center  
1055 Dunsmuir Street  
Vancouver, B.C. V7X 1L4

Neither the Superintendent of Brokers nor the Vancouver Stock Exchange has in any way passed upon the merits of the securities offered hereunder and any representation to the contrary is an offence.

May 18/90

# 1. PLAN OF DISTRIBUTION

## A. THE OFFERING

By Agreement dated for reference March 28, 1990 (the "Agency Agreement"), Gigi Resources Ltd. (the "Issuer") appointed the following as its agents (the "Agents") to offer through the facilities of the Vancouver Stock Exchange (the "Exchange") 1,000,000 Units of the Issuer at a fixed price in the amounts set opposite their respective names (the "Offering"):

| <u>Agents</u>                       | <u>No. of Units</u> |
|-------------------------------------|---------------------|
| L.O.M. Western Securities Ltd.      | 700,000             |
| Yorkton Continental Securities Inc. | 300,000             |

The Offering will take place on the "Offering Day" which will be not more than one hundred eighty (180) calendar days after the date this Statement of Material Facts is accepted for filing by the Exchange and the Superintendent of Brokers (the "Effective Date").

The offering price of the Units (the "Offering Price") will be determined in accordance with the rules of the Exchange, at a premium over the average trading price of the Issuer's shares as determined by the Exchange, subject to the agreement of the Issuer and the Agents.

The Issuer has granted to the Agents an option, (the "Greenshoe Option") expiring 60 days after the Offering Day, to distribute up to an additional 15% of the number of Units offered hereunder at the Offering Price to cover over-allotments, if any. The number of Units subject to the Greenshoe Option will be determined immediately upon the completion of the Offering. Alternatively, the Agents are entitled to cover such over-allotment by making purchases of the Issuer's shares and Series "B" Warrants in the open market.

The Agents reserve the right to offer selling group participation in the normal course of the brokerage business to selling groups of other licenced dealers, brokers and investment dealers who may or may not be offered part of the commissions derived from the Offering.

The obligations of the Agents under the Agency Agreement may be terminated prior to opening of the market on the Offering Day at their discretion on the basis of their assessment of the state of the financial markets and may also be terminated upon the occurrence of certain stated events.

The Issuer has agreed to notify the Agents of any further public equity financing that it may require or propose to obtain during the twelve month period following the Effective Date and the



resource properties, it will do so only with the prior approval of the Exchange where such approval is required.

### 3. MATERIAL NATURAL RESOURCE PROPERTIES

#### Summary of Material Mining Properties

Group I Properties for which regulatory approval has been obtained under this Statement of Material Facts.

Group II Presently held properties which are currently producing or being explored, or upon which exploration is planned within the next year.

Group III Other presently held properties upon which the Issuer's acquisition and exploration costs to date exceed \$100,000.

| Group | Property Name                             | Issuer's Acquisition and Exploration Costs to Date (in \$) | Shares Issued to Date | Planned Expenditures from Funds Available upon Completion of the Offering |
|-------|---|--|-----------------------|---|
| I.    | None                                      | None   | None                  | None  |
| II.   | KAN Property, British Columbia            | Acquisition: \$53,850<br>Exploration: Nil                  | 25,000                | Nil   |
|       | Trophy Gold Project, British Columbia     | Acquisition: \$17,500<br>Exploration: \$283,603            | 100,000               | \$1,003,363   |
| III.  | RAN Property, Grew Creek, Yukon Territory | Acquisition: \$5,000<br>Exploration: \$151,220             | 25,000                | Nil   |

GROUP I: Properties for which regulatory approval has been obtained under this Statement of Material Facts.

None

GROUP II: Presently held properties which are currently producing or being explored, or upon which exploration is planned within the next year.

KAN PROPERTY, BRITISH COLUMBIA

By an agreement dated August 16, 1989 (the "Option Agreement") between the Issuer and Trade Winds Resources Ltd. ("Trade Winds") of Suite 800, 675 West Hastings Street, Vancouver, B.C., V6B 1N2, the Issuer was granted a sub-option to acquire a 50% interest in and to Trade Winds' interest in an option to purchase 6 mineral claims known as the KAN 1 - 6 mineral claims, record numbers 7037 - 42 inclusive, Skeena Mining Division, British Columbia (the "KAN Property"). By an agreement dated January 18, 1989, as amended July 31, 1989, August 4, 1989 and October 20, 1989, between Ferdinand Schomig and Universal Pre-Vent Inc. (the "Schomig Agreement"), which was assigned to Trade Winds, Trade Winds acquired an option to purchase an one hundred percent (100%) undivided interest in and to the KAN Property, subject only to a two percent (2%) net smelter returns royalty reserved to Ferdinand Schomig. Subsequent to entering into the Option Agreement, a complaint under Section 35 of the Mineral Tenure Act (British Columbia) was filed by a third party against the KAN Property, alleging those claims were improperly located. If the complaint is successful, the KAN Property mineral claims will be cancelled.

In consideration of the grant of the sub-option to the Issuer of the right to earn a fifty percent (50%) interest, the Issuer has reimbursed Trade Winds for its costs of Five Thousand Dollars (\$5,000), the Issuer has further paid Twenty Thousand Dollars (\$20,000) to Universal Pre-Vent Inc., and has paid Five Thousand Dollars (\$5,000) and has issued twenty-five thousand (25,000) shares of the Issuer to Ferdinand Schomig. Trade Winds has issued twenty-five thousand (25,000) shares of Trade Winds to Ferdinand Schomig pursuant to the Schomig Agreement. The Issuer has agreed to assume the following underlying property payments to Ferdinand Schomig pursuant to the Schomig Agreement, and the Issuer and Trade Winds have each agreed to issue to Ferdinand Schomig the following shares, during the currency of the Option Agreement:

- (a) \$12,500 and 25,000 shares from each of the Issuer and Trade Winds upon completion of the first phase of exploration work;
- (b) a further \$12,500 and a further 25,000 shares from each of the Issuer and Trade Winds upon completion of the second phase of exploration work; and
- (c) a further \$15,000 and a further 25,000 shares from each of the Issuer and Trade Winds upon completion of the third phase of exploration work.

The issuance of shares and the payment of cash as referred to above on completion of each phase of exploration work is subject to the filing and acceptance by the Exchange of satisfactory

engineering reports recommending that further work be conducted on the KAN Property.

The Issuer has agreed to incur Two Hundred Fifty Thousand Dollars (\$250,000) in exploration and development work on the KAN Property on or before October 31, 1990 in order to keep the Option Agreement in good standing. The Issuer does not intend to conduct exploration work on the KAN Property while the title to the mineral claims is in dispute.

If and when the Issuer earns its fifty percent (50%) interest in the KAN Property, the Issuer and Trade Winds shall associate on a joint venture basis for further exploration and development of the Property. If either party elects not to contribute or fails to contribute its share of costs at the joint venture stage, such party's interest shall be reduced in accordance with a formula based upon the total exploration costs of all parties. If any party's interest is reduced below ten percent (10%), such party's interest shall automatically convert to a ten percent (10%) interest in net profits.

The Issuer has contracted with Prime Explorations Ltd. to act as Operator for conducting the exploration program on the KAN Property, for a management fee equal to fifteen percent (15%) of exploration costs.

The KAN Property is subject to a technical report prepared by Orequest Consultants Ltd. dated September 15, 1989 (the "KAN Report"). The KAN Report states that the Property is located 80 kilometers north-northwest of Stewart, British Columbia and access to the property is by helicopter by the Bronson Air Strip or Bell II Staging Area on the Stewart-Cassiar Highway, about 20 kilometers to the east. Inclement weather conditions and reliance on helicopter transport make this a high cost area to explore for minerals. The KAN Report states that currently, activity in this region is most intense around the Eskay Creek discovery of Calpine Resources Ltd. and Consolidated Stikine Resources Ltd., located 5 kilometers to the southwest.

The KAN Report states that there is no record of any work having been conducted on the KAN Property, however regional geochemical sampling by the government in 1987 has revealed anomalous values in zinc, nickel, mercury, barium, molybdenum, and antimony from streams draining in this area. These are all considered good geochemical trace elements for the Eskay Creek style of mineralization. The KAN Report recommends a Phase I exploration program consisting of prospecting, reconnaissance mapping and geochemical sampling at an estimated cost of Twenty Thousand Dollars (\$20,000). Depending on the results of Phase I a Phase II program is recommended consisting of an air-borne geophysical survey and follow-up geological and geochemical work, at an estimated cost of Fifty Thousand Dollars (\$50,000). If the results of the first two phases are encouraging, the KAN Report recommends the implementation of a Phase III field program

consisting of identifying and locating the sources of any airborne anomalies, using exploration tools such as prospecting, sampling and mapping as well as a limited diamond drilling program to test the targets generated by the first two phases. The estimated cost of the Phase III work is One Hundred Thousand Dollars (\$100,000).

THERE IS NO UNDERGROUND OR SURFACE PLANT OR EQUIPMENT ON THE KAN PROPERTY, NOR ANY KNOWN BODY OF COMMERCIAL ORE AND THE PROPOSED PROGRAM IS AN EXPLORATORY SEARCH FOR ORE.

TROPHY GOLD PROJECT, BRITISH COLUMBIA

By an Agreement dated January 26, 1989, as amended February 28, 1989 and March 20, 1990, between the Issuer and Continental Gold Corp. ("Continental") of Suite 1020, 800 West Pender Street, Vancouver, British Columbia, V6C 2V6, the Issuer was granted the exclusive right to acquire up to a fifty-five percent (55%) undivided interest in and to 47 mineral claims located in the Galore Creek Area of British Columbia (the "Trophy Gold Project") more particularly described as follows:

| <u>Claim Name</u>      | <u>Record Numbers</u> |
|------------------------|-----------------------|
| Trophy 1-4 inclusive   | 4067-70               |
| Glacier 1-8 inclusive  | 4121-28               |
| Glacier 9-12 inclusive | 4475-78               |
| Scotch 1-10 inclusive  | 4136-45               |
| Scotch 11              | 4483                  |
| Scotch 12              | 4484                  |
| Catto 1                | 4131                  |
| Catto 2                | 4132                  |
| Bear 1                 | 4129                  |
| Bear 2                 | 4130                  |
| Saddle 1-13 inclusive  | 4430-42               |
| Saddle 14              | 4776                  |
| Saddle 15              | 4777                  |

The Issuer can earn a twenty-five percent (25%) undivided interest in and to the Trophy Gold Project, by the issuance of 150,000 common shares to Continental, and the Issuer incurring a total of Two Million Five Hundred Thousand Dollars (\$2,500,000) in exploration expenditures on the property. The first 50,000 shares have been issued to Continental, and the Issuer must deliver a further 50,000 shares (which have been delivered) and carry out Five Hundred Thousand Dollars (\$500,000) worth of expenditures on or before April 30, 1990, a further 50,000 shares and One Million Dollars (\$1,000,000) worth of expenditures on or before March 23, 1991, and a further One Million Dollars (\$1,000,000) in expenditures on or before March 23, 1992.

The Issuer can also earn an additional thirty percent (30%) undivided interest in the Trophy Gold Project, for an aggregate fifty-five percent (55%) interest, by issuing a further 50,000

shares on or before March 23, 1992, and incurring a further Three Million Dollars (\$3,000,000) in expenditures (for an aggregate sum of Five Million Five Hundred Thousand Dollars (\$5,500,000) in exploration and development work) as follows: One Million Dollars (\$1,000,000) on or before March 23, 1993, and a further Two Million Dollars (\$2,000,000) on or before March 23, 1994. Upon the Issuer earning its largest interest in the Trophy Gold Project, the parties shall carry out further exploration and development of the property on a joint venture basis. The Issuer and Continental deal with each other on an arms length basis.

At the joint venture state, in the event that a party elects or fails to pay its required share of future expenditures, the interest of the non-contributing party shall be diluted in accordance with a formula based upon the total exploration and development expenditures of all parties. If the Issuer has earned a fifty-five percent (55%) interest, in the event that either party's interest is reduced to less than fifteen percent (15%) under the terms of the joint venture agreement, such party shall relinquish and transfer its interest in the Trophy Gold Project to the other party, and shall receive as consideration therefor a royalty equal to fifteen percent (15%) of net profits. If the Issuer has only earned a twenty-five percent (25%) interest in the Trophy Gold Project as its largest interest, and the Issuer's interest is reduced to less than five percent (5%) under the terms of the Joint Venture Agreement, the Issuer shall relinquish and transfer its interest in the Trophy Gold Project to Continental, and shall receive as consideration therefor a royalty equal to five percent (5%) of net profits.

The Issuer has appointed Prime Explorations Ltd. of 10th Floor, 808 West Hastings Street, Vancouver, British Columbia to manage any exploration work carried out on the Trophy Gold Project, in consideration of a management fee equal to 15% of total exploration costs. Prime Explorations Ltd. is a wholly owned subsidiary of Prime Capital Corporation. Prime Capital Corporation in turn is the wholly owned subsidiary of Prime Resources Group Inc. (formerly Prime Resources Corporation), a reporting company whose shares are listed and posted for trading on the Exchange.

The Trophy Gold Project is the subject of a technical report dated March 12, 1990 by David A. Caulfield, F.G.A.C. of Equity Engineering Ltd. (the "Equity Report"). The Equity Report details the results of the 1989 and 1988 exploration programs conducted on the Trophy Gold Project by the Issuer and Continental Gold Corporation, and recommends Phase IIa and IIb exploration programs. The 1989 exploration program consisted of additional geological mapping and prospecting, in conjunction with stream sediment and soil geochemical sampling of the more significant zones of mineralization, discovered during the 1988 reconnaissance exploration program. An airborne geophysical survey was started on September 24, 1989, but was not completed before the base camp was closed due to inclement weather

conditions. This survey will be completed in 1990 and reported on separately.

The Equity Report states that although concentrated exploration initiatives have been completed on specific areas (ie. the Ptarmigan Zone) on the Trophy Gold Project, many areas on the property have received very little detailed exploration work. To date, a large number of auriferous mineral occurrences have been discovered on the property, although most of these occurrences are very narrow and are not continuous along strike. However, the Equity Report states several areas have demonstrated potential for hosting significant gold or silver bearing mineralization, including the Ptarmigan Zone, the area north of Camp Creek, Occurrence 12 and the multiple showings on the eastern half of map Sheet 3 (Figure 7E of the Equity Report).

After completion of the airborne survey started in the fall of 1989, the Equity Report recommends a Phase IIa consisting of further geological mapping, prospecting, geochemical and geophysical surveys, followed by trenching of promising targets and drilling of the Ptarmigan Zone. The Equity Report recommends that a Phase IIb exploration program be carried out (if warranted by the results of Phase IIa), consisting of up to 1,750 meters of diamond drilling on the Ptarmigan Zone, and testing of targets developed during Phase IIa of the program. The Equity Report estimates the Phase IIa costs to be \$500,238, and the Phase IIb costs to be a further \$503,125. The reader is referred to the entire text of the Equity Report which is included in and forms a part of this Statement of Material Facts.

THERE IS NO UNDERGROUND OR SURFACE PLANT OR EQUIPMENT ON THE TROPHY GOLD PROJECT, NOR ANY KNOWN BODY OF COMMERCIAL ORE AND THE PROPOSED PROGRAM IS AN EXPLORATORY SEARCH FOR ORE.

**GROUP III:**        Other presently held properties upon which the Issuer's acquisition and exploration costs to date exceed \$100,000:

**RAN PROPERTY, GREW CREEK, YUKON TERRITORY**

By an Agreement dated January 27, 1988, as amended, between Prime Capital Corporation ("Prime Capital"), of 11th Floor, 808 West Hastings Street, Vancouver, British Columbia, as the vendor, and Golden Ring Resources Ltd., formerly Norman Resources Ltd. ("Golden Ring") of 11th Floor, 808 West Hastings Street, Vancouver, British Columbia and the Issuer, both as the purchasers, the Issuer and Golden Ring acquired, each as to an undivided 50% interest an exclusive option (the "Option") to purchase a 100% undivided interest in and to the 190 unpatented mining claims, situated in the Yukon Territory, Canada (the "RAN Property"), more particularly described as follows:



1989 SUMMARY REPORT  
ON THE  
TROPHY GOLD PROJECT

Located in the Galore Creek Area  
Liard Mining Division  
NTS 104G/3E, 3W  
57° 10' North Latitude  
131° 15' West Longitude

-prepared for-  
GIGI RESOURCES LTD.

-prepared by-  
David A. Caulfield, F.G.A.C.

March, 1990

4. Capital stock

a. Changes in capital stock during the period were as follows:

|  | <u>Number of<br/>shares</u> | <u>Amount</u>       |
|--|-----------------------------|---------------------|
| Issued at beginning of year                              | 3,800,392                   | \$ 1,104,815        |
| Shares issued for cash on exercise<br>of stock options   | 84,600                      | 30,380              |
| Shares issued for resource property                      | 25,000                      | 11,250              |
| Shares issued for cash pursuant to<br>a public financing | <u>1,700,000</u>            | <u>2,107,150</u>    |
|  | <u>5,609,992</u>            | <u>\$ 3,253,595</u> |

b. At January 31, 1990 outstanding directors' and employees' stock options were as follows:

| <u>Number of shares</u> | <u>Exercise price</u> | <u>Expiry date</u> |
|-------------------------|-----------------------|--------------------|
| 13,800                  | \$0.30                | May 05, 1993       |
| 280,000                 | \$0.40                | August 15, 1994    |

c. At January 31, 1990 outstanding warrants were as follows:

| <u>Number of warrants</u> | <u>Exercise price</u> | <u>Expiry date</u> |
|---------------------------|-----------------------|--------------------|
| 3,400,000 "A" warrants    | 2:1 @ \$1.34          | September 05, 1990 |
| 600,000 Agents warrants   | 1 @ \$1.34            | September 05, 1990 |

5. Related party transactions

a. As at January 31, 1990, accounts payable include \$3,267 (1989 - \$42,746) due to companies related by way of directors in common.

b. During the period ended January 31, 1990, the Company has transactions with companies related by way of directors in common as follows:

- (i) incurred administration and accounting fees of \$45,750 (1989 - \$47,250);
- (ii) incurred wages and benefits of \$4,000 (1989 - Nil);
- (iii) incurred exploration management fees of \$31,342 (1989 - \$25,356); and
- (iv) incurred legal fees of \$30,383 (\$9,757) with a law firm in which a director is a partner.

## 1989 SUMMARY REPORT ON THE TROPHY GOLD PROJECT

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## 1.0 INTRODUCTION

The Trophy Gold property, consisting of 755 units, was staked in 1987 and 1988 to cover favourable lithology and known mineral occurrences in the Galore Creek area, approximately 160 kilometers northwest of Stewart in northwestern British Columbia (Figure 1). Continental Gold Corp. carried out extensive exploration on the Trophy property in 1988, including 2,834 meters of diamond drilling on three showings. The geological similarity to the Iskut River, Sulphurets and Stewart mining camps to the south and the discovery in recent years of several major precious metals occurrences elsewhere in the Galore Creek district have sparked renewed exploration interest throughout the area.

Reconnaissance exploration, consisting of geological mapping, prospecting and geochemical sampling, was carried out over the property during August, September and October of 1989. Equity Engineering Ltd. conducted this program for Gigi Resources Ltd. and has been retained to report on the results of the fieldwork and prepare recommendations for further exploration.

## 2.0 LIST OF CLAIMS

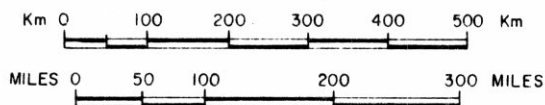
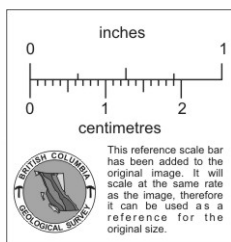
The Trophy Gold property comprises 755 units in 47 contiguous claims within the Liard Mining Division (Figure 2), as outlined in Table 2.0.1. Records of the British Columbia Ministry of Energy, Mines and Petroleum Resources indicate that these claims are owned by Continental Gold Corp. Separate documents indicate that they are under option to Gigi Resources Ltd.

TABLE 2.0.1

### CLAIM DATA

| Claim Name | Record Number | No. of Units | Record Date   | Expiry Year |
|------------|---------------|--------------|---------------|-------------|
| Trophy 1   | 4067          | 20           | May 5, 1987   | 1998        |
| Trophy 2   | 4068          | 20           | May 5, 1987   | 1998        |
| Trophy 3   | 4069          | 20           | May 5, 1987   | 1998        |
| Trophy 4   | 4070          | 20           | May 5, 1987   | 1998        |
| Glacier 1  | 4121          | 20           | July 24, 1987 | 1997        |
| Glacier 2  | 4122          | 20           | July 24, 1987 | 1996        |
| Glacier 3  | 4123          | 20           | July 24, 1987 | 1996        |
| Glacier 4  | 4124          | 20           | July 24, 1987 | 1996        |
| Glacier 5  | 4125          | 20           | July 24, 1987 | 1997        |
| Glacier 6  | 4126          | 20           | July 24, 1987 | 1997        |
| Glacier 7  | 4127          | 15           | July 24, 1987 | 1996        |
| Glacier 8  | 4128          | 20           | July 24, 1987 | 1998        |
| Glacier 9  | 4475          | 10           | Feb. 17, 1988 | 1994        |
| Glacier 10 | 4476          | 10           | Feb. 17, 1988 | 1995        |

# PROPERTY LOCATION



|                                     |          |                   |        |
|-------------------------------------|----------|-------------------|--------|
| GIGI RESOURCES LTD.                 |          |                   |        |
| TROPHY GOLD PROJECT<br>LOCATION MAP |          |                   |        |
| BRITISH COLUMBIA                    |          |                   |        |
| EQUITY ENGINEERING LTD.             |          |                   |        |
| DRAWN                               | J.W.     | MINING DIV. LIARD | FIGURE |
| NTS                                 | 104 G/3  | SCALE: AS SHOWN   | 1      |
| DATE                                | DEC 1989 | REVISED:          |        |



TABLE 2.0.1 (continued)

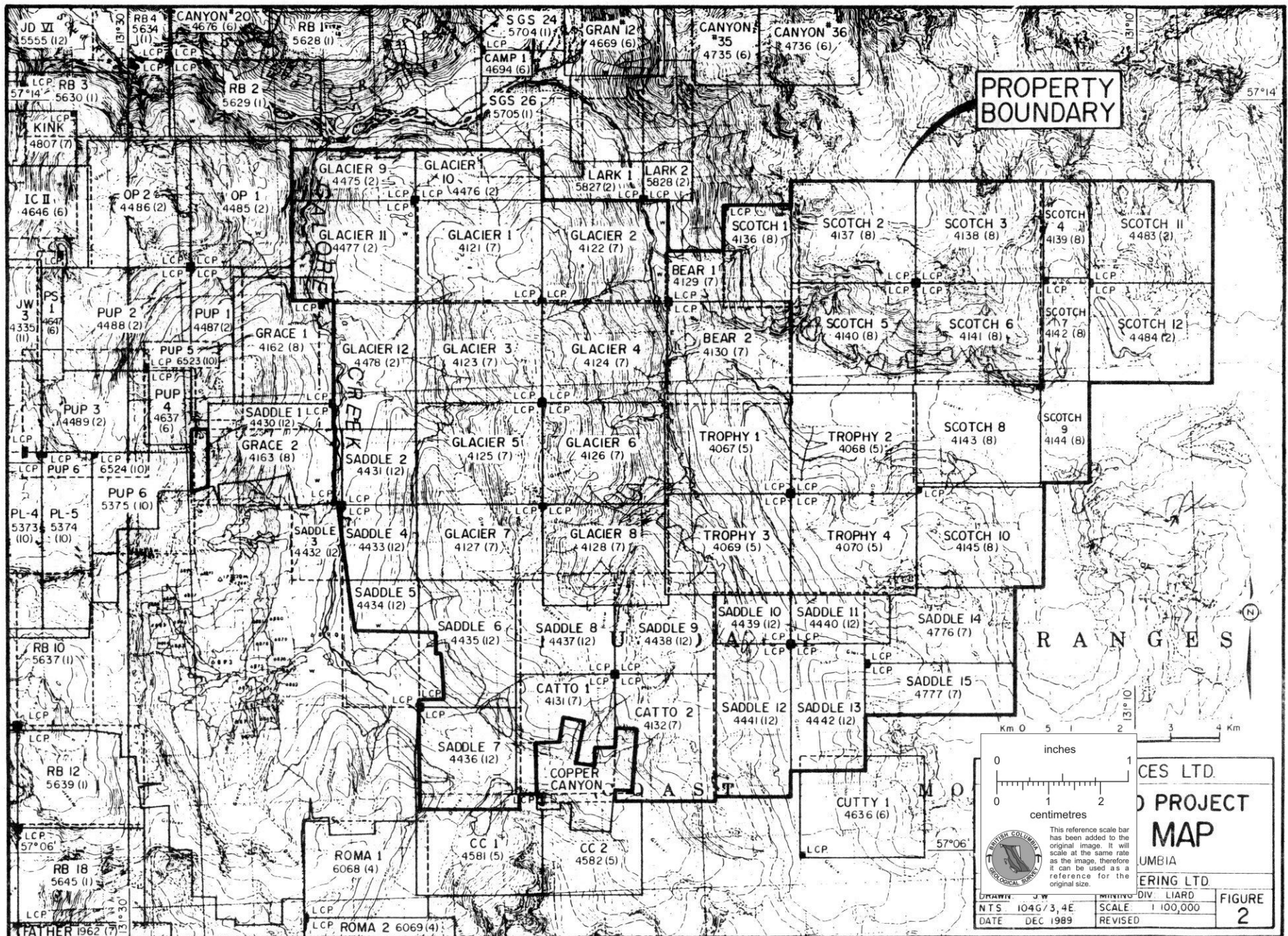
## CLAIM DATA

| Claim Name | Record Number | No. of Units | Record Date   | Expiry Year |
|------------|---------------|--------------|---------------|-------------|
| Glacier 11 | 4477          | 20           | Feb. 17, 1988 | 1995        |
| Glacier 12 | 4478          | 20           | Feb. 17, 1988 | 1994        |
| Scotch 1   | 4136          | 8            | Aug. 10, 1987 | 1998        |
| Scotch 2   | 4137          | 20           | Aug. 10, 1987 | 1998        |
| Scotch 3   | 4138          | 20           | Aug. 10, 1987 | 1992        |
| Scotch 4   | 4139          | 8            | Aug. 10, 1987 | 1993        |
| Scotch 5   | 4140          | 20           | Aug. 10, 1987 | 1998        |
| Scotch 6   | 4141          | 20           | Aug. 10, 1987 | 1992        |
| Scotch 7   | 4142          | 8            | Aug. 10, 1987 | 1993        |
| Scotch 8   | 4143          | 20           | Aug. 10, 1987 | 1998        |
| Scotch 9   | 4144          | 8            | Aug. 10, 1987 | 1998        |
| Scotch 10  | 4145          | 20           | Aug. 10, 1987 | 1998        |
| Scotch 11  | 4483          | 20           | Feb. 17, 1988 | 1994        |
| Scotch 12  | 4484          | 20           | Feb. 17, 1988 | 1994        |
| Catto 1    | 4131          | 20           | July 24, 1987 | 1993        |
| Catto 2    | 4132          | 20           | July 24, 1987 | 1998        |
| Bear 1     | 4129          | 6            | July 24, 1987 | 1995        |
| Bear 2     | 4130          | 20           | July 24, 1987 | 1996        |
| Saddle 1   | 4430          | 18           | Dec. 9, 1987  | 1993*       |
| Saddle 2   | 4431          | 9            | Dec. 9, 1987  | 1997*       |
| Saddle 3   | 4432          | 6            | Dec. 9, 1987  | 1993*       |
| Saddle 4   | 4433          | 9            | Dec. 9, 1987  | 1994*       |
| Saddle 5   | 4434          | 15           | Dec. 9, 1987  | 1993*       |
| Saddle 6   | 4435          | 20           | Dec. 9, 1987  | 1993*       |
| Saddle 7   | 4436          | 16           | Dec. 9, 1987  | 1993*       |
| Saddle 8   | 4437          | 16           | Dec. 9, 1987  | 1992        |
| Saddle 9   | 4438          | 16           | Dec. 9, 1987  | 1998        |
| Saddle 10  | 4439          | 6            | Dec. 9, 1987  | 1998        |
| Saddle 11  | 4440          | 8            | Dec. 9, 1987  | 1997        |
| Saddle 12  | 4441          | 18           | Dec. 9, 1987  | 1998        |
| Saddle 13  | 4442          | 15           | Dec. 9, 1987  | 1996        |
| Saddle 14  | 4776          | 18           | July 6, 1988  | 1998        |
| Saddle 15  | 4777          | 12           | July 6, 1988  | 1997        |

755

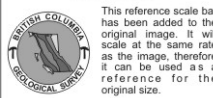
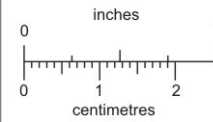
\* Subject to approval of assessment work filed in December 1989

The Catto 1 and 2 claims almost completely surround the old 2-post claims which cover the Copper Canyon deposit (Figure 2). The Saddle 1, 3, 4, 5 and 6 claims overlap the northern and eastern boundaries of the Galore Creek 2-post claim group. In addition, the Saddle 1 claim almost entirely overlies the previously staked Grace 2 claim. These overlaps reduce the actual size of the Trophy property to approximately 720 units (18,000 hectares). The positions of the legal corner posts for the Glacier 9-12 and Scotch 11-12 claims have been verified by the author.



PROPERTY  
BOUNDARY

RANGES



NTS 104G/3, 4E  
DATE DEC 1989

GES LTD.  
PROJECT  
MAP  
UMBIA  
ERING LTD  
FIGURE  
2

### 3.0 LOCATION, ACCESS AND PHYSIOGRAPHY

The Trophy Gold property is located within the Coast Range Mountains approximately 170 kilometers northwest of Stewart and 80 kilometers southeast of Telegraph Creek in northwestern British Columbia (Figure 1). The claims lie within the Liard Mining Division, centered at 57° 10' north latitude and 131° 15' west longitude.

Access to the Trophy Gold property in 1989 was provided by daily helicopter setouts from the Galore Creek camp and airstrip. The entire property lies within twenty kilometers flight distance from the airstrip. During the field season, fixed-wing aircraft fly charters from Smithers to the Galore Creek camp and airstrip direct or via the Bronson Creek airstrip. The Galore Creek airstrip is 425 meters in length, limiting the size of aircraft that can be safely landed there. During the 1989 season, the camp was serviced by a Turbo Otter, out of Smithers. The Scud River airstrip, located 29 kilometers to the northwest of the Galore Creek camp at the confluence of the Scud and Stikine Rivers, is suitable for DC-3 aircraft.

On the Alaskan side of the border, Wrangell lies approximately 100 kilometers to the southwest, and provides a full range of services and supplies, including a major commercial airport. The Stikine River has been navigated by 90-tonne barges upriver as far as Telegraph Creek, allowing economical transportation of heavy machinery and fuel to within sixteen kilometers of the property. During the 1960's, Kennco constructed a cat road from their Galore Creek copper-gold deposit along the east side of Galore Creek and down the Scud River to the Scud River airstrip. This cat road extends through the Saddle 2, 4, 5 and Glacier 9, 11 and 12 claims on the western side of the Trophy Gold property. It has not been maintained and would require some reconstruction before becoming usable.

The claims cover portions of the Scud River drainage at the eastern margin of the Coast Mountain Range. Topography throughout is rugged, typical of mountainous and glaciated terrain, with elevations ranging from 250 meters on the floodplain of the Scud River to over 2250 meters on an unnamed peak in the southeast corner of the Trophy 4 claim. Valley glaciers are common throughout the area, with the largest ones descending below 500 meters in elevation.

Lower slopes are covered by a mature forest of hemlock, spruce and balsam fir with a dense undergrowth of devil's club, alder and huckleberry. Above treeline, which lies at approximately 1000 meters, the creek beds and slopes are covered by dense slide alder and willow growth. Steeper slopes are covered in short heather and other alpine vegetation. Northerly-facing slopes are covered with permanent snowfields at higher elevations.



The property lies in the wet belt of the Coast Range Mountains, with annual precipitation between 190 and 380 centimeters. Except during July, August and September, precipitation in the mountains falls mainly as snow, with accumulations of snow reaching three meters or more. Both summer and winter temperatures are moderate, ranging from  $-5^{\circ}\text{C}$  in the winter to  $20^{\circ}\text{C}$  in the summer months (Kerr, 1948b).

#### 4.0 PROPERTY MINING HISTORY

##### 4.1 Previous Work

The Galore Creek district (Figure 3) was extensively explored for its copper potential throughout the 1960's, following the discovery in 1955 of the Galore Creek copper-gold porphyry deposit. This deposit, whose Central Zone hosts reserves of 125 million tonnes grading 1.06% copper and 400 ppb gold (Allen et al, 1976), is located approximately two kilometers west of the Saddle 5 claim boundary. Several major mining companies conducted regional mapping and silt sampling programs over the entire Galore Creek area, and the Copper Canyon copper porphyry deposit was discovered in 1957. Copper Canyon, estimated by Grant (1964) at 28 million tonnes grading 0.64% copper, lies eight kilometers east of the Galore Creek Central Zone on claims adjoined on three sides by the Trophy Gold property. Unfortunately, most of the regional data collected at that time was not filed for assessment credit and is not available.

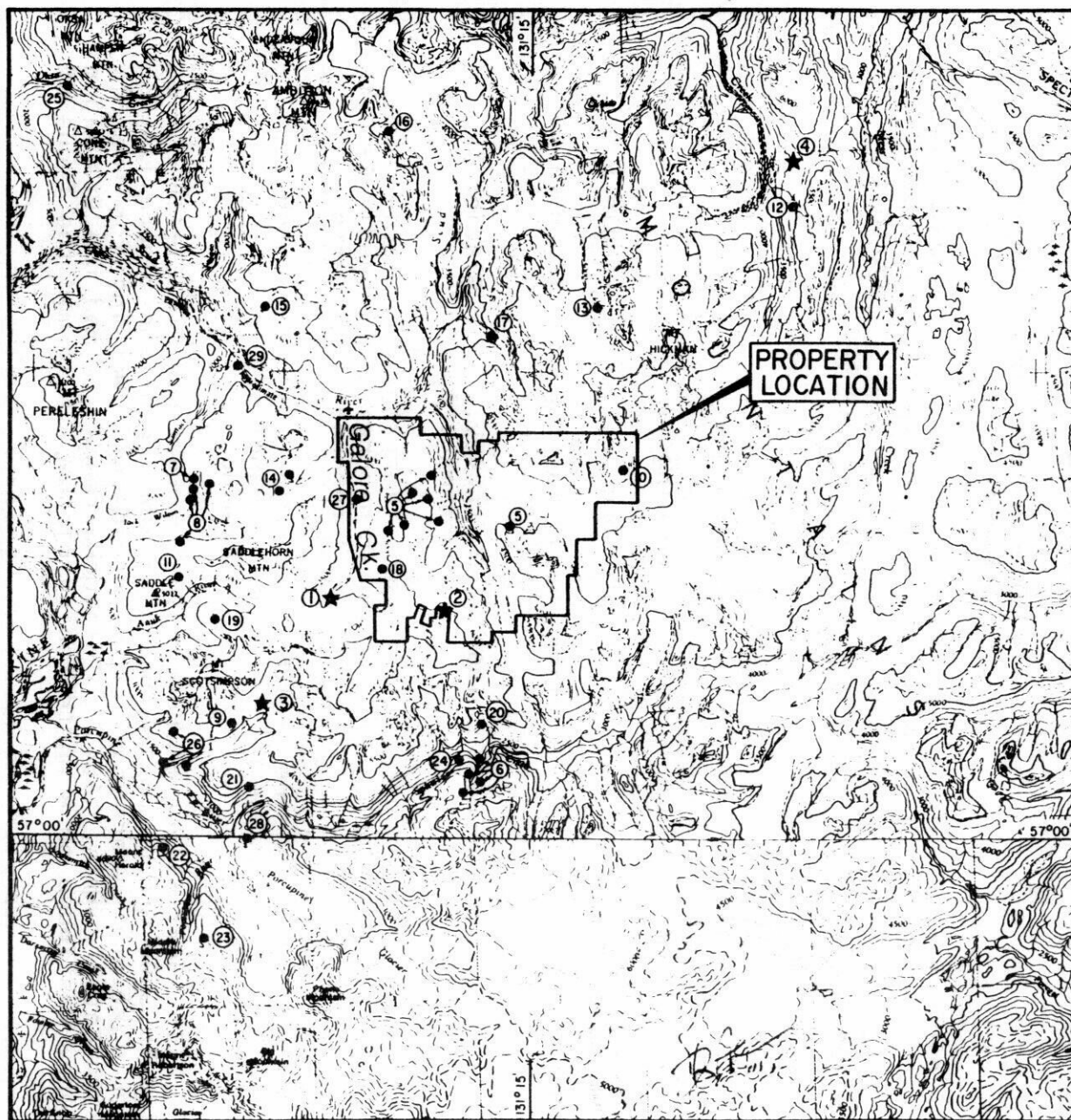
In the mid-1960's, a number of exploration programs were initiated on ground currently covered by the Trophy Gold project. The majority of this work was concentrated along the east side of Galore Creek in the search for copper mineralization similar to the deposit being developed by Stikine Copper at the headwaters of Galore Creek. The greatest amount of exploration was carried out by the Scud Venture, a syndicate controlled by Silver Standard Mines Limited, on the Stikine North, Stikine East and South Scud properties. Other companies exploring ground now covered by the Trophy Gold project include Conwest Exploration Company Limited, Phelps Dodge Corporation of Canada Limited and Copper Soo Mining Company. Their work programs were mostly limited to geological mapping, prospecting, ground geophysics and silt geochemistry with limited drilling confined to the Stikine East and North properties. The work programs carried out prior to Continental Gold Corp.'s involvement are summarized in Table 4.1.1.

TABLE 4.1.1

## PREVIOUS WORK PROGRAMS

| <u>Claim Group</u> | <u>Company</u>  | <u>Year</u> | <u>Work Program</u>                        | <u>Current Claims</u>                        |
|--------------------|-----------------|-------------|--|--|
| Stikine North      | Silver Standard | 1964        | Geol. mapping, silt geochem.               | Saddle 2<br>Glacier 12                       |
|                    |                 | 1964        | Ground mag. survey                         | "  |
|                    |                 | 1965        | I.P. survey<br>Diamond drilling?           | "  |
|                    |                 | 1966        | Trenching                                  |  |
|                    |                 | 1974        | Diamond drilling<br>2 holes,               | Saddle 2                                     |
| Stikine East       | "               | 1964        | Geol. mapping, silt geochem.               | Saddle 4-8<br>Glacier 7<br>Catto 1           |
|                    |                 | 1964        | Ground mag. survey                         | "  |
|                    |                 | 1965        | I.P. survey<br>Diamond drilling?           | Saddle 4,5                                   |
|                    |                 | 1966        | Trenching?                                 |  |
|                    |                 | 1974        | Diamond drilling                           | Saddle 5                                     |
| South Scud         | "               | 1964        | Geol. mapping, silt geochem.               | Trophy 1-4                                   |
| CW                 | Conwest         | 1965        | I.P. survey, ground mag.                   | Glacier 12                                   |
| Lot                | Copper Soo      | 1964        | Geol. mapping, silt geochem, soil geochem. | Glacier 4,6,8<br>Saddle 8-10,12<br>Catto 1,2 |
| Jay, C             | Phelps Dodge    | 1965        | Surveying, geol. mapping, trenching        | Scotch 11,12                                 |

In 1964, Silver Standard Mines staked the BIK 87-116 claims (South Scud Group) on the basis of weak lead-zinc mineralization found several years earlier by prospectors working for the BIK Syndicate (Lammle, 1964). This occurrence, termed the Ptarmigan Zone, was found on a north facing cirque; it formed the focus of



# NAME OF OCCURRENCE MINERAL RESERVES AND/OR ELEMENTS

|                  |                        |                                  |
|------------------|------------------------|----------------------------------|
| 1. Galore Creek  | 125,000,000 tonnes     | 0.40 gm/tonne Au                 |
| 2. Copper Canyon | 28,000,000 tonnes      | 1.06 % Cu                        |
| 3. Paydirt       | 185,000 tonnes         | 0.64% Cu                         |
| 4. Schaft Creek  | 330,000,000 tonnes     | 4.11 gm/tonne Au                 |
|                  |                        | 0.32 gm/tonne Au                 |
|                  |                        | 1.50 gm/tonne Ag                 |
|                  |                        | 0.40% Cu 0.036% MoS <sub>2</sub> |
| 5. Trophy        | Au, Cu, Pb, Zn, Ag     |                                  |
| 6. Trek          | Au, Cu, Pb, Zn, Ag, Mo |                                  |
| 7. Icy           | Au, Cu, Ag             |                                  |
| 8. Jack Wilson   | Au, Cu                 |                                  |
| 9. Ann/Su        | Cu                     |                                  |
| 10. Jay          | Cu, Au, Ag             |                                  |
| 11. Devil's Club | Cu, Ag, Au             |                                  |
| 12. Hicks        | Cu, Mo                 |                                  |
| 13. Alberta      | Cu                     |                                  |
| 14. Pup          | Cu, Au, Pb, Zn         |                                  |
| 15. JD           | Cu, Au, Pb, Zn         |                                  |
| 16. North Scud   | Cu                     |                                  |
| 17. Middle Scud  | Cu, Ag                 |                                  |
| 18. Stikine East | Cu                     |                                  |
| 19. Joan, MB     | Cu, Au, Ag             |                                  |
| 20. Kim          | Cu, Au, Ag             |                                  |
| 21. Wiser        | Au, Ag                 |                                  |
| 22. Cuds         | Au, Ag, Pb, Cu         |                                  |
| 23. Ginny        | Au                     |                                  |
| 24. Sphal        | Cu, Au                 |                                  |
| 25. Uksa Creek   | Cu, Pb, Zn, Au, Ag     |                                  |
| 26. PL 7-11      | Au, Ag, Cu, Zn         |                                  |
| 27. Bix          | Cu                     |                                  |
| 28. Glenlivet    | Au                     |                                  |
| 29. Bell         | Au                     |                                  |

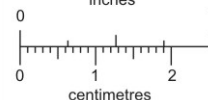
● MINERAL OCCURRENCE

★ MINERAL DEPOSIT

Km 0 5 10 15



inches



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.

GIGI RESOURCES LTD.

## TROPHY GOLD PROJECT REGIONAL MINERAL OCCURRENCE MAP

BRITISH COLUMBIA

EQUITY ENGINEERING LTD.

|                |                   |        |
|----------------|-------------------|--------|
| Drawn: J.W.    | MINING DIV: LIARD | FIGURE |
| NTS: 104B,G    | SCALE: As shown   | 3      |
| DATE: DEC 1989 | REVISED:          |        |



Continental Gold Corp.'s more recent exploration. In addition, a copper-bearing skarn, the Hummingbird Zone, was discovered approximately 500 meters west of the Ptarmigan Zone (Lammle, 1964).

Closer to Stikine Copper's discovery on the east side of Galore Creek, Silver Standard's holdings included the Stikine North and East Groups. The 1964 and 1965 programs consisted of geological mapping, silt geochemistry and ground magnetometer and induced polarization surveys. Geological mapping indicated the properties to be underlain by Upper Triassic andesitic volcanics intruded by satellite bodies of the Galore Creek syenite (Gale, 1964). Minor occurrences of copper mineralization were noted on each property; one 11.9 meter sample of mineralized syenite assayed 0.10% copper on the Stikine East claim group (Gale, 1964). Silt geochemistry showed the drainages in the area of 1000 meter by 500 meter syenite body on Stikine East to be very anomalous in copper. Large I.P. anomalies were discovered on both groups, neither of which can be adequately explained by mineralization reported by Silver Standard. Two diamond drill holes totalling 553 meters were drilled in 1965 and eight trenches were excavated in 1966 for a total length of 1036 meters on the Stikine River East and North properties, but exact locations were not reported (BCDM&PR, 1965-66). Silver Standard's interest in this area continued at least until 1974 when four diamond drill holes were reported on the Galore Creek access road (McAusland, 1974a,b). The positioning of the holes is somewhat unusual in that none of the holes were near areas of known mineralization or near the I.P. targets outlined in the 1965 surveys (Falconer, 1965a,b). The number sequence of the drill holes is incomplete suggesting that more holes were drilled in 1974 than were reported. The core for these holes were found in 1989 near one of the drill collars.

In 1965, Phelps Dodge Corporation of Canada Limited worked a group of 126 mineral claims, part of which is now covered by the Scotch 11 and 12 claims. For one month, a crew of ten men did surveying, geological mapping and trenching on magnetite and chalcopryrite mineralized shear zones, known collectively as the Jay Showing. Twelve trenches were blasted for a total length of 398 meters (BCDM&PR, 1965).

In 1987, Continental Gold Corp. staked 80 claim units over the Ptarmigan and Hummingbird showings, and an additional 675 units around them in 1988. A mapping and sampling program was conducted over the Trophy 1-4 claims in 1987 (Forster, 1987). The following year, more extensive exploration was carried out over the entire Trophy Gold property, consisting of property-wide geological mapping and sampling, detailed mapping on the Trophy 1-4 claims and 2,834 meters of diamond drilling on the Ptarmigan, Hummingbird and Eagle Zones (Heinrich et al, 1989).

#### 4.2 1989 Program

From August through October of 1989, Gigi Resources Ltd. carried out reconnaissance exploration on the Trophy Gold project, consisting of geological mapping, prospecting and geochemical sampling. Along with evaluating previously noted mineral occurrences, this program was targeted at exploring for structurally-controlled precious metal mineralization similar to that occurring elsewhere in the Galore Creek district and within a similar geological environment which stretches south through the Iskut River, Sulphurets and Stewart mining districts. This work was concentrated on the west side of the property in areas underlain by the more favourable Stuhini volcanic package.

During the course of this program, 110 stream sediment samples, 400 contour soil samples and 415 rock samples were taken. The stream sediment samples consisted of both silt and field-sieved stream sediment samples; unfortunately, the different sampling techniques were not differentiated by the field crews. Field-sieved stream sediment samples were taken from the active parts of major drainages and screened underwater to minus forty mesh, while silt samples were collected from minor drainages and back-eddies. They were analyzed geochemically for gold and 32-element ICP.

A 10,000 meter contour soil line was established on the east slope of Galore Creek to test the favourable geological environment identified by previous operators. Wherever possible, soil samples were taken from the red-brown "B" horizon, but talus fines were taken in areas of poor soil development. These samples were analyzed geochemically for gold and 10-element ICP. Due to topographical constraints, the elevation of the contour line was adjusted at different points and identified as the 800M-E, 800M-N, 800M-S, the 650M-N, and TR ROAD-N lines.

Prospecting and reconnaissance geology was carried out using existing topographic maps at a scale of 1:10,000. The 1989 silt and rock samples are plotted on these maps with gold, silver, copper, lead, zinc and arsenic results listed on each map sheet (Figures 5-12). Rock samples were analyzed geochemically for gold and 10-element ICP. Samples with initial analyses in excess of 1000 parts per billion gold, 200 parts per million silver, or 10000 parts per million copper, lead or zinc were subsequently assayed. Detailed descriptions of all rock samples collected, statistical analysis of soil geochemistry and analytical certificates are appended in the assessment report by Caulfield and Archambault (1990). The bulk of this report has been abridged from the assessment report.

An airborne geophysical survey was contracted to Aerodat Corporation by Prime Explorations Ltd. on behalf of Gigi Resources Ltd. This survey was started on September 24 but was not completed before the base camp was closed due to inclement weather

conditions. The results of this survey will be reported separately upon completion of the airborne survey and processing.

## 5.0 REGIONAL GEOLOGY

The first geological investigations of the Stikine River in northwestern British Columbia began over a century ago when Russian geologists came to Russian North America assessing the area's mineral potential (Alaskan Geographic Society, 1979, in Brown and Gunning, 1989), and was followed by the first Geological Survey of Canada foray of G.M. Dawson and R. McConnel in 1887. Several more generations of federal and provincial geologists have been sent to the Stikine, including Kerr (1948b), the crew of Operation Stikine (GSC, 1957), Panteleyev (1976), Souther (1971), Souther and Symons (1974), Monger (1977), and Anderson (1989). The British Columbia Geological Survey has recently completed regional mapping of the area at a scale of 1:50,000 by Brown and Gunning (1989a,b) and Logan et al (1989).

The Galore Creek Camp lies within the Intermontane Belt, a geological and physiographic province of the Canadian Cordillera, and flanks the Coast Plutonic Complex to the west (Figure 4). At Galore Creek, the generally northwest-trending structure of the Intermontane Belt is discordantly cut across by the northeast-trending Stikine Arch which became an important, relatively positive tectonic element in Mesozoic time when it began to influence sedimentation into the Bowser Successor Basin to the southeast and into the Whitehorse Trough to the northwest (Souther et Symons, 1974).

Stikinian stratigraphy ranges from possibly Devonian to Jurassic, and was subsequently intruded by granitoid plutons of Upper Triassic to Eocene age. The oldest strata exposed in the Galore Creek camp are Mississippian or older mafic to intermediate volcanic flows and pyroclastic rocks (Map Units 4a and 4c) with associated clastic sediments and carbonate lenses (Map Unit 4b). These are capped by up to 700 meters of Mississippian limestone with a diverse fossil fauna (Map Unit 4d). It appears from fossil evidence that all of the Pennsylvanian system is missing and may be represented by an angular unconformity and lacuna of 30 million years, though field relationships are complicated by faulting (Monger, 1977; Logan and Koyanagi, 1989). Permian limestones (Map Unit 6), also about 700 meters thick, lie upon the Mississippian limestone but are succeeded by a second lacuna amounting to about 20 million years from the Upper Permian to the upper Lower Triassic.

Middle and Upper Triassic siliciclastic and volcanic rocks (Map Unit 7) are overlain by Upper Triassic Stuhini Group siliciclastic (Map Unit 8a) and volcanic (Map Unit 8b, 8c and 8d) rocks, consisting of mafic to intermediate pyroclastic rocks and lesser flows. The Galore Creek porphyry copper deposit appears

from field evidence to mark the edifice of an eroded volcanic center with numerous sub-volcanic plutons of syenitic composition. Jurassic Bowser Basin strata onlap the Stuhini Group strata to the southeast of Iskut River but, because of erosion and non-deposition, are virtually absent from the Galore Creek area.

The plutonic rocks follow a three-fold division (Logan and Koyanagi, 1989). Middle Triassic to Late Jurassic syenitic and broadly granodioritic intrusions are partly coeval and cogenetic with the Stuhini Group volcanics and include the composite Hickman Batholith (Map Unit 9) and the syenitic porphyries of the Galore Creek Complex (Map Unit 11). Jura-Cretaceous Coast Plutonic Complex intrusions (Map Unit 12) occur on the west side of the Galore Creek Camp, along the Stikine River, with the youngest of these intrusions occupying more axial positions along the trend of the Coast Plutonic Complex flanked by older intrusions. The youngest intrusives in the Galore Creek Camp are Eocene (quartz-) monzonitic plugs (Map Unit 13), felsic and mafic sills and dykes (Map Unit 14), and biotite lamprophyre (minette) dykes (Map Unit 14).

The dominant style of deformation in the Galore Creek area consists of upright north-trending, open to tight folds and northwest-trending, southwest-verging, folding and reverse faulting in the greenschist facies of regional metamorphism. Localized contact metamorphism ranges as high as pyroxene hornfels grade; metasomatism is also noted near intrusions. Upright folding may be an early manifestation of a progressive deformation which later resulted in southwest-verging structures. Southwest-verging deformation involves the marginal phases of the Hickman Batholith and so is, at least in part, no older than Late Triassic.

Steeply dipping faults which strike north, northwest, northeast, and east have broken the area into a fault-block mosaic. North-striking faults are vertical to steeply east-dipping and parallel to the Mess Creek Fault (Souther, 1972), which was active from Early Jurassic to Recent times (Souther and Symons, 1974); northwest-striking faults are probably coeval with the north-striking faults, but locally pre-date them. East-west trending faults are vertical or steeply dipping to the north and have normal-type motion on them (i.e., north-side down), whereas northeast-striking faults are the loci of (sinistral) strike-slip motion (Brown and Gunning, 1989a).

A number of metallic deposit types have been recognized in the Galore Creek camp: porphyry copper  $\pm$  molybdenum  $\pm$  gold deposits, structurally-controlled precious metal vein/shear deposits, skarns and breccia deposits (Figure 3). Porphyry copper deposits of this area include both the alkalic Galore Creek copper-gold and calc-alkalic Schaft Creek copper-molybdenum deposits. Galore Creek, which is associated with syenitic stocks and dikes rather than a quartz-feldspar porphyry, is further contrasted from



the calc-alkaline Schaft Creek in that molybdenite is rare, magnetite is common and gold and silver are important by-products. The mineralization is clearly coeval and cogenetic with the spatially associated intrusive bodies. Other porphyry copper occurrences in the Galore Creek area include the Copper Canyon, Sue/Ann and Jack Wilson Creek deposits.

Structurally-controlled gold-silver deposits have been the focus of exploration in recent years. The vein/shear occurrences are similar throughout the Galore Creek camp in that they are mesothermal in nature, containing base metal sulphides with strong silica veining and alteration. However, it appears that the intrusive bodies associated with this mineralization fall into two classes on the basis of age and composition. These two classes are reflected in differences in the style of structures, sulphide mineralogy and associated alteration products. The intrusive types are: 1) Lower Jurassic alkaline "Galore Creek" stocks; and 2) Eocene quartz monzonite to porphyritic granodiorite intrusions. Lead isotope data from the Stewart mining camp (Alldrick et al., 1987) further supports the proposition that separate Jurassic and Tertiary mineralizing events were "brief regional-scale phenomena".

Structures associated with the Lower Jurassic syenites are typically narrow (less than 2.0 meters) quartz-chlorite veins mineralized predominately with pyrite, chalcopyrite and magnetite. Examples of these structures in the Galore Creek camp include many of the discrete zones peripheral to the Galore Creek deposit and the gold-rich veins at Jack Wilson Creek. The Tertiary mineralization comprises discrete quartz veins and larger 'shear' zones characterized by pervasive silicification, sericitization and pyritization whose total sulphide content is commonly quite low. The quartz veins contain a larger spectrum of sulphide minerals including pyrite, chalcopyrite, pyrrhotite, arsenopyrite, galena and sphalerite. Unlike the Jurassic mineralization, silver grades may be very high. The Ptarmigan showing on the Trophy property and a number of mineral showings discovered in the Porcupine River area, including the Paydirt deposit and Wiser Deluxe zone, are of this type.

Skarns represent a minor percentage of the precious metal-bearing occurrences in the Galore Creek camp. The mineralogy of these deposits could be influenced by the composition of the intrusion driving the hydrothermal fluids, in much the same way as described above for the structurally-controlled deposits. If the invading intrusives are alkalic, the skarn assemblage will be dominated by magnetite and chalcopyrite, as at the Galore Creek deposit.

The breccia-hosted mineralization discovered in the Galore Creek camp precious metal deposits appear to be unique in style and mineralization. Three occurrences have been located in the camp: (1) the zinc-silver-gold Ptarmigan zone in the South Scud





River area, (2) the copper-molybdenum-gold-silver breccia at the Trek property on Sphaler Creek and (3) the copper-bearing and magnetite breccias of the complex Galore Creek deposit. The single common denominator of each is that the zones are located along fault structures which may have localized magmatic-hydrothermal brecciation as well as providing a conduit for mineralizing fluids.

## 6.0 PROPERTY GEOLOGY

### 6.1 Lithology

The Trophy Gold property is underlain by strata and intrusions ranging in age from Mississippian or older, to Tertiary. The following is a capsule summary of the stratigraphy of the Trophy property described from the oldest to the youngest. The property geology shown on Figures 5 to 12 is a compilation of geological mapping during the 1989 program, mapping by Continental Gold Corp. (Heinrich et al, 1989) and provincial government geologists (Logan et al, 1989).

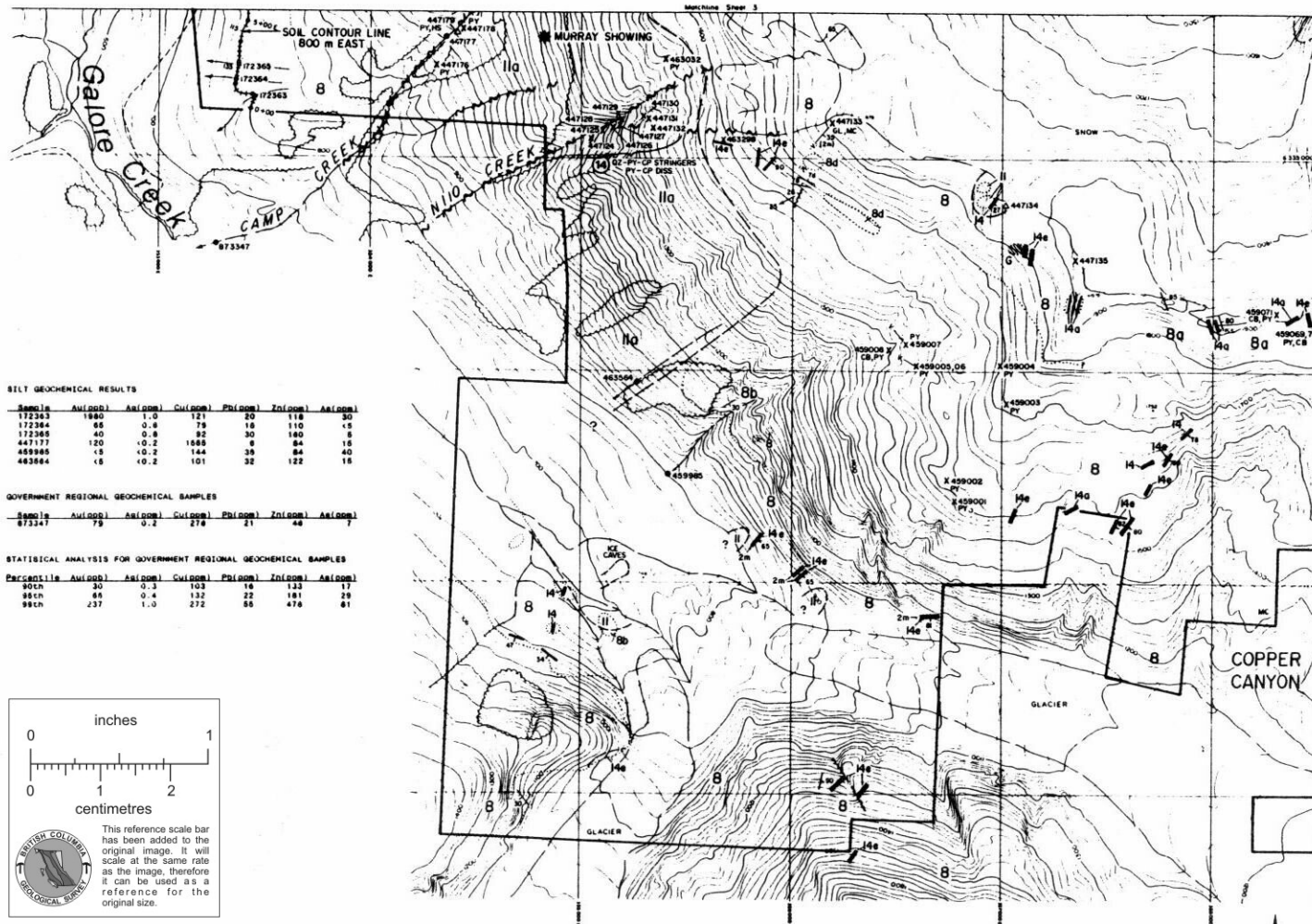
#### Unit U -- Ultramafic rocks of unknown, but probable Mississippian-or-older, age

Ultramafic rock consisting of serpentinite with numerous, one-to-three-centimeter sized, rounded fragments xenoliths exhibiting altered selvages crops out on both banks of Scotch Creek, along its north-south trending section (Figure 11). The outcrop area is approximately 200 meters wide and 700 meters long, and the whole serpentinite body appears to be fault bounded by the Stuhini volcanics (Unit 8) to the east and the rusty argillite unit (Unit 5) at the base of the Permian limestone to the west.

#### Unit 6 -- Permian Limestone

Along the South Scud River, Permian limestones have been divided into lower and upper members (Figures 6, 8, 11). The lower member (Subunit 6c) comprises 75 meters of dark grey micritic limestone with interbedded argillite and thinly bedded bioclastic limestone overlain by 350 meters of pale grey to buff coloured, thin-to-medium-bedded calcarenite interbedded with yellowish brown-weathering, structureless chert. The bioclastic component is predominantly crinoidal with lesser shelly and bryozoan fragments. This section of the limestone exhibits graded bedding typical of turbidity-current deposition.

The upper member (Subunit 6a) overlies the calcarenite. It comprises 100 meters of tan to light-grey weathering, bryozoan-rich limestone, overlain by more than 300 meters of light-grey, very thickly bedded bioclastic calcarenites with a fine-grained, light-grey, micritic matrix containing variable proportions of crinoid fragments, generally sparse bryozoan fragments and silicified



#### BILL GEOCHEMICAL RESULTS

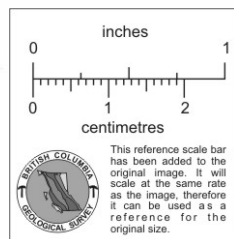
| Sample | Au(ppm) | Ag(ppm) | Cu(ppm) | Pb(ppm) | Zn(ppm) | As(ppm) |
|--------|---------|---------|---------|---------|---------|---------|
| 172363 | 1880    | 1.0     | 121     | 20      | 118     | 30      |
| 172364 | 65      | 0.8     | 79      | 16      | 110     | 15      |
| 172365 | 40      | 0.8     | 92      | 30      | 180     | 8       |
| 447177 | 120     | 0.2     | 1088    | 8       | 84      | 10      |
| 459846 | 15      | 0.2     | 144     | 39      | 84      | 40      |
| 443644 | 18      | 0.2     | 101     | 32      | 122     | 15      |

#### GOVERNMENT REGIONAL GEOCHEMICAL SAMPLES

| Sample | Au(ppm) | Ag(ppm) | Cu(ppm) | Pb(ppm) | Zn(ppm) | As(ppm) |
|--------|---------|---------|---------|---------|---------|---------|
| 873347 | 79      | 0.2     | 274     | 31      | 44      |         |

#### STATISTICAL ANALYSIS FOR GOVERNMENT REGIONAL GEOCHEMICAL SAMPLES

| Percentile | Au(ppm) | Ag(ppm) | Cu(ppm) | Pb(ppm) | Zn(ppm) | As(ppm) |
|------------|---------|---------|---------|---------|---------|---------|
| 90th       | 30      | 0.3     | 103     | 18      | 133     | 17      |
| 95th       | 45      | 0.4     | 132     | 22      | 181     | 29      |
| 99th       | 237     | 1.0     | 272     | 55      | 476     | 61      |



#### TERTIARY

##### INTRUSIVE ROCKS

Dykes and sills  
14 Undivided, probable Tertiary dykes  
(14a andesite, 14b basaltic (gabbro), 14c lamprophyre (basaltic mineral), 14d andesite, 14e felsic)

##### Plutonic

#### MIDDLE TRIASSIC - to - MIDDLE JURASSIC

Galore Creek intrusions  
11 Undivided Galore Creek intrusive rocks  
(11a syenite, 11b orthoclase porphyritic monzonite, 11c biotite-hornblende quartz monzonite - to - granodiorite)

#### MIDDLE - to - LATE TRIASSIC

Hickman Batholith  
9 Undivided intrusive rocks of Hickman Batholith

#### STRATIFIED ROCKS

##### MESOZOIC "STIKINIAN" STRATA

##### UPPER TRIASSIC

Stuhldre Group  
8 Undivided volcanic, pyroclastic and volcanoclastic rock  
(8a shale, siltstone, argillite, limestone, conglomerate; 8b argillite porphyritic basaltic andesite flows, breccia and agglomerate; 8c argillite and plagioclase porphyritic andesite; 8d bedded argillite crystal tuff, tuffaceous siltstone; 8e volcanoclastic agglomerate with subangular - to - subrounded clasts)

##### MIDDLE - to - UPPER TRIASSIC

(Un-named)  
7 Undivided post-Permian, pre-Stuhldre Group sedimentary strata, including porphyritic rocks  
(7a siliciclastic and porphyritic; 7b chert)

#### PALEOZOIC "STIKINE ASSEMBLAGE"

##### PERMIAN

(Un-named)

6 Undivided Permian strata  
(6a upper member Permian limestone - massive, light colored  
6b periplatform - to - black breccia  
6c lower member Permian limestone - thin bedded, pyritic, argillaceous and bioclastic calcarenite with argillaceous interbeds)

5 "Rusty argillite" at base of Permian section

U unknown, but probably faulted, contact  
7 Ultramafic rocks of unknown age and affinity; possibly fault slivers of oceanic basement terrane

AS Arsenopyrite  
AZ Azurite  
BX Breccia  
CP Chalcopyrite  
CB Carbonate  
DO Dolomite  
GL Galena  
GA Garnet  
HS Hematite, Specularite  
FE Iron  
MG Magnetite

MC Malachite  
MR Marcopite  
MS Muscovite (sericite)  
PY Pyrite  
PO Pyrrhotite  
QZ Quartz  
SI Silica  
SP Sphalerite  
TT Tetrahedrite  
ZN Zinc

|   |   |   |
|---|---|---|
| 6 | 7 | 8 |
| 3 | 4 | 5 |
| 2 |   |   |

#### ROCK GEOCHEMICAL RESULTS

| Sample | Au(ppm) | Ag(ppm) | Cu(ppm) | Pb(ppm) | Zn(ppm) | As(ppm) |
|--------|---------|---------|---------|---------|---------|---------|
| 447124 | 48      | 0.8     | 74      | 20      | 30      | 18      |
| 447125 | 80      | 0.5     | 81      | 10      | 82      | 19      |
| 447129 | 18      | 0.5     | 41      | 8       | 114     | 11      |
| 447127 | 318     | 1.0     | 2420    | 25      | 170     | 14      |
| 447128 | 108     | 0.8     | 838     | 8       | 22      | 8       |
| 447129 | 100     | 0.8     | 838     | 10      | 76      | 10      |
| 447130 | 80      | 0.5     | 123     | 15      | 82      | 8       |
| 447131 | 210     | 0.8     | 109     | 8       | 64      | 11      |
| 447132 | 155     | 0.5     | 108     | 15      | 86      | 15      |
| 447133 | 15      | 0.5     | 89      | 1400    | 184     | 14      |
| 447134 | 120     | 0.5     | 2290    | 1.19%   | 1.28%   | 75      |
| 447135 | 15      | 0.5     | 88      | 15      | 86      | 9       |
| 447178 | 25      | 0.5     | 85      | 10      | 86      | 10      |
| 447179 | 20      | 0.5     | 213     | 10      | 82      | 7       |
| 447179 | 35      | 0.5     | 484     | 8       | 32      | 8       |
| 459001 | 15      | 0.5     | 122     | 15      | 88      | 20      |
| 459002 | 15      | 0.5     | 2       | 15      | 84      | 10      |
| 459003 | 10      | 0.5     | 213     | 10      | 144     | 15      |
| 459004 | 15      | 0.5     | 383     | 10      | 82      | 23      |
| 459005 | 15      | 0.5     | 331     | 20      | 40      | 27      |
| 459006 | 35      | 0.5     | 87      | 8       | 44      | 80      |
| 459007 | 85      | 0.5     | 808     | 285     | 1890    | 315     |
| 459008 | 15      | 0.5     | 88      | 8       | 74      | 15      |
| 459009 | 15      | 0.5     | 78      | 15      | 56      | 29      |
| 459010 | 15      | 0.5     | 2       | 8       | 30      | 2       |
| 459011 | 15      | 0.5     | 82      | 15      | 88      | 10      |
| 459012 | 15      | 1.0     | 97      | 42      | 28      | 50      |
| 459013 | 15      | 0.5     | 7       | 18      | 204     | 8       |

#### LEGEND

- Geological boundary (defined, approximate, assumed), dip indicated
- Bedding, laps known (horizontal, inclined, vertical, overturned, dip unknown)
- Schistosity, gneissosity, cleavage, foliation (horizontal, inclined, vertical, dip unknown)
- Second generation (horizontal, inclined, vertical)
- Lineation (horizontal, inclined, plunge unknown, vertical)
- Minor folds and their symmetry viewed down-plunge S, Z, M, W, angle of plunge
- Fault (defined, approximate, assumed) inclined, vertical, downthrown side, horizontal movement
- Thrust fault (defined, approximate, assumed)
- Barbs on upper plate, dip indicated
- Dike, vein (V), or stockwork (S), (defined, approximate, assumed) Dip, width indicated
- X PY Mineral occurrence (pyrite)
- Trench
- Open cut
- Diamond Drill Hole Collar
- Gosson
- Legal Corner Post (located, approximate)

#### SAMPLING

- Stream Sediment Sample
- X Rock Sample - outcrop (Grab or Chip)
- Rock Sample - float
- (Au) (Cu) Contour Soil Sample Line
- Station Number
- Cu value in ppm (145 ppm or greater)
- Au value in ppb (40 ppb or greater)
- Mineral Showing described in text

Km 0 0.5 1.0

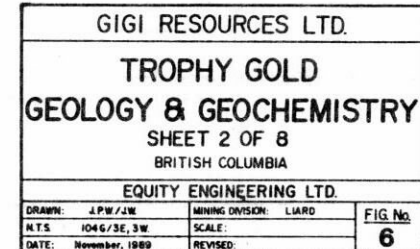
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**TROPHY GOLD PROJECT**  
**GEOLOGY & GEOCHEMISTRY**  
SHEET 1 OF 8  
BRITISH COLUMBIA

EQUITY ENGINEERING LTD.

|                      |                        |         |
|----------------------|------------------------|---------|
| DRAWN: J.P.W./J.W.   | MINING DIVISION: LIARD | FIG No. |
| NTS 1046/3E, 3W      | SCALE                  | 5       |
| DATE: November, 1989 | REVISED                |         |

Geology adopted in part from Heinrich et al (1989)  
Government geochemical data from GSC OPEN FILE 1646 (1988)



|   |   |   |
|---|---|---|
| 6 | 7 | 8 |
| 3 | 4 | 5 |
| 1 | 2 |   |

Geology adapted in part from Heinrich et al (1989)  
Government geochemical data from G.S.C. OPEN FILE 1646 (1988)





# ROCK GEOCHEMICAL RESULTS

| Sample | As(ppb) | As(μg/g) | Cu(ppm) | Ph(ppm) | Zn(ppm) | As(ppm) |
|--------|---------|----------|---------|---------|---------|---------|
| 447027 | 750     | 13.5     | 10      | 68      | 150     | 41      |
| 447028 | 15      | 0.5      | 11      | 18      | 14      | 3       |
| 447029 | 15      | 0.5      | 8       | 18      | 14      | 3       |
| 447101 | 15      | 0.5      | 17      | 10      | 28      | 18      |
| 447102 | 15      | 0.5      | 16      | 18      | 16      | 120     |
| 447103 | 80      | 1.5      | 47      | 18      | 56      | 225     |
| 447104 | 15      | 0.5      | 85      | 175     | 180     | 85      |
| 447141 | 20      | 0.5      | 127     | 15      | 145     | 19      |
| 447142 | 80      | 1.5      | 145     | 6480    | 1755    | 38      |
| 447143 | 85      | 2.5      | 15      | 90      | 102     | 41      |
| 447144 | 400     | 8.0      | 45      | 115     | 74      | 77      |
| 447145 | 85      | 1.0      | 417     | 20      | 72      | 120     |
| 447146 | 15      | 0.5      | 145     | 5       | 122     | 30      |
| 449072 | 15      | 0.40*    | 726     | 485     | 1.15*   | 250     |
| 449073 | 25      | 22.5     | 853     | 1025    | 1.77*   | 210     |
| 449074 | 30      | 0.5      | 31      | 16      | 274     | 43      |
| 449075 | 15      | 0.5      | 47      | 5       | 345     | 5       |
| 449076 | 15      | 0.5      | 14      | 5       | 225     | 5       |
| 449077 | 20      | 1.5      | 1590    | 5       | 120     | 80      |
| 449078 | 35      | 11.0     | 1830    | 80      | 3.55*   | 380     |
| 449079 | 15      | 5.0      | 227     | 18      | 4540    | 24      |
| 449080 | 15      | 1.0      | 115     | 15      | 1110    | 4       |
| 449081 | 10      | 1.0      | 215     | 5       | 442     | 2       |
| 449082 | 80      | 55.0     | 2.70*   | 40      | 1225    | 23      |
| 449083 | 20      | 21.0     | 4500    | 150     | 2.81*   | 240     |
| 449084 | 130     | 33.30*   | 2.09*   | 1.33*   | 5310    | 730     |
| 449085 | 75      | 11.0     | 191     | 70      | 185     | 28      |
| 449086 | 90      | 25.5     | 2050    | 85      | 3500    | 50      |
| 449087 | 80      | 4.5      | 2350    | 15      | 254     | 23      |
| 449088 | 15      | 3.5      | 345     | 15      | 135     | 5       |
| 449089 | 40      | 0.5      | 317     | 10      | 295     | 35      |
| 449090 | 45      | 0.5      | 72      | 120     | 274     | 25      |
| 449091 | 60      | 0.5      | 351     | 45      | 145     | 50      |
| 449092 | 70      | 3.5      | 193     | 80      | 1470    | 60      |
| 449093 | 25      | 0.5      | 405     | 15      | 220     | 55      |
| 449094 | 20      | 0.5      | 114     | 5       | 90      | 50      |
| 449095 | 10      | 0.5      | 55      | 5       | 235     | 15      |
| 449096 | 15      | 4.25*    | 1475    | 1.55*   | 4.42*   | 15      |
| 449097 | 15      | 8.0      | 290     | 3450    | 445*    | 11      |
| 449098 | 25      | 25.40*   | 4410    | 5.52*   | 3.54*   | 15      |
| 449099 | 150     | 2.75*    | 4110    | 430     | 5420    | 800     |
| 449100 | 210     | 85.0     | 2940    | 180     | 600     | 1000    |
| 449101 | 15      | 11.0     | 3410    | 255     | 1840    | 455     |
| 449102 | 115     | 5.0      | 2120    | 85      | 242     | 700     |
| 449103 | 575     | 13.0     | 5150    | 175     | 153     | 1500    |
| 449104 | 15      | 13.0     | 4100    | 20      | 410     | 35      |
| 449105 | 5       | 4.5      | 1505    | 10      | 545     | 35      |
| 449106 | 40      | 4.5      | 1520    | 5       | 545     | 35      |
| 449107 | 5       | 2.5      | 1070    | 15      | 150     | 340     |
| 449108 | 45      | 0.5      | 1450    | 85      | 440     | 375     |
| 449109 | 55      | 5.5      | 473     | 445     | 3710    | 3800    |
| 449110 | 25      | 12.0     | 372     | 105     | 254     | 850     |
| 449111 | 85      | 14.5     | 375     | 150     | 374     | 5800    |
| 449112 | 15      | 0.5      | 33      | 5       | 55      | 15      |
| 449113 | 15      | 0.5      | 55      | 5       | 55      | 30      |
| 449114 | 0.054*  | 44.0     | 7250    | 120     | 2710    | 2200    |
| 449115 | 240     | 5.5      | 4250    | 55      | 1210    | 1800    |
| 449116 | 80      | 0.5      | 195     | 5       | 55      | 81      |
| 449117 | 15      | 0.5      | 155     | 15      | 45      | 15      |
| 449118 | 5       | 0.5      | 42      | 5       | 24      | 250     |
| 449119 | 15      | 0.5      | 11      | 20      | 154     | 120     |
| 449120 | 15      | 0.5      | 1515    | 15      | 55      | 4       |
| 449121 | 15      | 0.5      | 295     | 5       | 50      | 27      |
| 449122 | 10      | 0.5      | 555     | 5       | 45      | 17      |
| 449123 | 15      | 0.5      | 154     | 15      | 25      | 15      |
| 449124 | 10      | 0.5      | 155     | 5       | 45      | 11      |
| 449125 | 15      | 0.5      | 321     | 15      | 30      | 5       |
| 449126 | 45      | 0.5      | 221     | 20      | 155     | 45      |
| 449127 | 0.575*  | 154.0    | 574     | 7770    | 1.25*   | 540     |
| 449128 | 100     | 0.5      | 235     | 55      | 152     | 11      |
| 449129 | 290     | 32.5     | 10000   | 5.23*   | 2.04*   | 540     |
| 449130 | 15      | 0.5      | 2150    | 545     | 15      | 15      |
| 449131 | 310     | 35.5     | 5570    | 15      | 55      | 5       |
| 449132 | 15      | 0.5      | 75      | 15      | 152     | 10      |
| 449133 | 15      | 0.5      | 55      | 15      | 55      | 2       |

\* Denotes 02/ton

## SILT GEOCHEMICAL RESULTS

| Sample | As(ppb) | As(μg/g) | Cu(ppm) | Ph(ppm) | Zn(ppm) | As(ppm) |
|--------|---------|----------|---------|---------|---------|---------|
| 447028 | 15      | 0.5      | 80      | 5       | 90      | 35      |
| 447029 | 15      | 0.2      | 157     | 12      | 80      | 25      |

## STATISTICAL ANALYSIS FOR GOVERNMENT REGIONAL GEOCHEMICAL SAMPLES

| Parameter | As(ppb) | As(μg/g) | Cu(ppm) | Ph(ppm) | Zn(ppm) | As(ppm) |
|-----------|---------|----------|---------|---------|---------|---------|
| 90th      | 30      | 0.5      | 153     | 15      | 133     | 17      |
| 95th      | 85      | 0.4      | 132     | 22      | 151     | 25      |
| 99th      | 237     | 1.0      | 272     | 55      | 475     | 51      |

## INTRUSIVE ROCKS

- TERTIARY**
- Dikes and sills
- Undivided, probable Tertiary dikes  
M: andesitic; M: basaltic (gabro); M: lamprophyre (basaltic monzonite); M: diorite; M: felsic
- MIDDLE TRIASSIC - to -? MIDDLE JURASSIC**
- Galore Creek intrusions
- Undivided Galore Creek intrusive rocks  
M: andesitic; M: basaltic (gabro); M: lamprophyre (basaltic monzonite); M: diorite; M: felsic
- MIDDLE - to - LATE TRIASSIC**
- Hickman Batholith
- Undivided intrusive rocks of Hickman Batholith

## STRATIFIED ROCKS

- MESOZOIC "STIKINIAN" STRATA**
- UPPER TRIASSIC**
- Shuhini Group
- Undivided volcanic, pyroclastic and volcaniclastic rock  
8a: shale, siltstone, argillite, limestone, conglomerate;  
8b: argillite, siltstone, argillite, limestone, conglomerate;  
8c: argillite, siltstone, argillite, limestone, conglomerate;  
8d: argillite, siltstone, argillite, limestone, conglomerate;  
8e: argillite, siltstone, argillite, limestone, conglomerate;  
8f: argillite, siltstone, argillite, limestone, conglomerate;  
8g: argillite, siltstone, argillite, limestone, conglomerate;  
8h: argillite, siltstone, argillite, limestone, conglomerate;  
8i: argillite, siltstone, argillite, limestone, conglomerate;  
8j: argillite, siltstone, argillite, limestone, conglomerate;  
8k: argillite, siltstone, argillite, limestone, conglomerate;  
8l: argillite, siltstone, argillite, limestone, conglomerate;  
8m: argillite, siltstone, argillite, limestone, conglomerate;  
8n: argillite, siltstone, argillite, limestone, conglomerate;  
8o: argillite, siltstone, argillite, limestone, conglomerate;  
8p: argillite, siltstone, argillite, limestone, conglomerate;  
8q: argillite, siltstone, argillite, limestone, conglomerate;  
8r: argillite, siltstone, argillite, limestone, conglomerate;  
8s: argillite, siltstone, argillite, limestone, conglomerate;  
8t: argillite, siltstone, argillite, limestone, conglomerate;  
8u: argillite, siltstone, argillite, limestone, conglomerate;  
8v: argillite, siltstone, argillite, limestone, conglomerate;  
8w: argillite, siltstone, argillite, limestone, conglomerate;  
8x: argillite, siltstone, argillite, limestone, conglomerate;  
8y: argillite, siltstone, argillite, limestone, conglomerate;  
8z: argillite, siltstone, argillite, limestone, conglomerate;
- MIDDLE - to - UPPER TRIASSIC**
- (Un-named)
- Undivided post-Permian, pre-Shuhini Group  
sedimentary strata, including pyroclastic rocks  
7a: siltstone and pyroclastic; 7b: chert

## PALEOZOIC "STIKINE ASSEMBLAGE"

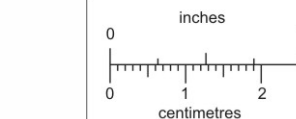
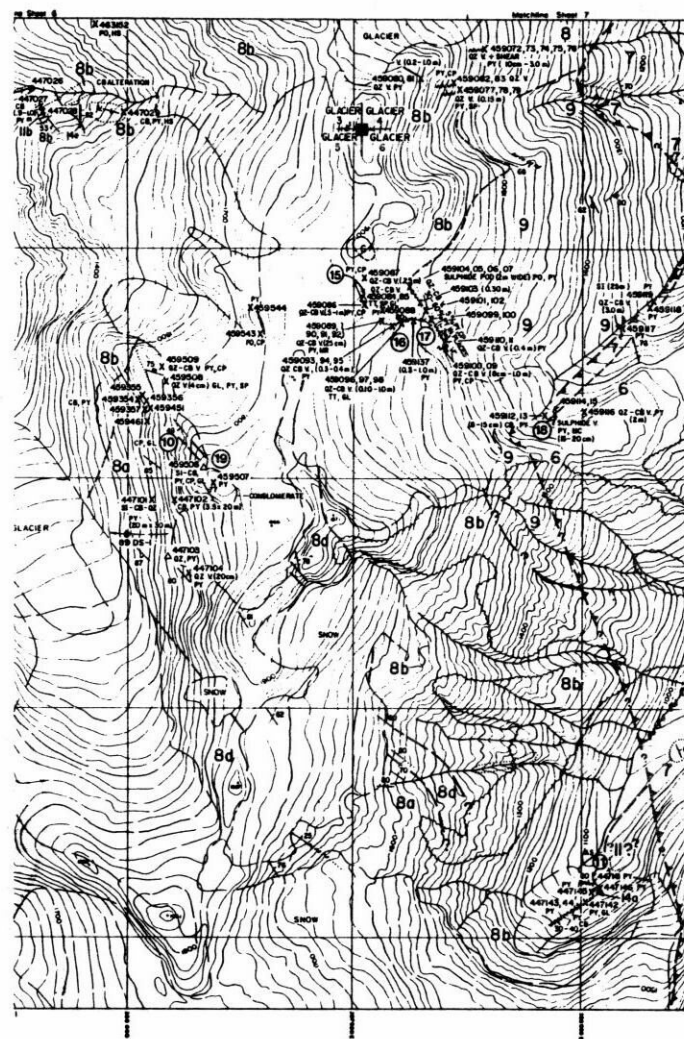
- PERMIAN**
- (Un-named)
- Undivided Permian strata  
6a: upper member Permian limestone - massive, light coloured  
6b: parapsammite - tabular black breccia  
6c: lower member Permian limestone - thin bedded, pyritic,  
argillaceous and blocky calcarenite with  
argillaceous interbeds
- "Rusty argillite" at base of Permian section
- unknown, but probably faulted, contact
- Ultramafic rocks of unknown age and affinity;  
possibly fault slices of oceanic basement terrane

- AS Arsenopyrite MC Malachite  
AZ Azurite MR Malpasite  
BX Breccia MS Muscovite (sericite)  
CP Chalcopyrite PY Pyrite  
CB Carbonate PO Pyrrhotite  
DO Dolomite QZ Quartz  
GL Galena SI Silica  
GA Garnet SP Sphalerite  
HS Hematite, Specularite TT Tetrahedrite  
FE Iron ZN Zinc

## MAP INDEX

|   |   |   |
|---|---|---|
| 6 | 7 | 8 |
| 4 | 5 |   |
| 1 | 2 |   |

Geology adapted in part from Heinrich et al (1989)  
Government geochemical data from G.S. OPEN FILE 1646 (1988)



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.

## LEGEND

- Geological boundary (defined, approximate, assumed); dip indicated
- Bedding, logs known (horizontal, inclined, vertical, overturned, dip unknown)
- Schistosity, gneissosity, cleavage, foliation (horizontal, inclined, vertical, dip unknown)
- Second generation (horizontal, inclined, vertical)
- Lineation (horizontal, inclined, vertical)
- Mineral folds and their symmetry viewed down-plunge: S, E, W, angle of plunge
- Fault (defined, approximate, assumed) inclined, vertical, downthrown side, horizontal movement
- Thrust fault (defined, approximate, assumed) Barbs on upper plate, dip indicated
- Dyke, vein (V), or stockwork (S), (defined, approximate, assumed) Dip, width indicated
- X PY Mineral occurrence (pyrite)
- Trench
- Open cut
- Diamond Drill Hole Collar
- Gossan
- Legal Corner Post (located, approximate)

## SAMPLING

- Stream Sediment Sample
- Rock Sample - outcrop (Grab or Chip)
- Rock Sample - float
- (Au) Contour Soil Sample Line
- Station Number
- Cu value in ppm (145 ppm or greater)
- Au value in p.p.b. (40 p.p.b. or greater)
- Mineral Showing described in text

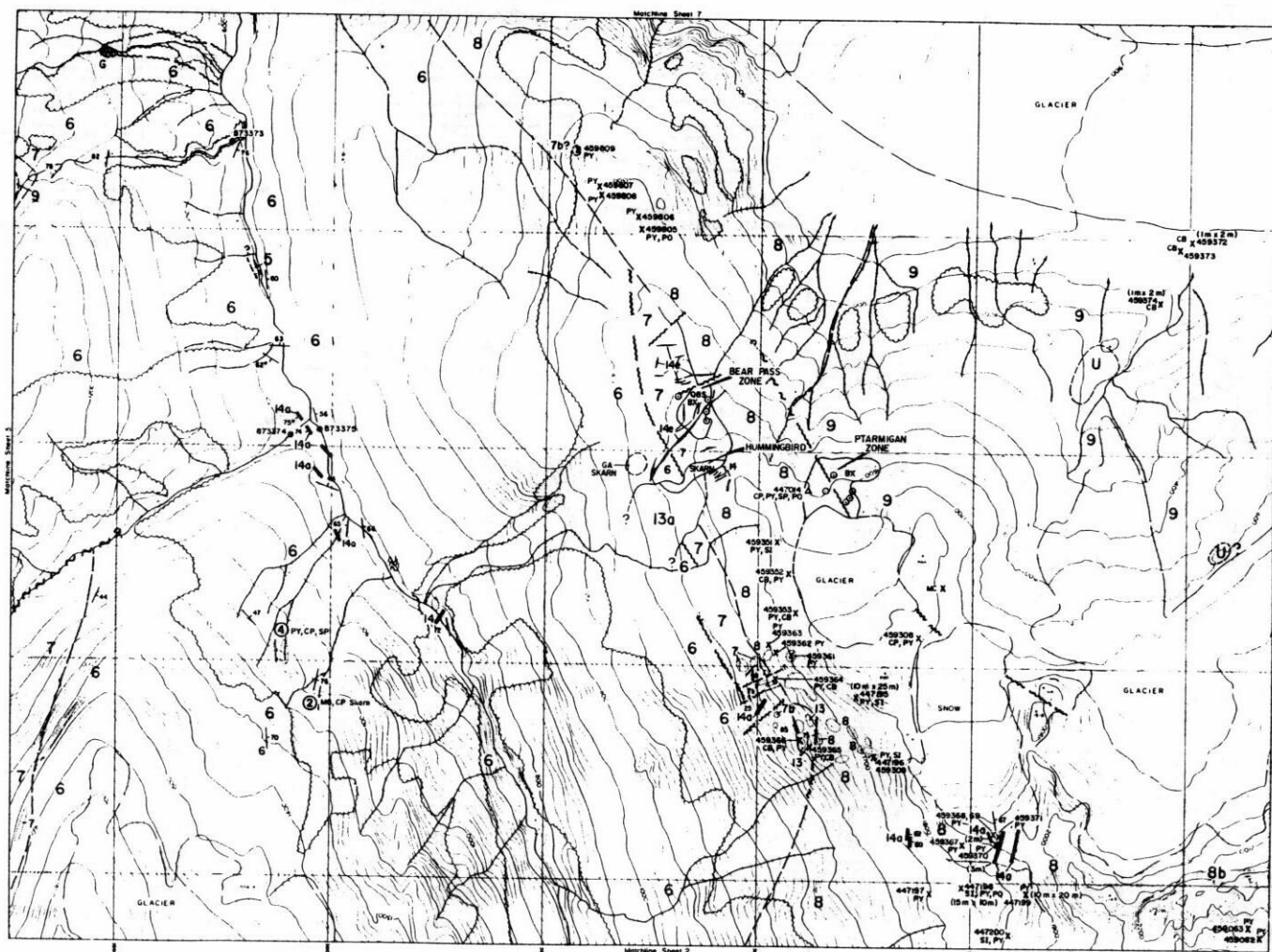
Km 0 0.5 1.0 Km

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**BRITISH COLUMBIA**

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DRAWN: J.P.W./J.W. MINING DIVISION: LIARD  
N.T.S. 1046/3E, 3W SCALE:  
DATE: November, 1989 REVISED:  
FIG No. 7E



# ROCK GEOCHEMICAL RESULTS

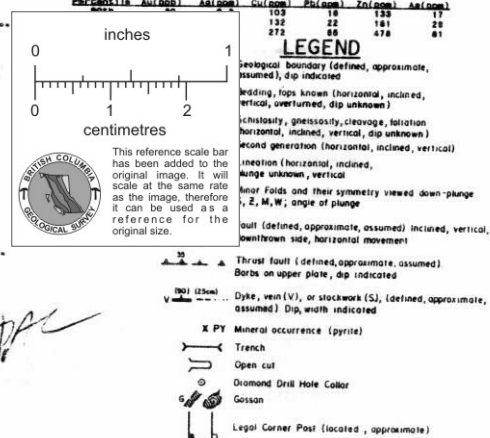
| Sample | Au(ppb) | Ag(ppb) | Cu(ppm) | Pb(ppm) | Zn(ppm) | As(ppm) |
|--------|---------|---------|---------|---------|---------|---------|
| 447101 | 18      | 7.2     | 840     | 98      | 1710    | 270     |
| 447180 | 18      | <0.5    | 218     | 108     | 172     | 11      |
| 447188 | 28      | <0.5    | 214     | 18      | 88      | 8       |
| 447187 | 50      | <0.5    | 56      | 5       | 20      | 12      |
| 447186 | 38      | <0.5    | 303     | 20      | 102     | 10      |
| 447189 | 10      | <0.5    | 88      | 5       | 34      | 3       |
| 447200 | 88      | <0.5    | 82      | 18      | 38      | 24      |
| 488082 | 140     | 0.8     | 87      | 8       | 82      | 83      |
| 488083 | 80      | <0.5    | 84      | 18      | 48      | 17      |
| 488308 | 360     | 1.0     | 436     | 18      | 70      | 11      |
| 488309 | 80      | 0.8     | 884     | 10      | 28      | 17      |
| 488311 | 18      | <0.5    | 171     | 22      | 84      | 38      |
| 488312 | 18      | <0.5    | 289     | 18      | 88      | 32      |
| 488313 | 45      | <0.5    | 203     | 5       | 38      | 46      |
| 488314 | 8       | <0.5    | 102     | 8       | 38      | 88      |
| 488315 | 18      | <0.5    | 88      | 5       | 38      | 83      |
| 488316 | 18      | <0.5    | 82      | 8       | 138     | 20      |
| 488317 | 30      | <0.5    | 88      | 8       | 38      | 700     |
| 488318 | 38      | 8.0     | 213     | 80      | 100     | 15      |
| 488319 | 308     | 2.5     | 186     | 40      | 88      | 180     |
| 488320 | 80      | 1.0     | 70      | 88      | 132     | 12      |
| 488321 | 80      | <0.5    | 83      | 88      | 128     | 20      |
| 488322 | 108     | 1.0     | 88      | 88      | 88      | 28      |
| 488323 | 18      | <0.5    | 70      | 28      | 70      | 4       |
| 488324 | 18      | <0.5    | 110     | 30      | 84      | 20      |
| 488325 | 18      | <0.5    | 42      | 28      | 140     | 10      |
| 488326 | 18      | 2.0     | 123     | 10      | 88      | 180     |
| 488327 | 10      | 2.5     | 140     | 8       | 78      | 70      |
| 488328 | 18      | 2.5     | 42      | 10      | 44      | 820     |
| 488329 | 8       | <0.5    | 121     | 10      | 82      | 38      |
| 488330 | 18      | 0.8     | 37      | 10      | 82      | 14      |

## GOVERNMENT REGIONAL GEOCHEMICAL SAMPLES

| Sample | Au(ppb) | Ag(ppb) | Cu(ppm) | Pb(ppm) | Zn(ppm) | As(ppm) |
|--------|---------|---------|---------|---------|---------|---------|
| 873373 | 30      | 0.5     | 71      | 133     | 17      |         |
| 873374 | 11      | 0.4     | 41      | 14      | 88      | 18      |
| 873375 | 8       | <0.1    | 44      | 12      | 80      | 20      |

## STATISTICAL ANALYSIS FOR GOVERNMENT REGIONAL GEOCHEMICAL SAMPLES

| Percentile | Au(ppb) | Ag(ppb) | Cu(ppm) | Pb(ppm) | Zn(ppm) | As(ppm) |
|------------|---------|---------|---------|---------|---------|---------|
| 10         | 10      | 0.1     | 10      | 10      | 10      | 10      |
| 25         | 15      | 0.2     | 15      | 15      | 15      | 15      |
| 50         | 20      | 0.3     | 20      | 20      | 20      | 20      |
| 75         | 25      | 0.4     | 25      | 25      | 25      | 25      |
| 90         | 30      | 0.5     | 30      | 30      | 30      | 30      |



## INTRUSIVE ROCKS

- TERTIARY**
- Dikes and sills
  - 14 Undivided, probable Tertiary dikes (14a andesitic, 14b basaltic (gabro), 14c lamprophyre (basite mineral), 14d diabase, 14e felsic)
- PLUTONIC**
- 13 Undivided Tertiary, probably Eocene, plutonic rocks (13a biotite quartz monzonite, 13b plagioclase porphyritic diorite)
- MIDDLE TRIASSIC - to - ? MIDDLE JURASSIC**
- Galore Creek intrusions
  - 11 Undivided Galore Creek intrusive rocks (11a syenite, 11b orthoclase porphyritic monzonite, 11c biotite-hornblende quartz monzonite to granodiorite)
- MIDDLE - to - LATE TRIASSIC**
- Hickman Batholith
  - 9 Undivided intrusive rocks of Hickman Batholith

## STRATIFIED ROCKS

### MESOZOIC "STIKINIAN" STRATA

- UPPER TRIASSIC**
- Stuhini Group
- 8 Undivided volcanic, pyroclastic and volcanoclastic rock (8a shale, siltstone, argillite, limestone, conglomerate; 8b argillite porphyritic basaltic andesite flows, breccia and agglomerate; 8c ophiolite and plagioclase porphyritic andesite; 8d bedded argillite crystal tuff, tuffaceous siltstone; 8e volcanoclastic agglomerate with subangular to subrounded clasts)
- MIDDLE - to - UPPER TRIASSIC**
- (Un-named)
- 7 Undivided post-Permian, pre-Stuhini Group sedimentary strata, including pyroclastic rocks (7a siliciclastic and pyroclastic; 7b chert)

### PALEOZOIC "STIKINE ASSEMBLAGE" PERMIAN

- (Un-named)
- 6 Undivided Permian strata (6a upper member Permian limestone - massive, light coloured; 6b periplatform - takes black breccia; 6c lower member Permian limestone - thin bedded, pyritic, argillaceous and biotitic calcarenite with argillaceous interbeds)
  - 5 "Rusty argillite" at base of Permian section
  - Unknown, but probably faulted, contact
  - U Ultramafic rocks of unknown age and affinity; possibly fault slivers of oceanic basement terrane

- AS Arsenopyrite
- AZ Azurite
- BX Breccia
- CP Chalkopyrite
- CB Carbonate
- DO Dolomite
- GL Golea
- GA Garnet
- HS Hematite, Specularite
- FE Iron
- MG Magnetite
- MC Malachite
- MR Mariposite
- MS Muscovite (sericite)
- PY Pyrite
- PO Pyrrhotite
- QZ Quartz
- SI Silica
- SP Sphalerite
- TT Tetrahedrite
- ZN Zinc

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Geology adapted in part from Heinrich et al (1989)  
Government geochemical data from G.S.C. OPEN FILE 1646 (1988)

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**GEOLOGY & GEOCHEMISTRY**

**SHEET 4 OF 8**

**BRITISH COLUMBIA**

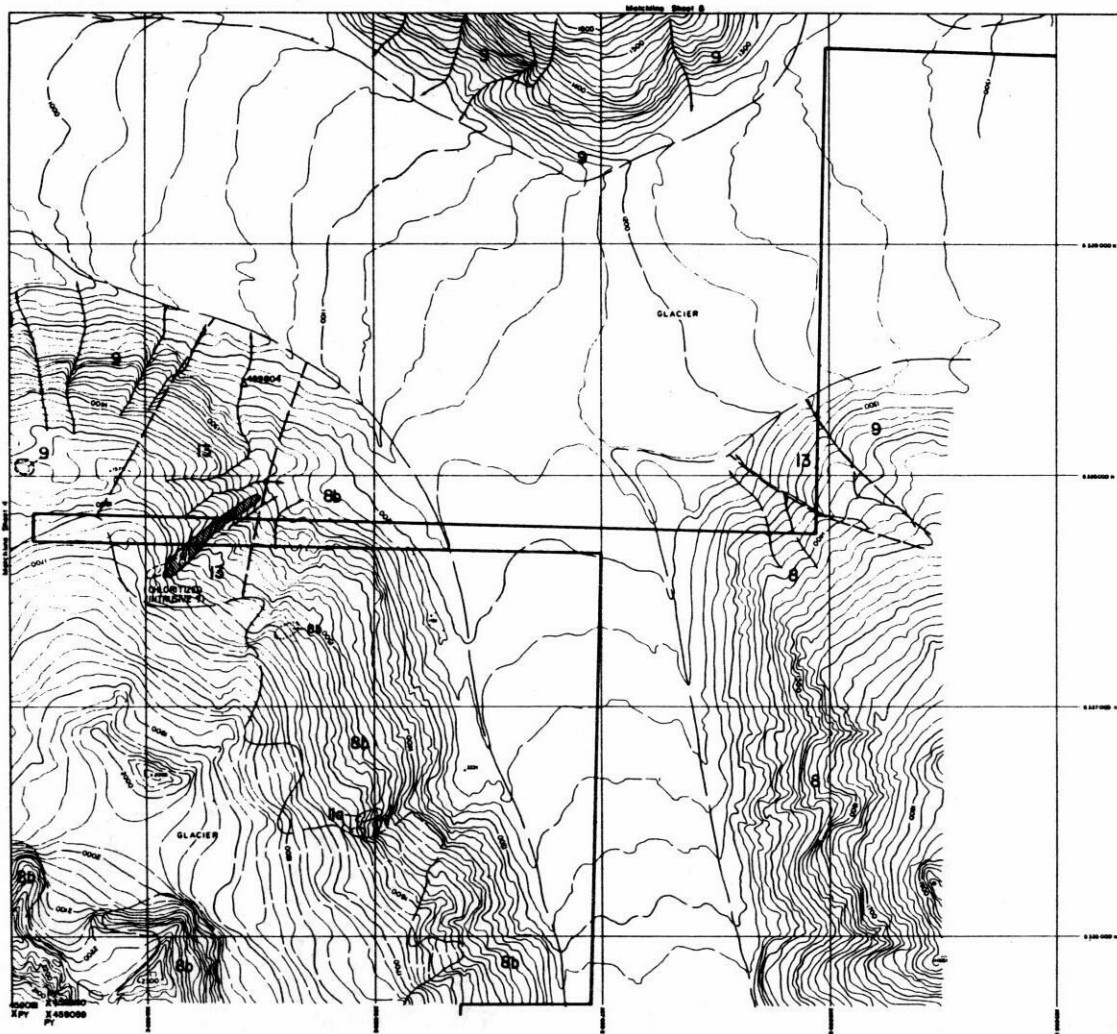
**EQUITY ENGINEERING LTD.**

DRAWN: J.P.W./J.W. MINING DIVISION: L.I.A.D. FIG No. 8

SCALE: 1046/3E, 3W

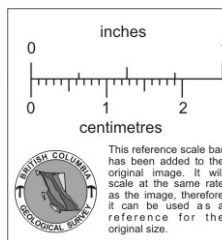
DATE: November, 1989 REVISED





#### ROCK GEOCHEMICAL RESULTS

| Sample | Au(ppb) | Ag(ppm) | Cu(ppm) | Pb(ppm) | Zn(ppm) | As(ppm) |
|--------|---------|---------|---------|---------|---------|---------|
| 489000 | 30      | 0.8     | 140     | 10      | 44      | 100     |
| 489000 | 20      | 0.8     | 47      | <8      | 80      | 87      |
| 489001 | 30      | 0.8     | 37      | <8      | 58      | 14      |
| 489004 | 18      | 1.0     | 26      | 10      | 66      | 48      |



#### LEGEND

- Geological boundary (defined, approximate, assumed), dip indicated
- Bedding, logs known (horizontal, inclined, vertical, overturned, dip unknown)
- Schistosity, gneissosity, cleavage, foliation (horizontal, inclined, vertical, dip unknown)
- Second generation (horizontal, inclined, vertical)
- Lithiation (horizontal, inclined, vertical)
- Minor folds and their symmetry viewed down-plunge S, E, W, angle of plunge
- Fault (defined, approximate, assumed) inclined, vertical, downthrown side, horizontal movement
- Thrust fault (defined, approximate, assumed) Barbs on upper plate, dip indicated
- Dike, vein (V), or stockwork (S), (defined, approximate, assumed) Dip, width indicated
- X PY Mineral occurrence (pyrite)
- Trench
- Open cut
- Diamond Drill Hole Collar
- Gossion
- Legal Corner Post (located, approximate)

#### SAMPLING

- Stream Sediment Sample
- X Rock Sample - outcrop (Grab or Chip)
- Rock Sample - float
- (Au) (Cu) Contour Soil Sample Line
- Station Number
- Cu value in p.p.m. (145 p.p.m. or greater)
- Au value in p.p.b. (40 p.p.b. or greater)
- Mineral Showing described in text

Km 0 0.5 1.0 Km

#### INTRUSIVE ROCKS

- TERTIARY**
  - Dykes and sills
  - Undivided, probable Tertiary dykes
  - Ma andesitic; Ma basaltic (gabro); Mc lamprophyre (biotite monzonite); 14d andesitic; Ma felsic
- Plutonic**
  - Undivided Tertiary probably Eocene, plutonic rocks
  - 13a biotite quartz-monzonite; 13b plagioclase perphyritic diorite
- MIDDLE TRIASSIC - to - MIDDLE JURASSIC**
  - Galore Creek intrusions
  - Undivided Galore Creek intrusive rocks
  - 11a syenite; 11b orthoclase perphyritic monzonite; 11c biotite-hornblende quartz monzonite - to - granodiorite
- MIDDLE - to - LATE TRIASSIC**
  - Hickman Batholith
  - Undivided intrusive rocks of Hickman Batholith

#### STRATIFIED ROCKS

##### MESOZOIC "STIKINIAN" STRATA

- UPPER TRIASSIC**
  - Stuhini Group
  - Undivided volcanic, pyroclastic and volcanoclastic rock
  - 8a shale, siltstone, argillite, limestone, conglomerate; 8b argillite perphyritic basaltic andesite flows, breccia and agglomerate; 8c siltstone and argillite - perphyritic andesite; 8d bedded argillite crystal tuff, tuffaceous siltstone; 8e volcanoclastic agglomerate with subangular - to - subrounded clasts
  - apparently conformable contact
- MIDDLE - to - UPPER TRIASSIC**
  - (Un-named)
  - Undivided post-Permian, pre-Stuhini Group sedimentary strata, including pyroclastic rocks
  - 7a siliciclastic and pyroclastic; 7b chert
  - probable angular unconformity and lacuna

##### PALEOZOIC "STIKINE ASSEMBLAGE" PERMIAN

- (Un-named)
- Undivided Permian strata
- 6a upper member Permian limestone - massive, light coloured
- 6b periplatformal - to - block breccia
- 6c lower member Permian limestone - thin bedded, pyritic, argillaceous and bioclastic calcarenite with argillaceous interbeds
- "Rusty argillite" at base of Permian section
- unknown, but probably faulted, contact
- U Ultramafic rocks of unknown age and affinity; possibly fault silvers of oceanic basement terrane

- AS Arsenopyrite
- AZ Azurite
- BX Breccia
- CP Chalcopyrite
- CB Carbonate
- DO Dolomite
- GL Galena
- GA Garnet
- HS Hematite, Specularite
- FE Iron
- MS Magnetite
- MC Malachite
- MR Mariposite
- MS Muscovite (sericite)
- PY Pyrite
- PO Pyrrhotite
- QZ Quartz
- SI Silica
- SP Sphalerite
- TT Tetrahedrite
- ZN Zinc

#### MAP INDEX

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Geology adapted in part from Heinrich et al (1989)

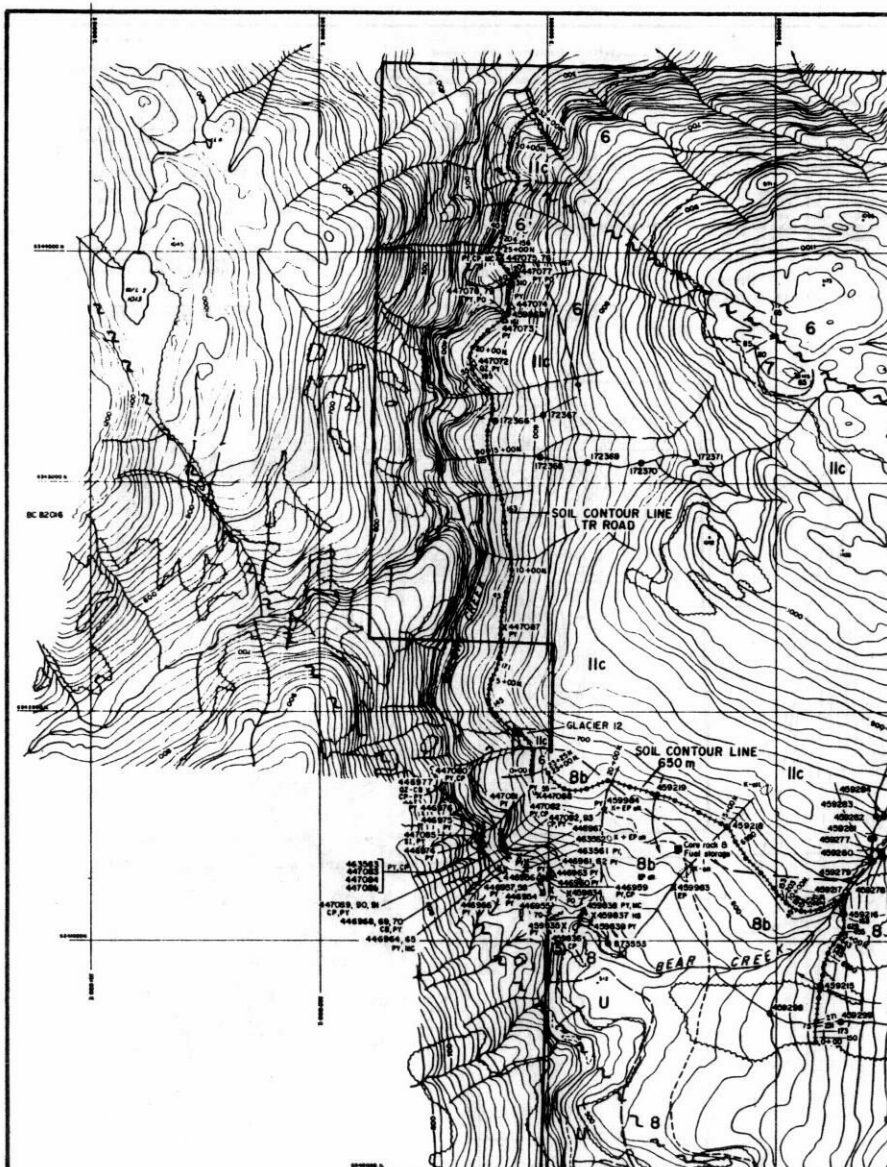
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|                      |                        |          |
|----------------------|------------------------|----------|
| DRAWN: J.P.W./J.W.   | MINING DIVISION: LWARD | FIG. No. |
| N.T.S. 1046/3E, 3W   | SCALE:                 | 9        |
| DATE: November, 1989 | REVISED:               |          |





#### ROCK GEOCHEMICAL RESULTS

| Sample | Au(ppm) | Ag(ppm) | Cu(ppm) | Pb(ppm) | Zn(ppm) | As(ppm) |
|--------|---------|---------|---------|---------|---------|---------|
| 448854 | <0.5    | <0.5    | 81      | <0.5    | 15      | 1       |
| 448855 | <0.5    | <0.5    | 72      | <0.5    | 12      | 1       |
| 448856 | <0.5    | <0.5    | 287     | <0.5    | 20      | 1       |
| 448857 | <0.5    | <0.5    | 72      | <0.5    | 29      | 1       |
| 448858 | <0.5    | <0.5    | 100     | <0.5    | 18      | 2       |
| 448859 | <0.5    | <0.5    | 1608    | <0.5    | 32      | 1       |
| 448860 | <0.5    | <0.5    | 88      | <0.5    | 12      | 1       |
| 448861 | <0.5    | <0.5    | 225     | <0.5    | 32      | 2       |
| 448862 | <0.5    | <0.5    | 33      | <0.5    | 8       | 2       |
| 448863 | <0.5    | <0.5    | 429     | <0.5    | 12      | 2       |
| 448864 | <0.5    | <0.5    | 1175    | <0.5    | 42      | 1       |
| 448865 | <0.5    | <0.5    | 367     | <0.5    | 42      | 1       |
| 448866 | <0.5    | <0.5    | 436     | <0.5    | 24      | 2       |
| 448867 | <0.5    | <0.5    | 1820    | <0.5    | 28      | 2       |
| 448868 | 26      | <0.5    | 289     | <0.5    | 12      | 5       |
| 448869 | <0.5    | <0.5    | 272     | <0.5    | 32      | 5       |
| 448870 | <0.5    | <0.5    | 445     | <0.5    | 48      | 8       |
| 448871 | <0.5    | <0.5    | 227     | 140     | 382     | 8       |
| 448872 | <0.5    | <0.5    | 531     | <0.5    | 24      | 8       |
| 448873 | <0.5    | <0.5    | 872     | <0.5    | 28      | 4       |
| 448874 | <0.5    | <0.5    | 2,028   | <0.5    | 134     | 11      |
| 447072 | <0.5    | <0.5    | 386     | <0.5    | 40      | 3       |
| 447073 | <0.5    | <0.5    | 702     | <0.5    | 48      | 3       |
| 447074 | <0.5    | <0.5    | 144     | <0.5    | 488     | 11      |
| 447075 | 35      | <0.5    | 658     | <0.5    | 108     | 180     |
| 447076 | 20      | <0.5    | 140     | <0.5    | 82      | 12      |
| 447077 | 70      | <0.5    | 852     | <0.5    | 180     | 86      |
| 447078 | <0.5    | <0.5    | 58      | <0.5    | 120     | 7       |
| 447079 | <0.5    | <0.5    | 112     | <0.5    | 254     | 8       |
| 447080 | <0.5    | <0.5    | 2930    | <0.5    | 20      | 1       |
| 447081 | <0.5    | <0.5    | 223     | <0.5    | 18      | 1       |
| 447082 | <0.5    | <0.5    | 2580    | <0.5    | 18      | 1       |
| 447083 | <0.5    | <0.5    | 876     | <0.5    | 14      | 2       |
| 447084 | <0.5    | <0.5    | 361     | <0.5    | 40      | 4       |
| 447085 | <0.5    | <0.5    | 1170    | <0.5    | 42      | 22      |
| 447086 | <0.5    | <0.5    | 5040    | <0.5    | 84      | 2       |
| 447087 | 185     | <0.5    | 244     | 20      | 80      | 20      |
| 447088 | <0.5    | <0.5    | 812     | <0.5    | 18      | 2       |
| 447089 | 38      | <0.5    | 1838    | <0.5    | 18      | 7       |
| 447090 | 78      | <0.5    | 9380    | <0.5    | 48      | 4       |
| 447091 | 36      | <0.5    | 1,488   | <0.5    | 208     | 2       |
| 447092 | <0.5    | <0.5    | 1485    | <0.5    | 40      | 1       |
| 447093 | 10      | <0.5    | 1685    | <0.5    | 40      | 5       |
| 447094 | <0.5    | <0.5    | 164     | <0.5    | 20      | 1       |
| 447095 | <0.5    | <0.5    | 448     | <0.5    | 8       | 2       |
| 447096 | 18      | <0.5    | 304     | <0.5    | 14      | 2       |
| 447097 | <0.5    | <0.5    | 295     | <0.5    | 14      | 2       |
| 447098 | 60      | <0.5    | 1450    | <0.5    | 12      | 2       |
| 447099 | <0.5    | <0.5    | 907     | <0.5    | 10      | 1       |
| 447100 | <0.5    | <0.5    | 128     | <0.5    | 30      | 1       |
| 447101 | <0.5    | <0.5    | 178     | <0.5    | 24      | 1       |
| 447102 | <0.5    | <0.5    | 183     | <0.5    | 18      | 1       |
| 447103 | <0.5    | <0.5    | 61      | <0.5    | 10      | 1       |
| 447104 | 20      | <0.5    | 2420    | <0.5    | 50      | 8       |

#### BILL GEOCHEMICAL RESULTS

| Sample | Au(ppm) | Ag(ppm) | Cu(ppm) | Pb(ppm) | Zn(ppm) | As(ppm) |
|--------|---------|---------|---------|---------|---------|---------|
| 172346 | <0.5    | <0.5    | 29      | <0.5    | 88      | 10      |
| 172347 | <0.5    | <0.5    | 34      | <0.5    | 110     | 18      |
| 172348 | <0.5    | <0.5    | 24      | <0.5    | 174     | 20      |
| 172349 | <0.5    | <0.5    | 28      | <0.5    | 188     | 28      |
| 172350 | <0.5    | <0.5    | 28      | <0.5    | 208     | 20      |
| 172351 | <0.5    | <0.5    | 18      | <0.5    | 168     | 25      |
| 458210 | 10      | <0.2    | 217     | <0.2    | 70      | <0.5    |
| 458211 | <0.5    | <0.2    | 287     | <0.2    | 70      | <0.5    |
| 458212 | <0.5    | <0.2    | 75      | <0.2    | 60      | 20      |
| 458213 | <0.5    | <0.2    | 87      | <0.2    | 18      | 18      |
| 458214 | <0.5    | <0.2    | 48      | <0.2    | 70      | <0.5    |
| 458215 | <0.5    | <0.2    | 96      | <0.2    | 104     | 28      |
| 458216 | <0.5    | <0.2    | 108     | <0.2    | 60      | 10      |
| 458217 | 10      | <0.2    | 80      | <0.2    | 110     | 25      |
| 458218 | <0.5    | <0.4    | 118     | <0.2    | 380     | 86      |
| 458219 | 10      | <0.4    | 90      | <0.2    | 380     | 28      |
| 458220 | 10      | <0.8    | 146     | <0.2    | 344     | 48      |
| 458221 | <0.5    | <0.2    | 38      | <0.2    | 182     | 28      |
| 458222 | 80      | <0.2    | 149     | 30      | 892     | 60      |
| 458223 | 88      | <0.2    | 193     | 2       | 74      | <0.5    |
| 458224 | 48      | <0.2    | 190     | 18      | 72      | 48      |
| 458225 | <0.5    | <0.2    | 18      | <0.2    | 118     | 8       |

#### GOVERNMENT REGIONAL GEOCHEMICAL SAMPLES

| Sample | Au(ppm) | Ag(ppm) | Cu(ppm) | Pb(ppm) | Zn(ppm) | As(ppm) |
|--------|---------|---------|---------|---------|---------|---------|
| 873353 | 30      | 0.1     | 130     | 17      | 82      | 2       |

#### STATISTICAL ANALYSIS FOR GOVERNMENT REGIONAL GEOCHEMICAL SAMPLES

| Percentile | Au(ppm) | Ag(ppm) | Cu(ppm) | Pb(ppm) | Zn(ppm) | As(ppm) |
|------------|---------|---------|---------|---------|---------|---------|
| 95th       | 30      | 0.1     | 103     | 18      | 118     | 1       |
| 90th       | 88      | 0.4     | 132     | 22      | 181     | 29      |
| 95th       | 237     | 1.0     | 272     | 55      | 478     | 61      |

#### PALEOZOIC "STIKINIAN ASSEMBLAGE"

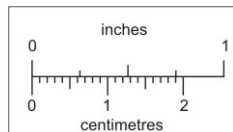
##### PERMIAN

- (Un-named)
  - 6 Undivided Permian strata
    - 6a upper member Permian limestone - massive, light coloured
    - 6b periplatform - tabular black-breccia
    - 6c lower member Permian limestone - thin bedded, pyritic, argillaceous and bioturbated calcarenite with argillaceous interbeds
  - 5 "Rusty argillite" at base of Permian section
  - U Ultramafic rocks of unknown age and affinity; possibly fault slices of oceanic basement terrane

- AS Arsenopyrite
- AZ Azurite
- BX Breccia
- CP Chalcopyrite
- CB Carbonate
- DO Dolomite
- GL Galena
- GA Garnet
- HS Hematite, Specularite
- FE Iron
- MS Magnetite
- MC Malachite
- MR Mariposite
- MS Muscovite (sericite)
- MY Pyrite
- PO Pyrrhotite
- OZ Quartz
- SI Silica
- SP Sphalerite
- TT Tetrahedrite
- ZK Zinc
- K Potassium feldspar
- EP Epidote

#### MAP INDEX

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| 3 | 4 | 5 |
| 2 |   |   |



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.

#### LEGEND

- Geological boundary (defined, approximate, assumed); dip indicated
- Bedding, logs known (horizontal, inclined, vertical, overturned, dip unknown)
- Schistosity, gneissosity, cleavage, foliation (horizontal, inclined, vertical, dip unknown)
- Second generation (horizontal, inclined, vertical)
- Lamination (horizontal, inclined, plunge unknown, vertical)
- Minor folds and their symmetry viewed down-plunge: S, Z, M, W, angle of plunge
- Fault (defined, approximate, assumed) inclined, vertical, downthrown side, horizontal movement
- Thrust fault (defined, approximate, assumed)
- Dike, vein (V), or stockwork (S), (defined, approximate, assumed) Dip, width indicated
- Mineral occurrence (pyrite)
- Trench
- Open cut
- Diamond Drill Hole Collar
- Gosson
- Legal Corner Post (located, approximate)

#### SAMPLING

- Stream Sediment Sample
- Rock Sample - outcrop (Grab or Chip)
- Rock Sample - float
- (Au) (Cu) Contour Soil Sample Line
- Station Number
- Cu value in ppm (145 ppm or greater)
- Au value in ppb (40 ppb or greater)
- Mineral Showing described in text

Km 0 0.5 1.0 Km

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**SHEET 6W OF 8**

**BRITISH COLUMBIA**

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|                      |                        |
|----------------------|------------------------|
| DRAWN: J.P.W./J.W.   | MINING DIVISION: LIARD |
| N.T.S. 1046/3E, 3W   | SCALE:                 |
| DATE: November, 1989 | REVISED:               |

FIG No. **10W**

Geology adapted in part from Heinrich et al (1989)  
Government geochemical data from G.S.C. OPEN FILE 1646 (1988)

# ROCK GEOCHEMICAL RESULTS

| Sample | As(ppm) | As(%) | Cu(ppm) | Pb(ppm) | Zn(ppm) | As(ppm) |
|--------|---------|-------|---------|---------|---------|---------|
| 447010 | 18      | 0.08  | 181     | 8       | 80      | 11      |
| 447151 | 8       | 0.03  | 12170   | 8       | 2180    | 20      |
| 447182 | 18      | 0.08  | 179     | 8       | 82      | 9       |
| 447183 | 18      | 0.07  | 8       | 219     | 10      | 12      |
| 447184 | 18      | 0.08  | 2.168   | 8       | 108     | 7       |
| 447185 | 18      | 0.08  | 8020    | 8       | 30      | 7       |
| 447186 | 18      | 0.08  | 80      | 8       | 289     | 80      |
| 447187 | 18      | 0.08  | 720     | 8       | 1680    | 20      |
| 447188 | 18      | 0.08  | 4900    | 8       | 10      | 10      |
| 447189 | 18      | 0.08  | 1.228   | 8       | 188     | 12      |
| 447190 | 18      | 0.08  | 163     | 8       | 30      | 7       |
| 447191 | 18      | 0.08  | 137     | 8       | 80      | 8       |
| 447192 | 18      | 0.08  | 143     | 8       | 78      | 11      |
| 447193 | 18      | 0.08  | 134     | 8       | 80      | 11      |
| 447194 | 18      | 0.08  | 478     | 8       | 78      | 18      |
| 447195 | 28      | 0.08  | 488     | 80      | 2.048   | 80      |
| 447196 | 18      | 0.08  | 122     | 8       | 238     | 610     |
| 447197 | 18      | 0.08  | 242     | 8       | 112     | 23      |
| 447198 | 18      | 0.08  | 4260    | 80      | 134     | 17      |
| 447199 | 18      | 0.08  | 846     | 7080    | 2930    | 8       |
| 447200 | 18      | 0.08  | 925     | 80      | 96      | 9       |
| 447201 | 18      | 0.08  | 728     | 880     | 782     | 8       |
| 447202 | 18      | 0.08  | 61      | 1348    | 314     | 7       |
| 447203 | 20      | 0.08  | 128     | 16      | 28      | 18      |
| 447204 | 18      | 0.08  | 132     | 8       | 38      | 9       |
| 447205 | 18      | 0.08  | 208     | 8       | 48      | 7       |
| 447206 | 18      | 0.08  | 128     | 8       | 24      | 7       |
| 447207 | 18      | 0.08  | 5110    | 1.778   | 19      | 19      |
| 447208 | 18      | 0.08  | 1.778   | 1.778   | 19      | 19      |
| 447209 | 18      | 0.08  | 468     | 10      | 162     | 18      |
| 447210 | 18      | 0.08  | 402     | 8       | 84      | 10      |
| 447211 | 18      | 0.08  | 210     | 8       | 84      | 9       |
| 447212 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447213 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447214 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447215 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447216 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447217 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447218 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447219 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447220 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447221 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447222 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447223 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447224 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447225 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447226 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447227 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447228 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447229 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447230 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447231 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447232 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447233 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447234 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447235 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447236 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447237 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447238 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447239 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447240 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447241 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447242 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447243 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447244 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447245 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447246 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447247 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447248 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447249 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447250 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447251 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447252 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447253 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447254 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447255 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447256 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447257 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447258 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447259 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447260 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447261 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447262 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447263 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447264 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447265 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447266 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447267 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447268 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447269 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447270 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447271 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447272 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447273 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447274 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447275 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447276 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447277 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447278 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447279 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447280 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447281 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447282 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447283 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447284 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447285 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447286 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447287 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447288 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447289 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447290 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447291 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447292 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447293 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447294 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447295 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447296 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447297 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447298 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447299 | 18      | 0.08  | 64      | 8       | 48      | 9       |
| 447300 | 18      | 0.08  | 64      | 8       | 48      | 9       |

# SILT GEOCHEMICAL RESULTS

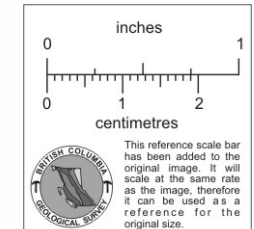
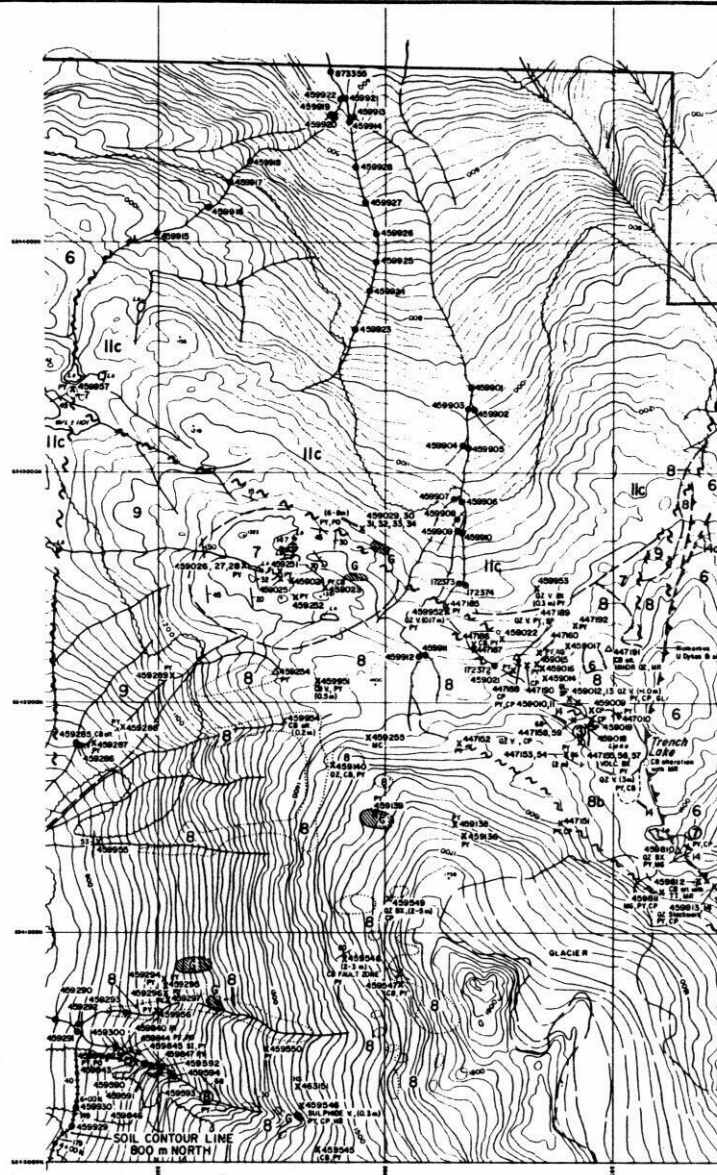
| Sample | As(ppm) | As(%) | Cu(ppm) | Pb(ppm) | Zn(ppm) | As(ppm) |
|--------|---------|-------|---------|---------|---------|---------|
| 172372 | 8       | 0.02  | 78      | 2       | 104     | 18      |
| 172373 | 10      | 0.02  | 80      | 2       | 88      | 18      |
| 172374 | 18      | 0.02  | 86      | 8       | 280     | 210     |
| 488285 | 10      | 0.02  | 96      | 2       | 38      | 38      |
| 488286 | 10      | 0.02  | 161     | 10      | 482     | 18      |
| 488287 | 10      | 0.02  | 160     | 8       | 68      | 18      |
| 488288 | 10      | 0.02  | 188     | 14      | 38      | 18      |
| 488289 | 10      | 0.02  | 120     | 4       | 44      | 38      |
| 488290 | 10      | 0.02  | 240     | 4       | 48      | 18      |
| 488291 | 10      | 0.02  | 120     | 10      | 78      | 18      |
| 488292 | 10      | 0.02  | 432     | 8       | 88      | 18      |
| 488293 | 10      | 0.02  | 454     | 20      | 64      | 18      |
| 488294 | 10      | 0.02  | 324     | 4       | 78      | 10      |
| 488295 | 10      | 0.02  | 343     | 8       | 68      | 18      |
| 488296 | 10      | 0.02  | 652     | 14      | 88      | 18      |
| 488297 | 10      | 0.02  | 86      | 12      | 94      | 18      |
| 488298 | 10      | 0.02  | 48      | 8       | 88      | 18      |
| 488299 | 10      | 0.02  | 48      | 8       | 88      | 18      |
| 488300 | 10      | 0.02  | 30      | 10      | 280     | 48      |
| 488301 | 10      | 0.02  | 47      | 12      | 88      | 18      |
| 488302 | 10      | 0.02  | 48      | 4       | 80      | 10      |
| 488303 | 10      | 0.02  | 48      | 4       | 168     | 18      |
| 488304 | 10      | 0.02  | 48      | 10      | 80      | 18      |
| 488305 | 10      | 0.02  | 81      | 4       | 72      | 28      |
| 488306 | 10      | 0.02  | 87      | 10      | 108     | 40      |
| 488307 | 10      | 0.02  | 96      | 14      | 294     | 228     |
| 488308 | 10      | 0.02  | 91      | 12      | 96      | 30      |
| 488309 | 10      | 0.02  | 91      | 12      | 96      | 30      |
| 488310 | 10      | 0.02  | 91      | 12      | 96      | 30      |
| 488311 | 10      | 0.02  | 91      | 12      | 96      | 30      |
| 488312 | 10      | 0.02  | 91      | 12      | 96      | 30      |
| 488313 | 10      | 0.02  | 91      | 12      | 96      | 30      |
| 488314 | 10      | 0.02  | 91      | 12      | 96      | 30      |
| 488315 | 10      | 0.02  | 91      | 12      | 96      | 30      |
| 488316 | 10      | 0.02  | 91      | 12      | 96      | 30      |
| 488317 | 10      | 0.02  | 91      | 12      | 96      | 30      |
| 488318 | 10      | 0.02  | 91      | 12      | 96      | 30      |
| 488319 | 10      | 0.02  | 91      | 12      | 96      | 30      |
| 488320 | 10      | 0.02  | 91      | 12      | 96      | 30      |
| 488321 | 10      | 0.02  | 91      | 12      | 96      | 30      |
| 488322 | 10      | 0.02  | 91      | 12      | 96      | 30      |
| 488323 | 10      | 0.02  | 91      | 12      | 96      | 30      |
| 488324 | 10      | 0.02  | 91      | 12      | 96      | 30      |
| 488325 | 10      | 0.02  | 91      | 12      | 96      | 30      |
| 488326 | 10      | 0.02  | 91      | 12      | 96      | 30      |
| 488327 | 10      | 0.02  | 91      | 12      | 96      | 30      |
| 488328 | 10      | 0.02  | 91      | 12      | 96      | 30      |
| 488329 | 10      | 0.02  | 91      | 12      | 96      | 30      |
| 488330 | 10      | 0.02  | 91      | 12      | 96      | 30      |

# GOVERNMENT REGIONAL GEOCHEMICAL SAMPLES

| Sample | As(ppm) | As(%) | Cu(ppm) | Pb(ppm) | Zn(ppm) | As(ppm) |
|--------|---------|-------|---------|---------|---------|---------|
| 873365 | 1       | 0.1   | 45      | 14      | 103     | 8       |

# STATISTICAL ANALYSIS FOR GOVERNMENT REGIONAL GEOCHEMICAL SAMPLES

| Parameter | As(ppm) | As(%) | Cu(ppm) | Pb(ppm) | Zn(ppm) | As(ppm) |
|-----------|---------|-------|---------|---------|---------|---------|
| Mean      | 30      | 0.3   | 103     | 14      | 113     | 17      |
| Std       | 86      | 0.4   | 132     | 22      | 161     | 29      |
| 95th      | 237     | 1.0   | 372     | 58      | 478     | 81      |



# LEGEND

- Geological boundary (defined, approximate, assumed), dip indicated
- Bedding, tops known (horizontal, inclined, vertical, overturned, dip unknown)
- Schistosity, gneissosity, cleavage, foliation (horizontal, inclined, vertical, dip unknown)
- Second generation (horizontal, inclined, vertical)
- Lamination (horizontal, inclined, plunge unknown, vertical)
- Minor folds and their symmetry viewed down-plunge S, Z, M, W, angle of plunge
- Fault (defined, approximate, assumed) inclined, vertical, downthrown side, horizontal movement
- Thrust fault (defined, approximate, assumed)
- Bore on upper plate, dip indicated
- Dike, vein (V), or stockwork (S), (defined, approximate, assumed) Dip, width indicated
- X PY Mineral occurrence (pyrite)
- Trench
- Open cut
- Diamond Drill Hole Color
- Gosson
- Legal Corner Post (located, approximate)

# SAMPLING

- Stream Sediment Sample
- Rock Sample - outcrop (Grab or Chip)
- Rock Sample - floor
- (Au) (Cd) Contour Soil Sample Line
- Station Number
- Cu value in ppm (145 ppm or greater)
- Au value in ppb (40 ppb or greater)
- Mineral Showing described in text

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**TROPHY GOLD**

**GEOLOGY & GEOCHEMISTRY**

SHEET 6E OF 8

BRITISH COLUMBIA

EQUITY ENGINEERING LTD.

DRAWN: J.P.W./J.W.    MINING DIVISION: L.I.A.R.D.    FIG No. 10E  
 N.T.S. 1046/3E, 3W    SCALE:     
 DATE: November, 1989    REVISED:

- INTRUSIVE ROCKS**
- TERTIARY**
- 14 Undivided, probable Tertiary dykes  
M<sub>1</sub> andesitic, M<sub>2</sub> basaltic (gabro), M<sub>3</sub> lophophy (diabase), M<sub>4</sub> dioritic, M<sub>5</sub> felsic
- Plutonic**
- 13 Undivided Tertiary, probably Eocene, plutonic rocks  
13a basaltic quartz-monzonite, 13b plagioclase porphyritic diorite
- MIDDLE TRIASSIC - to - MIDDLE JURASSIC**
- Galore Creek Intrusions
- 11 Undivided Galore Creek intrusive rocks  
11a syenite, 11b orthoclase perthite monzonite, 11c biotite-hornblende quartz monzonite - to - granodiorite
- MIDDLE- to - LATE TRIASSIC**
- Hickman Batholith
- 9 Undivided intrusive rocks of Hickman Batholith

- STRATIFIED ROCKS**
- MESOZOIC-STIKINIAN\* STRATA**
- UPPER TRIASSIC**
- 8 Stuhini Group  
Undivided volcanic, pyroclastic and volcanoclastic rock  
8a shale, siltstone, argillite, limestone, conglomerate;  
8b argillite perthitic basaltic andesite flows, breccia and agglomerate, ophiolite and plagioclase porphyritic andesite;

## SILT GEOCHEMICAL RESULTS

| Sample | Au(ppb) | As(ppm) | Cu(ppm) | Pb(ppm) | Zn(ppm) | Ag(ppm) |
|--------|---------|---------|---------|---------|---------|---------|
| 463164 | <0.1    | 60      | 2       | 80      | 18      |         |
| 463167 | <0.2    | 41      | 2       | 84      | 30      |         |
| 463168 | <0.2    | 29      | <2      | 86      | 10      |         |
| 463169 | <0.2    | 31      | 8       | 86      | 9       |         |
| 463170 | <0.2    | 78      | <2      | 70      | 8       |         |
| 463171 | <0.2    | 76      | <2      | 80      | 28      |         |
| 463172 | <0.2    | 78      | 4       | 80      | 8       |         |
| 463173 | <0.2    | 44      | 2       | 96      | 10      |         |
| 463165 | <0.2    | 38      | 2       | 96      | 10      |         |

## GOVERNMENT REGIONAL GEOCHEMICAL SAMPLES

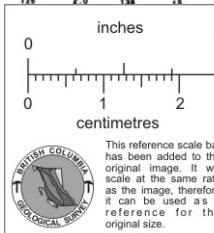
| Sample | Au(ppb) | As(ppm) | Cu(ppm) | Pb(ppm) | Zn(ppm) | Ag(ppm) |
|--------|---------|---------|---------|---------|---------|---------|
| 873372 | 0.1     | 134     | 8       | 58      | 3       |         |
| 873377 | 1       | 0.1     | 84      | 9       | 122     | 7       |
| 873378 | 1       | 0.1     | 96      | 9       | 60      | 6       |

## STATISTICAL ANALYSIS FOR GOVERNMENT REGIONAL GEOCHEMICAL SAMPLES

| Percentage | Au(ppb) | As(ppm) | Cu(ppm) | Pb(ppm) | Zn(ppm) | Ag(ppm) |
|------------|---------|---------|---------|---------|---------|---------|
| 90th       | 90      | 0.3     | 103     | 18      | 123     | 11      |
| 95th       | 96      | 0.4     | 132     | 22      | 161     | 29      |
| 99th       | 237     | 1.0     | 272     | 58      | 478     | 81      |

## ROCK GEOCHEMICAL RESULTS

| Sample | Au(ppb) | As(ppm) | Cu(ppm) | Pb(ppm) | Zn(ppm) | Ag(ppm) |
|--------|---------|---------|---------|---------|---------|---------|
| 463004 | <0.5    | 8       | 10      | 82      | 11      |         |
| 463009 | <0.5    | 450     | 8       | 80      | 14      |         |
| 463038 | 0.048*  | 8.8     | 1800    | 98      | 2510    | 950     |
| 463040 | 750     | 10.0    | 1000    | 20      | 8760    | 800     |
| 463041 | 70      | 2.8     | 1818    | 20      | 890     | 43      |
| 463042 | 90      | 0.8     | 282     | <5      | 318     | 38      |
| 463043 | 720     | 8.0     | 118     | 20      | 842     | 530     |
| 463044 | 480     | 4.6     | 314     | <8      | 2080    | 330     |
| 463046 | 80      | 2.0     | 428     | 200     | 1040    | 170     |
| 463048 | 168     | <0.6    | 843     | 18      | 8710    | 170     |
| 463047 | 870     | 1.0     | 837     | 68      | 2860    | 160     |
| 463049 | 125     | 2.0     | 138     | <8      | 384     | 22      |
| 463050 |         |         |         |         |         | 41      |
| 463051 |         |         |         |         |         | 9       |
| 463052 |         |         |         |         |         | 20      |
| 463053 |         |         |         |         |         | 87      |
| 463054 |         |         |         |         |         | 800     |
| 463055 |         |         |         |         |         | 80      |
| 463056 |         |         |         |         |         | 170     |
| 463057 |         |         |         |         |         | 210     |
| 463058 |         |         |         |         |         | 148     |
| 463059 |         |         |         |         |         | 22      |
| 463060 |         |         |         |         |         | 7       |
| 463061 |         |         |         |         |         | 19      |
| 463062 |         |         |         |         |         | 70      |
| 463063 |         |         |         |         |         | 4       |
| 463064 |         |         |         |         |         | 40      |
| 463065 |         |         |         |         |         | 88      |
| 463066 |         |         |         |         |         | 24      |
| 463067 |         |         |         |         |         | 70      |
| 463068 |         |         |         |         |         | 18      |
| 463069 |         |         |         |         |         | 2       |
| 463070 |         |         |         |         |         | 2       |



\* Denotes 02/ton

## LEGEND

- Geological boundary (defined, approximate, assumed), dip indicated
- Bedding, top known (horizontal, inclined, vertical, overturned, dip unknown)
- Schistosity, gneissosity, cleavage, foliation (horizontal, inclined, vertical, dip unknown)
- Secondary generation (horizontal, inclined, vertical)
- Lamination (horizontal, inclined, plunge unknown, vertical)
- Minor folds and their symmetry viewed down-plunge S, Z, M, W, angle of plunge
- Fault (defined, approximate, assumed) inclined, vertical, downthrown side, horizontal movement
- Thrust fault (defined, approximate, assumed)
- Barre on upper plate, dip indicated
- Dike, vein (V), or stockwork (S), (defined, approximate, assumed) Dip, width indicated
- Mineral occurrence (pyrite)
- Trench
- Open cut
- Diamond Drill Hole Color
- Gossan
- Legend Corner Post (located, approximate)

## SAMPLING

- Stream Sediment
- Rock Sample - outcrop (Grab or Chip)
- Rock Sample - float
- Contour Soil Sample Line
- Station Number
- Cu value in ppm (145 ppm or greater)
- Au value in ppb (140 ppb or greater)
- Mineral Showing described in text

Km 0 0.5 1.0 Km

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**GEOLOGY & GEOCHEMISTRY**  
 SHEET 7 OF 8  
 BRITISH COLUMBIA

EQUITY ENGINEERING LTD.

DRAWN: J.P.W./J.W. MINING DIVISION: L.I.A.R.D. FIG. No.  
 N.T.S. 1016/3E, 3W SCALE: 11  
 DATE: November, 1989 REVISED:

## INTRUSIVE ROCKS

- 14** Dikes and sills  
 Undivided, probable Tertiary dikes  
 Hc andesitic; Hb basaltic (gabbro); Mc lamprophyre (basaltic monzonite); Hc dioritic; Hc felsic
- 13** Plutonic  
 Undivided Tertiary, probably Eocene, plutonic rocks  
 Hc biotite quartz monzonite; Hb plagioclase porphyritic diorite
- 11** Middle Triassic - to - ? Middle Jurassic  
 Gole Creek Intrusions  
 Undivided Gole Creek intrusive rocks  
 Hc syenite; Hb orthoclase porphyritic monzonite; Hc biotite-hornblende quartz monzonite to granodiorite
- 9** Middle - to Late Triassic  
 Hickman Batholith  
 Undivided intrusive rocks of Hickman Batholith

## STRATIFIED ROCKS

MESOZOIC "STIKINIAN" STRATA  
UPPER TRIASSIC

- 8** Stuhini Group  
 Undivided volcanic, pyroclastic and volcanoclastic rock  
 Bc shale, siltstone, argillite, limestone, conglomerate;  
 Bc argillite porphyritic basaltic andesite flows, breccia and agglomerate, ophiolite and plagioclase porphyritic andesite; Bc bedded argillite crystal tuff, tuffaceous siltstone; Bc volcanoclastic agglomerate with subangular - to - subrounded clasts
- 7** Middle - to Upper Triassic  
 (Un-named)  
 Undivided post-Permian, pre-Stuhini Group sedimentary strata, including proterozoic rocks  
 Bc siltstone and argillite; Bc chert

PALEOZOIC "STIKINE ASSEMBLAGE"  
PERMIAN

- 6** (Un-named)  
 Undivided Permian strata  
 Gc upper member Permian limestone - massive, light coloured  
 Gc periplatformal - laka black breccia  
 Gc lower member Permian limestone - thin bedded, pyritic, argillaceous and biotitic, calcarenite with argillaceous interbeds
- 5** "Rusty argillite" at base of Permian section
- U** Unknown, but probably faulted, contact

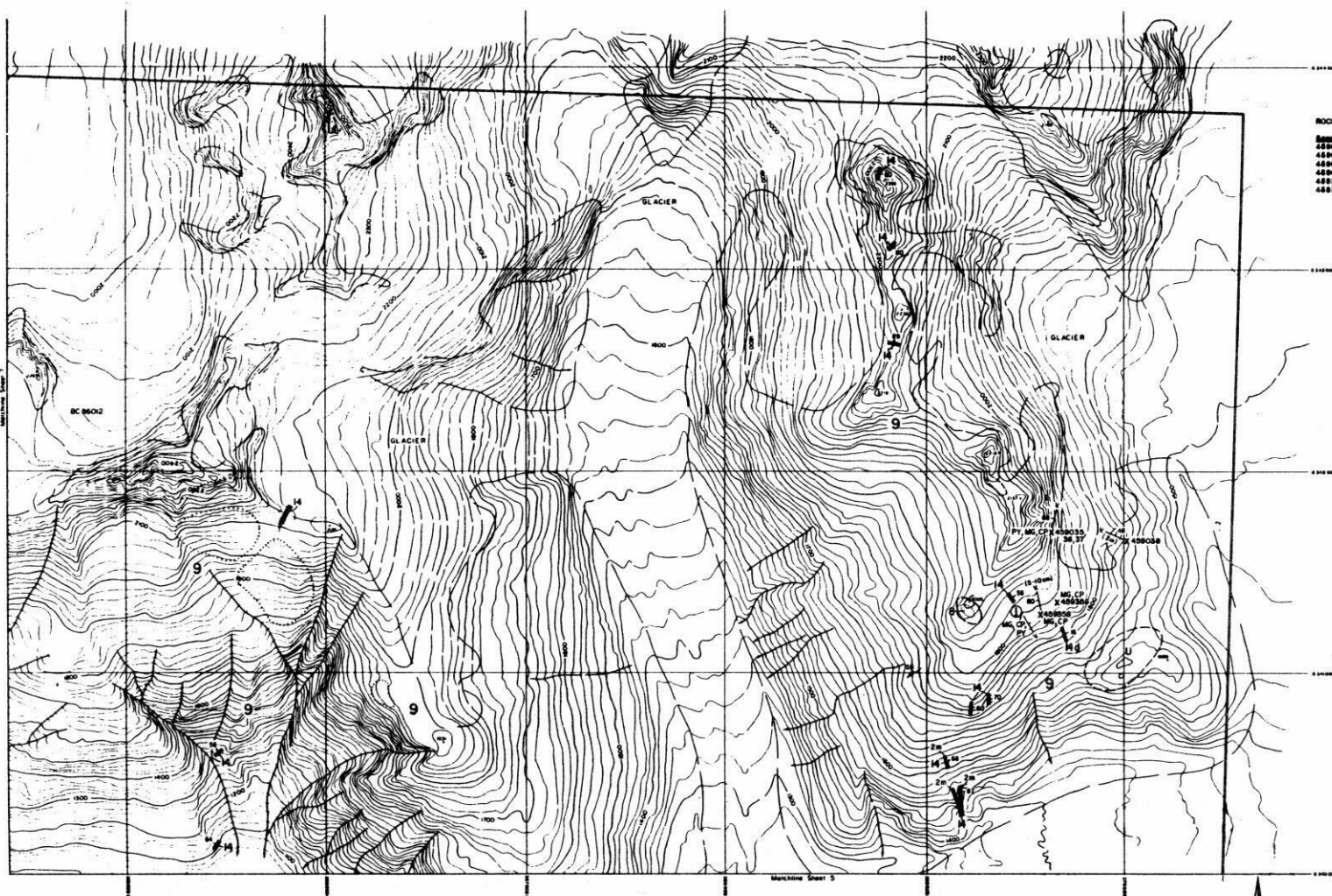
- AS Arsenopyrite  
 AZ Azurite  
 BX Breccia  
 CP Chalcopryrite  
 CB Carbonate  
 DL Dolomite  
 GL Gole Creek  
 GA Garnet  
 HS Hematite, Sphalerite  
 FE Iron  
 MG Magnetite
- MC Malachite  
 MR Mariposite  
 MS Muscovite (sericite)  
 PY Pyrite  
 PD Pyrrhotite  
 OZ Quartz  
 SI Silica  
 SP Sphalerite  
 TT Tetrahedrite  
 ZN Zinc

## MAP INDEX

|   |   |   |
|---|---|---|
| 6 | 7 | 8 |
| 3 | 4 | 5 |
| 1 | 2 |   |

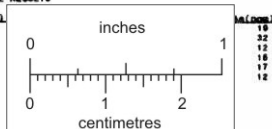
Geology adopted in part from Heinrich et al (1989)  
 Government geochemical data from G.S.C. OPEN FILE 1646 (1988)





#### ROCK GEOCHEMICAL RESULTS

| Sample | Alt (m) |
|--------|---------|
| 488035 | 210     |
| 488036 | 410     |
| 488037 | 280     |
| 488038 | 15      |
| 488039 | 630     |
| 488040 | 400     |



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.

#### LEGEND

- Geological boundary (defined, approximate, assumed), dip indicated
- Bedding, tops known (horizontal, inclined, vertical, overturned, dip unknown)
- Schistosity, gneissosity, cleavage, foliation (horizontal, inclined, vertical, dip unknown)
- Second generation (horizontal, inclined, vertical)
- Lamination (horizontal, inclined, vertical, plunge unknown, vertical)
- Minor folds and their symmetry viewed down-plunge S, Z, M, W; angle of plunge
- Fault (defined, approximate, assumed) inclined, vertical, downthrown side, horizontal movement
- Thrust fault (defined, approximate, assumed) Borne on upper plate, dip indicated
- Dike, vein (V), or stockwork (S), (defined, approximate, assumed) Dip, width indicated
- Mineral occurrence (pyrite)
- Trench
- Open cut
- Diamond Drill Hole Collar
- Gossan
- Legal Corner Post (located, approximate)

#### SAMPLING

- Stream Sediment Sample
- Rock Sample - outcrop (Grab or Chip)
- Rock Sample - float
- (Au) (Cu) Contour Soil Sample Line
- Station Number
- Cu value in ppm (145 ppm or greater)
- Au value in p.p.b. (40 p.p.b. or greater)
- Mineral Showing described in text

Km 0 0.5 1.0 Km

#### INTRUSIVE ROCKS

- TERTIARY**
- Dikes and sills
- Undivided, probable Tertiary dyes.
- Mc andesitic; Mb basaltic (gabbro); Mc lamprophyre (basalt monette); 14d dioritic; Mc felsic
- Plutonic**
- Undivided Tertiary, probably Eocene, plutonic rocks
- 13a biotite quartz-monzonite; 13b plagioclase porphyritic diorite
- MIDDLE TRIASSIC - to - ? MIDDLE JURASSIC**
- Galore Creek intrusions
- Undivided Galore Creek intrusive rocks.
- No syenite; 8b orthoclase porphyritic monzonite; 11c biotite-hornblende quartz monzonite - to - granodiorite
- MIDDLE - to - LATE TRIASSIC**
- Hickman Batholith
- Undivided intrusive rocks of Hickman Batholith
- intrusive contact

#### STRATIFIED ROCKS

##### MESOZOIC "STIKINIAN" STRATA

##### UPPER TRIASSIC

- Stuhini Group
- Undivided volcanic, pyroclastic and volcanoclastic rock.
- 8a shale, siltstone, argillite, limestone, conglomerate; 8b argillite porphyritic basaltic andesite flows, breccia and agglomerate; 8c andesite and plagioclase porphyritic andesite; 8c bedded argillite crystal tuff, tuffaceous siltstone; 8c volcanoclastic agglomerate with subangular - to - subrounded clasts
- apparently conformable contact
- MIDDLE - to - UPPER TRIASSIC**
- (Un-named)
- Undivided post-Permian, pre-Stuhini Group sedimentary strata, including pyroclastic rocks
- 7a siltstone and pyroclastic; 7b chert
- probable angular unconformity and lacuna

#### PALEOZOIC "STIKINE ASSEMBLAGE"

##### PERMIAN

- (Un-named)
- Undivided Permian strata
- 6a upper member Permian limestone - massive, light coloured
- 6b periplatford - to - black breccia
- 6c lower member Permian limestone - thin bedded, pyritic, argillaceous and biotitic calcarenite with argillaceous interbeds
- "Rusty argillite" at base of Permian section
- unknown, but probably faulted, contact
- Ultramafic rocks of unknown age and affinity; possibly fault sivers of oceanic basement terrane

- AS Arsenopyrite
- AZ Azurite
- BX Breccia
- CP Chalcopyrite
- CB Carbonate
- DO Dolomite
- GL Galena
- GA Garnet
- HS Hematite, Specularite
- FE Iron
- MS Magnetite
- MC Malachite
- MR Margarite
- MS Muscovite (sericite)
- PY Pyrite
- PO Pyrrhotite
- QZ Quartz
- SI Silica
- SP Sphalerite
- TT Tetrahedrite
- ZN Zinc

#### MAP INDEX

|   |   |   |
|---|---|---|
| 6 | 7 | 8 |
| 3 | 4 | 5 |
| 1 | 2 |   |

Geology adapted in part from Helreich et al (1989)

GIGI RESOURCES LTD.

**TROPHY GOLD**  
**GEOLOGY & GEOCHEMISTRY**  
**SHEET 8 OF 8**  
**BRITISH COLUMBIA**

EQUITY ENGINEERING LTD.

|                      |                           |          |
|----------------------|---------------------------|----------|
| DRAWN: J.P.W./J.W.   | MINING DIVISION: L.I.R.D. | FIG. No. |
| N.T.S. 1046/3E, 3W   | SCALE:                    | 12       |
| DATE: November, 1989 | REVISED:                  |          |

brachiopods.

Bodies of coarse, angular, block-breccia (Subunit 6b) are locally present near the base of the calcarenite section. The breccias are commonly matrix-supported and locally ferruginous. They are thought to be peri-platform talus deposits. One of these talus bodies occurs in the Bear Pass area of the Trophy 1 claim and was mapped by Continental as their "QBS" unit (Heinrich et al., 1989).

#### Unit 7 -- Middle to Upper Triassic Sediments

The Permian limestone is overlain, with apparent conformity, by a sedimentary sequence divisible into a lower member of silty shales, argillites and limy dolomitic siltstones, and an upper member of chert, cherty siltstones, and rare carbonaceous limestones. These limestones and overlying shales with a cumulative thickness in excess of 200 meters (Logan and Koyanagi, 1989) form a two-to-three-kilometer-wide fault-bounded belt along the South Scud River (Figure 8, 11). The lower member contains thin, Daonella- sp. bearing horizons, indicating a Middle Triassic age.

#### Unit 8 -- Upper Triassic Stuhini Group Volcanics and Sediments

The Stuhini Group comprises a variety of volcanic flows, tuffs, breccias and associated sedimentary rocks (Unit 8). Field relationships suggest that the largest local volcanic edifice was centered on the area now occupied by the Galore Creek porphyry-copper deposit (Allen et al., 1976). The Stuhini Group represents components of an emergent Upper Triassic island arc characterized by distal volcanoclastic and sedimentary turbidites. The stratigraphy ranges in age from early Carnian to late Norian based on radiometric dates (Anderson, 1983) and fossil ages (Souther, 1972). The Middle Triassic Hickman pluton intrudes these volcanics in the eastern part of the property, indicating ages as old as Middle Triassic.

On the Trophy Gold property, the Stuhini Group has been divided into four packages of rock types. The most common package consists of andesite flows and breccias (Subunit 8b). This package occurs mainly below the thrust fault on the east side of Galore Creek, and on the west side of the South Scud River. The massive flows are fine-to-medium-grained, and fragmental textures are common. Porphyries are trachytic, typically contain 15% to 40% plagioclase phenocrysts and 20% hornblende in a dense green (chloritic) matrix. Compositional similarity of fragments and matrix in the "fragmental" subunit makes recognition of the fragmental character difficult except where there has been preferential weathering on exposed surfaces.

Sediments (Subunit 8a) are interbedded with volcanics mainly within and below the thrust fault crossing Friendly Creek (Figure 7W). A limestone and shale unit, up to 50 meters in thickness, marks the location of this thrust fault on the east slope of Galore Creek. Subunit 8a also includes upward-fining, thinly-bedded siltstone and sandstone as well as a conglomerate composed of green and purple volcanic, limestone and other sedimentary clasts. They occur north of Copper Canyon (Figures 2, 5), on the ridge immediately west of the South Scud River. The presence of Monotis subcircularis Gabb within these sedimentary rocks indicates a Late Triassic age (Logan and Koyanagi, 1989).

Subunit 8d consists of a dark green, matrix-supported, volcanoclastic package. The fragments are subrounded to angular and vary in size from less than a centimeter to one meter. This subunit also occurs above the thrust fault crossing Friendly Creek between the thrust fault and the small glacier in the first valley east of Galore Creek (Figure 7W). The fragments are most commonly volcanic, and weather to buff, beige, and pale green. Fragment compositions range from andesitic to rhyolitic with euhedral hornblende, plagioclase, and augite phenocrysts being conspicuous in some fragments; others are vesicular.

Subunit 8c is composed of purple to maroon, thinly-bedded tuffs, epiclastics and siltstones which outcrop between Copper Canyon and Galore Creek (Logan and Koyanagi, 1989). Graded bedding indicates that the beds are locally overturned. Maroon lithic-ash tuffs and lapilli tuffs can be traced northwestward where they interfinger with bedded siltstone, conglomerate and pods of clastic limestone. The distinctive maroon colour and well-bedded nature of these rocks suggests they may be a separate suite of volcanics.

#### Unit 9 -- Middle to Late Triassic Hickman Batholith

The Hickman Batholith (Unit 9) is a composite body comprised of three I-type plutons (Brown and Gunning, 1989a): the Middle(?) to Late Triassic Nightout and Hickman Plutons and the Middle Jurassic Yehiniko Pluton (Souther, 1971; Holbek, 1988). The older plutons are sub-volcanic intrusions, spatially and genetically associated with broadly coeval Stuhini Group volcanic strata.

The Hickman Pluton occupies most of the Trophy Gold property east of the South Scud River; a small plug on the west slope of the South Scud valley is probably correlative with the Hickman Pluton (Logan and Koyanagi, 1989). The various intrusive phases of the Hickman Pluton have yet to be mapped in detail, but according to Souther (1971), it is crudely zoned and ranges in composition from pyroxene diorite in the core to biotite granodiorite near the margins. The bulk of the pluton is comprised of biotite- and hornblende-pyroxene bearing diorite to monzodiorite. The Hickman Pluton is bounded by a steeply dipping

faulted contact with Stuhini Group volcanics on its western side (Read, 1989, in Heinrich et al., 1989), although at other locations the pluton displays intrusive contacts with the Stuhini volcanics.

#### Unit 11 -- Middle Triassic to Middle Jurassic Galore Creek Intrusions

The Galore Creek Complex consists of a series of syenitic intrusions hosted by broadly coeval Upper Triassic Stuhini Group volcanics. On the Trophy property, this intrusive complex forms three subdivisions. Cropping out between Camp Creek and North 110 Creek, Subunit 11a includes several syenite plugs and dykes of variable texture and composition dominated by orthoclase phenocrysts with a grey or pink groundmass and various proportions of plagioclase, biotite, and K-feldspar phenocrysts. Subunit 11b is an orthoclase-porphyrritic monzonite of coarse-to-medium grain size constituted by about equal amounts of K-feldspar and green (probably saussuritized) plagioclase. An outcrop of this unit is located up the north fork of Friendly Creek (Figure 7E).

Subunit 11c forms a large, medium- to coarse-grained plug northwest of Trench Lake area. This unit is biotite- and hornblende-bearing, quartz monzonite to granodiorite and has been dated at  $195 \pm 6$  million years (Logan and Koyanagi, 1989). It has been included with the Galore Creek Intrusions because of its Early Jurassic age, although it is compositionally distinct.

#### Unit 13 -- Tertiary Plutonic Rocks

Undivided, probable Tertiary-aged intrusives are assigned to Unit 13. Subunit 13b consists of small plugs and dykes of plagioclase porphyritic diorite which are green to grey in colour with up to 20% phenocrysts of zoned plagioclase, hornblende and quartz. Pyrite is ubiquitous in these porphyritic diorites, and weathered outcrops are limonite stained because of this. Although this unit has not been mapped by Equity Engineering geologists, it has been reported from the Trophy property, localized by north-trending faults along the South Scud River valley (Logan and Koyanagi, 1989).

A zone of quartz monzonite (Subunit 13a) associated with rhyodacite and rhyolite dyking covers an area of 250 meters by 800 meters immediately south of the Hummingbird Zone (Figure 8). The medium-grained, equigranular quartz monzonite contains 15% biotite and lesser hornblende. Read (1989) considers this intrusive complex to be Eocene because of its composition and orientation.

#### Unit 14 -- Dykes and sills

Dykes and sills of apparently different ages and composition are found throughout the property, though their petrography and cross-cutting relationships have not been studied in detail. They



include felsic (Subunit 14e) and andesitic/basaltic (Subunits 14a,14b) compositions.

## 6.2 Structure

Regional geological investigations have suggested that two phases of deformation may be present in the Stikine Arch (Souther, 1972). The first one produced bedding-parallel foliation in pre-Permian stratas. The second phase of deformation is described as having affected pre- and post-Permian stratas and resulted in the creation of southwest-verging folds and thrust faults.

Southwest-verging folding and faulting near the margins of the Hickman Pluton involves both the marginal phases of the Pluton and the Stuhini Group which it intrudes (Read, 1989, in Heinrich et al., 1989). This suggests that southwest-verging deformation can be no older than Late Triassic. According to Read (1989), on the west side of the South Scud River "...the Permian limestone, Middle Triassic argillite, Triassic volcanics, and Early Jurassic(?) granodiorite [Hickman Pluton] are involved in an east-dipping thrust and reverse fault system. The stratified rocks, excluding the unbedded Triassic volcanics of unknown orientation, have a moderate eastward dip, but the rock units young westward [and are therefore overturned on a large scale]. The contact between rock units are mainly planar and faulted.". The thrust It juxtaposed Stuhini Group on top of the Permian limestones and shales in what would otherwise be considered a normal stratigraphic sequence. Other thrust faults have been recognized within Stuhini Group strata, and the whole package may be imbricated to an extent which is largely unrecognized.

Four fault sets have been recognized on the property. Northerly striking faults are vertical to steeply east-dipping and were active from Early Jurassic to Recent times and includes a prominent north-south trending fault along the South Scud River. Northwest-striking faults are probably coeval with the north striking faults, but locally predate them. Northwest-striking faults include the thrust faults previously noted such as the Cone Mountain fault (Brown and Gunning, 1989a) and its extension along strike to the southeast through to Trench Lake. Northwest-striking faults are prominent within the Stuhini Group volcanics between Galore Creek and the South Scud River. Northeast faults form the third set which are steeply dipping and show sinistral movement. An example of this type of faulting is Camp Creek Fault located in the southwest corner of the property where it forms the northern boundary of the syenite body. Many of the creeks are aligned in a northeasterly direction and are likely controlled by this fault. East-west faults are vertical or steeply dipping to the north and have normal-type motion with north side down. They mostly post-date the north and northwest trending faults. An east-west fault plane was mapped up the north fork of Friendly Creek. The presence

of the latter fault explains why the continuation of the thrust fault could not be located to the north.

## 7.0 MINERALIZATION

A number of mineralization-types have been identified on the Trophy Gold property to date. These types include base and precious metal mineralization related to breccia, mesothermal vein, porphyry, skarn and listwanite alteration systems. The metals present and style of mineralization at each occurrence appears to be related to its associated intrusive event or in the case of the listwanite occurrence, to major fault structures.

To date, the majority of mineral occurrences found on the Trophy Gold property are related to the emplacement of either Middle Triassic-Early Jurassic stocks or younger, Eocene granodiorite to monzonite plugs. An example of the first deposit-type is the auriferous quartz-epidote veining with pyrite and chalcopyrite mineralization, related to the syenitic body in the southwest corner of the property. The gold-silver mineralization of the Ptarmigan Zone is typical of the second type with high silver to gold ratios, intense sericitic-silicic alteration and location along strong northerly trending fault structures.

### 7.1 Summary of Known Occurrences

A number of significant mineral occurrences were discovered during the mid 1960's and Continental Gold Corp.'s exploration campaigns prior to the 1989 field program (Figures 5-12). Three of these occurrences have advanced to the drilling stage: Ptarmigan, Hummingbird and porphyry-style targets in the southwest corner of the property. The Ptarmigan, Hummingbird and Eagle zones are named as such whereas all other showings have been assigned numerically. Not all of the showings were examined during the current program; therefore, the following discussions are based mostly on historical information and have been updated as noted. Sample sites discussed, below from Continental Gold Corp.'s 1988 field program, are not plotted individually but have been grouped and centered with a numbered symbol.

#### Ptarmigan, Hummingbird and Eagle Zones

Mineralized areas identified by Continental Gold Corporation geologists on their Trophy 1-4 claims include the Hummingbird Skarn, the Eagle Structure (including the Bear Pass zone), and the Ptarmigan Zone (Figure 8). These structures were identified during the 1960's by the BIK-Silver Standard syndicate.

The Hummingbird Skarn on the Trophy 1 and 3 claims is a zone of metasomatic alteration developed within Middle Triassic (pre-Stuhini Group) limestone near the contact of numerous dykes

marginal to the Hickman pluton and an unnamed Jurassic (?) stock. The mineralogy of the skarn consists of garnet, calcite, diopside, quartz, and chlorite, with chalcopyrite, pyrite, and pyrrhotite. Podiform massive sulphide bodies occur at the contact between the metasomatically altered limestone and silicified volcanics of the Stuhini Group. Several other skarn zones were located in the area of the Hummingbird showing. The best precious metal values are associated with massive sulphide lenses; unfortunately, the lenses are very limited in extent with typical dimensions of 1.5 meters in width and 3.0 meters in length. In 1988, one diamond drill hole, TR88-12, was targeted at the Hummingbird Skarn. This hole was abandoned due to drilling difficulties after only 64.0 meters were drilled. Skarn mineralization was intersected to a depth of 19.7 meters at which point a banded chert was encountered. No significant base or precious metal values were found in the skarn.

Both the Eagle Zone (including the Quartz Breccia Sulphide - QBS and Bear Pass Breccia) and the Ptarmigan Zone consist of mineralized breccia bodies. Of the two, the Eagle Zone is hydrothermally less-altered to an assemblage of quartz, sericite, iron carbonate, and possibly potassium feldspar with pyrite being the dominant sulphide present. An examination of the Eagle breccia reveals that this breccia is not of a magmatic hydrothermal origin, like the Ptarmigan structure, but resembles a debris flow with variable clast types. The QBS zone contains sphalerite, pyrrhotite, galena, tetrahedrite, electrum, and native gold which were identified in thin section. Auriferous mineralization associated with the QBS system includes massive sulphide blocks and galena "shears" within large limestone clasts in the breccia. The QBS breccia is ellipitical in shape, being 250 meter long and 150 meters wide. Two diamond drill holes, TR88-9 and -11, scissored the breccia along a northwest-southeast orientation. Hole TR88- which was abandoned after 142.7 meters were drilled did not intersect the breccia indicating the northwest boundary has a southeasterly dip. Two wide zones of low grade gold values were intersected in the upper half of hole TR88-11 including a one meter intersection of 0.103 ounces per ton gold located at the footwall of the "sedimentary breccia-conglomerate". Significant intercepts in hole TR88-11 are listed below in Table 7.1.1.

TABLE 7.1.1

DRILL HOLE SUMMARY: Eagle Zone - QBS Zone

| Hole Number | Depth (m)         | Width (m) | Au (oz/t) | Ag (oz/t) | Zn (%) |
|-------------|-------------------|-----------|-----------|-----------|--------|
| TR88-11     | 4.3-23.2          | 18.9      | 0.017     | 0.11      | 0.09   |
|             | 28.5-45.0         | 16.5      | 0.019     | 0.13      | 0.03   |
|             | 135.1-139.1       | 4.0       | 0.050     | 0.47      | 0.10   |
|             | incl. 136.1-137.1 | 1.0       | 0.103     | 0.60      | 0.26   |

The Bear Pass section of the Eagle Zone contains stockworks and narrow (3-7 cm.) veins mineralized with galena, arsenopyrite, pyrite, pyrrhotite, sphalerite, tetrahedrite, and ruby silver in a gangue suite of quartz, calcium and iron carbonates. The 1988 sampling revealed that the highest gold and silver values are restricted to selected grab samples of the narrow veinlets containing the higher sulphide concentrations. More rigorous chip sampling of the zone during the 1988 program returned much lower gold values ranging up to 1290 parts per billion gold over one meter sample intervals. The zone, as mapped, appears to be limited to the northeast by volcanic units and to the southwest by sediments. Therefore, there is very little room to develop significant tonnage even if "ore grade" precious metal grades could be identified. The Bear Pass structure was also drill-tested in 1988, intersecting several wider zones of low grade gold values similar to the surface trenching results. A single two meter intersection of 0.086 ounces/ton gold was encountered in hole TR88-10. The drill logs indicate that a massive pyrite fracture filling occurs at this point in the hole. Significant intercepts in hole TR88-10 are summarized in Table 7.1.2.

TABLE 7.1.2

DRILL HOLE SUMMARY: Eagle Zone - Bear Pass Structure

| Hole Number | Depth (m) | Width (m) | Au (oz/t) | Ag (oz/t) | Zn (%) |
|-------------|-----------|-----------|-----------|-----------|--------|
| TR88-10     | 17.4-20.4 | 3.0       | 0.031     | 0.03      | 0.01   |
|             | 49.8-51.8 | 2.0       | 0.086     | 0.53      | 0.03   |
|             | 76.8-77.4 | 0.6       | 0.034     | 1.84      | 0.32   |

The Ptarmigan Zone is a concentrically-zoned, pipe-like body of heterolithic and homolithic ("monolithic") intrusive breccias at the contact between the Upper Triassic Hickman Pluton and Upper Triassic Stuhini Group volcanics. A northwest-trending, steeply east-dipping fault through the pipe-like Ptarmigan Zone is marked by an envelope of intense sericitic-silicic alteration with associated arsenical, auriferous-sulphide mineralization. Sulphide minerals include pyrite, sphalerite, galena, pyrrhotite, minor chalcopyrite and arsenopyrite which occur in stockwork veining and in void structures in the breccia. Dominant gangue minerals are calcite, iron carbonate, sericite and silica. Within the cirque of the Ptarmigan Zone exposure, the fault zone is about five meters wide and sixty meters long. At the regional scale, the fault is parallel to and on trend with the western intrusive contact of the Hickman Pluton. Lead isotope dating of galena from the Ptarmigan zone exhibits "isotope ratios similar to Tertiary model-ages" (Logan and Koyanagi, 1989). Northeast-trending mineralized fractures are a conspicuous feature of the fault zone. This feature was noted by the Continental Gold Corp.'s geologists who believed that northeast-trending structures were the major control of mineralization at the Hummingbird, Eagle, and Ptarmigan zones.



A program of diamond drilling launched late in the 1988 field program by Continental Gold Corp. was designed to intersect the down-dip (to the northeast) extension of the "A-zone" ("discovery") mineralization at the Ptarmigan Zone. Drill core assays returned more than 24 intersections grading greater than 0.05 ounces per ton gold (> 1.0 meter core sample length) were reported including a number of intersections exceeding 0.10 ounces per ton gold.

Inspection of drill logs and the construction of new composite drill sections suggest that these northeast-trending veins probably represent planes of extension (dilation) within the more obvious northwest-trending fault and alteration envelope; and that the auriferous mineralization intersected to date is confined to not more than three main lenticular zones of intense sericite and silica alteration with attendant sulphide mineralization which strike parallel to the central, northwest-trending fault, and dip steeply to the northeast (see detailed report in Appendix B). Some of the longest mineralized intersections reported by Continental Gold Corp. appear to be the result of drilling down-dip along the lenticular alteration zones due to an unfortunate choice of geological model. Table 7.1.3 lists weighted averages of the significant intersections for the Ptarmigan Zone drilling.

TABLE 7.1.3

DRILL HOLE SUMMARY: Ptarmigan Zone

| Hole Number | Depth (m)   | Width (m) | Au (oz/t) | Ag (oz/t) | Zn (%) |
|-------------|-------------|-----------|-----------|-----------|--------|
| TR88-1      | 37.6-42.6   | 5.0       | 0.023     | 1.29      | 0.51   |
| TR88-2      | 56.0-88.9   | 32.9      | 0.078     | 2.43      | 1.62   |
| incl.       | 58.9-61.9   | 3.0       | 0.163     | 9.46      | 4.26   |
| and         | 72.9-77.9   | 5.0       | 0.141     | 1.27      | 1.82   |
| TR88-3      | 90.0-104.7  | 14.7      | 0.058     | 0.56      | 0.71   |
|             | 114.4-119.3 | 4.9       | 0.014     | 0.11      | 0.06   |
|             | 231.1-231.6 | 0.5       | 0.193     | 0.11      | 0.11   |
| TR88-4      | 207.5-208.5 | 1.0       | 0.428     | 0.41      | 0.01   |
|             | 213.2-236.5 | 23.3      | 0.101     | 0.75      | 1.01   |
| incl.       | 213.2-216.6 | 3.4       | 0.224     | 1.64      | 1.27   |
| TR88-5      | 8.9-11.5    | 2.6       | 0.018     | 3.21      | 0.26   |
|             | 14.2-20.1   | 5.9       | 0.042     | 2.01      | 0.14   |
| TR88-6      | 106.2-107.5 | 1.3       | 0.122     | 0.19      | 0.54   |
|             | 124.5-126.3 | 1.8       | 0.062     | 0.32      | 0.63   |
| TR88-7      | 72.0-76.0   | 4.0       | 0.084     | 1.91      | 0.67   |
|             | 98.8-105.4  | 6.6       | 0.050     | 0.17      | 0.13   |
| incl.       | 98.8-100.1  | 1.3       | 0.107     | 0.21      | 0.18   |
|             | 120.7-125.2 | 4.5       | 0.074     | 1.01      | 1.11   |
|             | 127.2-128.3 | 1.1       | 0.116     | 3.08      | 2.24   |
| TR88-8      | 53.8-60.5   | 6.7       | 0.054     | 1.09      | 0.10   |
| incl.       | 53.8-56.8   | 3.0       | 0.094     | 1.90      | 0.16   |

TABLE 7.1.3 (cont'd)

## DRILL HOLE SUMMARY: Ptarmigan Zone

| Hole Number      | Depth (m)   | Width (m) | Au (oz/t) | Ag (oz/t) | Zn (%) |
|------------------|-------------|-----------|-----------|-----------|--------|
| TR88-13<br>incl. | 31.6-35.9   | 4.3       | 0.040     | 0.44      | 0.25   |
|                  | 32.9-34.2   | 1.3       | 0.097     | 0.18      | 0.08   |
|                  | 38.3-40.3   | 2.0       | 0.040     | 0.64      | 0.25   |
| TR88-14          | 11.2-13.9   | 2.7       | 0.076     | 2.46      | 0.29   |
|                  | 67.2-69.1   | 1.9       | 0.116     | 4.15      | 3.08   |
|                  | 81.2-84.1   | 2.9       | 0.054     | 0.20      | 0.10   |
|                  | 87.2-90.2   | 3.0       | 0.055     | 0.20      | 0.14   |
| TR88-15          | 116.0-117.3 | 1.3       | 0.039     | 2.28      | 0.49   |
|                  | 16.1-18.1   | 2.0       | 0.046     | 2.62      | 0.67   |
|                  | 20.1-21.2   | 1.1       | 0.108     | 0.63      | 0.08   |
|                  | 29.2-30.2   | 1.0       | 0.033     | 5.73      | 4.08   |
| TR88-16          | 43.9-45.1   | 1.2       | 0.054     | 4.83      | 1.32   |
|                  | 15.0-17.0   | 2.0       | 0.063     | 1.01      | 0.28   |
|                  | 19.8-23.5   | 3.7       | 0.034     | 1.67      | 0.07   |
|                  | 29.5-30.5   | 1.0       | 0.072     | 1.93      | 0.81   |
|                  | 50.0-51.1   | 1.1       | 0.108     | 0.43      | 0.12   |
|                  | 62.0-64.0   | 2.0       | 0.095     | 6.20      | 0.89   |
|                  | 71.0-72.0   | 1.0       | 0.098     | 11.01     | 0.54   |
|                  | 106.9-108.0 | 1.1       | 0.025     | 3.21      | 0.45   |
|                  | 110.8-112.0 | 1.2       | 0.038     | 3.38      | 0.93   |
|                  | 113.5-114.5 | 1.0       | 0.051     | 7.19      | 1.40   |
|                  | 125.5-127.5 | 2.0       | 0.057     | 8.92      | 2.31   |

## 1) Magnetite-Chalcopyrite Veins

This occurrence is located on the Scotch 12 claim centered on the 1,900 meter contour elevation (Figure 12). This area was identified as the Jay showing and subsequently trenched by Phelps Dodge Corporation in the mid 1960's. The mineralization consists of magnetite, pyrite, chalcopyrite and quartz hosted as fracture fillings and zones of local brecciation within larger shear zones. The shear zones are enveloped by potassic alteration within a granodiorite phase of the Hickman batholith. Fractures are oriented north, northwest and north-northwest, with steep easterly dips. The shear zones are reported to be approximately 50 meters in length (Heinrich et al., 1989). In 1988, chip sampling of the zones yielded values up to 2760 parts per billion gold and 89879 parts per million copper over 1.2 meters (Sample #BL 4792). Gold values from the chip sampling are generally less than 2,000 parts per billion and the higher values, up to 3090 parts per billion gold, were restricted to selected grab and float samples.

Six rock samples were collected from this general area in 1989. The best copper mineralization encountered was a 5 to 10 centimeter fracture filling which strikes north-northwesterly and dipping steeply to the east; grab sample #459359 from this fracture

assayed 2.71% copper.

## 2) Magnetite-Chalcopyrite Skarn

This showing is located on the western slope of the South Scud River valley (Figure 8), approximately two kilometers southwest of the Hummingbird Zone. The skarn mineralization consists of magnetite and chalcopyrite, hosted in a crinoidal limestone unit. Sample results indicate that gold concentrations appear to be strongest in the magnetite-rich lenticular zones and that there is not a direct correlation between copper and gold values. Chip sampling of the magnetite-rich lenses by Continental Gold Corp., commonly returned copper values in excess of 1.0%, but the bulk of the gold values are below 1000 parts per billion (Heinrich et al., 1989). Unfortunately, the dimensions of the mineralized lenses was not reported and this showing was not examined in 1989.

## 3) Trench Lake

A series of parallel quartz and quartz-carbonate veins are hosted in mafic volcanics and contain minor pyrite, chalcopyrite and sphalerite (Figure 10E). The veins vary in width from 20 centimeters to greater than one meter and trend 120°. Grab samples taken in 1988 assayed up to 3.06 ounces per ton silver (Sample #PB 6279) with associated copper values between 1.30% and 7.02%. Only one grab sample (#BA 4316) returned an anomalous gold value (1,420 ppb).

Further work conducted in this area in 1989 located numerous quartz-chalcopyrite veins, 20 to 65 centimeters in width, but failed to match the high silver values similar of those reported in 1988.

## 4) Limestone-Hosted Shear

This showing, located on the west side of the South Scud River valley (Figure 8), is reported as a silicified malachite-stained shear zone hosted in limestone with 3% pyrite and 1% chalcopyrite (Heinrich et al., 1989). No orientation, width and strike length measurements were not reported in the sample descriptions. A chip sample (#BA 4517), taken over 0.5 meters, returned 0.048 ounces per ton gold, 3.34 ounces per ton silver, 1.42% copper and 20.70% zinc. A grab sample (#BA 4518), taken 2.0 meters up slope from the chip sample, assayed 0.207 ounces per ton gold and 4.59 ounces per ton silver. This showing was not examined in 1989.

## 5) Glacier 12

This occurrence consists of a massive chalcopyrite-pyrite vein with anomalous gold values, hosted in highly sheared and fractured mafic volcanics (Figure 10W). The vein width varies from 15 centimeters to 1.0 meter and was traced for more than 100 meters



on surface (Heinrich et al., 1989). Selected grab sampling in 1988 returned assays up to 14.22% copper, 2.04 ounces per ton silver and 0.118 ounces per ton gold from a 0.5 to 5 centimeter wide vein (#BM 7333) and 32.72% copper and 2.10 ounces per ton silver in a 15 to 20 centimeter wide calcite vein (#LB 5747). This vein could not be relocated in 1989 due to a topographical error on map-sheet 6 where the two southernmost creeks were shown to flow into Galore Creek. The more southerly one does not exist and the northern one flows into the next drainage to the north. This may have led to some errors in locating the shear-hosted veins reported in the 1988 report. The topographic base has been corrected on map-sheet 6.

In 1989, a shear zone, up to 15 meters wide, was discovered on the east bank of Galore Creek, immediately west of the Glacier 12 claim (Figure 10W). The shear zone contains several pods of copper mineralization approximately 10 centimeters long by 30 centimeters thick. Fifty centimeters sample intervals across these pods returned 9,380 parts per million copper and 1.49% copper from grab samples #447090 and #447092, although gold values were negligible. This general area along the east bank of Galore Creek is marked by widespread pyrite and chalcopyrite mineralization associated with potassium feldspar and epidote alteration of the volcanic host rocks.

#### 6) Glacier 5

Continental Gold Corp.'s personnel reported a 15 to 50 centimeters wide, shear-hosted vein, containing up to 40% coarse-grained chalcopyrite and 10% pyrite (Figure 7W). This zone is reported to be exposed for over 50 meters. A chip sample of the vein (#PB 6391, 15 cm) assayed 17.49% copper, 15.57 ounces per ton silver and 0.206 ounces per ton gold (Heinrich et al., 1989). The high copper content of the sample indicates that this "chip" sample may have been very selective. Another chip sample (#PB 6388) across 50 centimeters of the same vein returned 760 parts per billion gold, 3.54 ounces per ton silver and 2.70% copper. This showing was not re-examined during the 1989 program.

#### 7) Area Southeast of Trench Lake

In 1988, numerous quartz-calcite base metal veins were discovered approximately 500 meters southeast of Trench Lake (Figure 10E). These veins are noted as being very similar to those around Trench Lake except for a stronger lead and zinc component to the mineralization. Vein widths, where noted, ranged from 15 to 50 centimeters and the highest silver assay of 12.2 ounces per ton was a selected sample (#BA 4334) with greater than 5.5% combined lead-zinc. A zone of brecciated limestone mineralized with pyrite and chalcopyrite was also discovered in this same area. A sample (#BA 4343) of this mineralization assayed 4.42 ounces per ton silver and 4.71% copper. Prospecting in the immediate area during 1989, located a quartz stockwork system containing pyrite

and chalcopryite. A grab sample from this zone returned 5.50% copper, 3.32 ounces per ton silver and 20 parts per billion gold (#459814). The strike extension of the veins and breccias remain open. Of interest, a listwanitized thrust contact occurs at or in close proximity to the veining.

#### 8) Glacier 3

A narrow pyritic shear, hosted in strongly fractured andesites, was discovered in a creek bed on the east slope of the Galore Creek valley (Figure 10W). A number of samples were taken from this structure with the gold values ranging up to 0.268 ounces per ton (#BA 4280). Approximately 400 meters up the creek from this showing, a 30 centimeter wide vein, hosted in mafic volcanics and mineralized with pyrite, specularite and chalcopryite, was discovered in 1989. A grab sample (#459546) of vein material assayed 0.072 ounces per ton gold and 2.96% copper. Another auriferous quartz-pyrite vein, one centimeter in width, was located 400 meters downstream from Occurrence 8. A grab sample (#459845) from the vein assayed 0.074 ounces per ton gold with negligible silver and base metal values.

#### 9) Glacier 5 "Listwanite"

This occurrence was reported to be a highly ankeritic, sheared volcanic unit over an area covering 50 x 75 meters (Figure 7W). The gossanous zone consists of a dip slope exposure of carbonate-mariposite alteration within a thrust fault. The zone is oriented 325° with a 50° dip to the east. A chip sample (#BA 4299), taken over a 20 by 20 centimeter area, assayed 0.068 ounces per ton gold. The sample contained trace sulphide mineralization.

The thrust fault can be traced for approximately 1.5 kilometers, although iron carbonate-mariposite ("listwanite") alteration is restricted to perhaps 75 meters of the total strike length. Sampling in 1989 of both the "listwanite" and the carbonate altered volcanics immediately below the thrust fault failed to return any anomalous base and precious metal values.

#### 10) Glacier 5 - Sulphide Vein

Shear-hosted veining is hosted in fragmental volcaniciastics and black siltstones near the top of the ridge between Galore Creek and the South Scud River (Figure 7E). The showing consists of a 10-25 centimeter wide shear zone with chalcopryite, galena and possibly tetrahedrite (Heinrich et al, 1989). The best sample (#BA 4365) graded 0.123 ounces per ton gold, 9.78% lead and 2.48% zinc. Sampling of the footwall returned only weakly anomalous gold values (188 ppb). This particular showing was not examined in 1989 but extensive sampling of numerous pyritic gossans in the same rock unit failed to return any anomalous values.

### 11) Glacier 8 - Quartz-carbonate veins

The Glacier 8 showing is located on the west slope of the South Scud River in a cirque in the southeast corner of map-sheet 3 (Figure 7E). Several, 5 to 10 centimeter wide, quartz-carbonate veins mineralized with 5-8% arsenopyrite are hosted in mafic volcanic rocks. Very selected sampling (#BM 7424) of one of these vein structures in 1988 returned gold values up to 2.63 ounces per ton gold with high arsenic (6195 ppm), cobalt (1054 ppm) and nickel (12173 ppm) values. However, an additional sample (#BM 7424) of the above vein contained only 89 parts per billion gold indicating either the extremely erratic nature of the gold mineralization or a very selective sampling procedure. Wallrock alteration extends 50 centimeters on either side of the vein and consists of orange-brown weathering iron carbonate, quartz and sericite (Heinrich, S.M., 1989). No sampling of the wallrock alteration was noted in the sample records to indicate whether auriferous values extend outside of the narrow vein structure. Erratic results were obtained from another narrow (2 cm) veinlet by two independent samplers: (#LB 5771) 19,100 parts per billion gold and (#BA 4384) 4,120 parts per billion gold.

In 1989, a shear zone, penetrated by quartz-carbonate veinlets, was discovered further upslope in the same cirque. Gold geochemical values of the veining varied from below detection up to 400 parts per billion (Samples #447141-447146).

### 12) Saddle 14

Occurrence 12 is located on a steep slope above and north of a glacier in the southeast corner of the Trophy Gold property on the Saddle 14 claim (Figure 12). The mineralization is described as fracture-controlled, disseminated pyrite in augite and plagioclase porphyritic volcanics (Heinrich et al, 1989). Two of the samples carried anomalous gold values including (#BA 4422) 25200 and (#PB 6357) 3285 parts per billion gold. Both samples did not contain significant base metal values. There is no indication of the size of the mineralized structures or what characteristic geologic features may account for the gold enrichment. A number of other samples were taken of mineralization of similar description but these samples returned low or negligible gold values. To date, little work was done in this area and more detailed work is required to isolate this subtle style of mineralization.

## 7.2 1989 Occurrences

A number of significant metalliferous occurrences were discovered during the 1989 field program. The bulk of the work was concentrated on the western portion of the property where regional government mapping indicated the area to be underlain by the favourable Stuhini Group volcanic and sedimentary rock package.

A large portion of the property remains to be examined as this year's program was limited due to the onset of winter snow cover. The showings described below are numbered sequentially after the previous section. Complete descriptions of all of the mineral occurrences are appended.

### 13) Limestone-hosted Shear Zone

A quartz-carbonate-chlorite alteration zone (Figure 11) occurs within a shear zone hosted in limestone on the west side of the South Scud River. The planar shear zone strikes  $214^{\circ}$  and varies from 10 centimeters to 1 meter in width and is exposed for 30 meters. Sample #459039, from a 1 meter wide section of quartz-carbonate-chlorite alteration containing 60% combined pyrite, magnetite and sphalerite, assayed 0.046 ounces per ton gold with parts per million values of 9.5, 1600, 95, 3210 and 950 for silver, copper, lead, zinc and arsenic, respectively. Other samples from the same zone containing 1-20% pyrite and minor sphalerite, were anomalous in gold with values up to 700 parts per billion and zinc values up to 6750 parts per million (#459040-459046). The sample results at this location are characterized by a weak arsenic geochemical signature.

### 14) Syenite-hosted Copper Mineralization

Widespread chalcopyrite-pyrite mineralization, hosted in syenite intrusions, was discovered near the headwaters of N110 Creek in the southwest corner of the Trophy Gold property (Figure 5). The sulphide minerals are found as disseminations, blebs and stringers or are contained in quartz-epidote-hematite veinlets. Sampling of this mineralization (#447124-447132) returned weakly anomalous gold values (<5-315 ppb) and copper values ranging from 41 to 2420 parts per million. Gold values tend to be highest with the best copper grades. This syenite was the focus of exploration during the mid 1960's. A number of copper occurrences in the syenite body between N110 and Camp Creeks were found including the Murray Showing in which a 11.9 meter sample cut an average assay of 0.10% copper (Gale, 1964).

### 15) Quartz-carbonate Vein

Mineralized, frost-heaved rubble was discovered at the edge of a glacier in the northeast corner of map-sheet 3 (Figure 7E). The rubble consists of quartz-carbonate material with 1% tetrahedrite and subordinate galena and pyrite. A sample of the subcrop, #459084, contains 130 parts per billion gold, 33.30 ounces per ton silver, 2.09% copper, 1.33% lead, 6310 parts per million zinc and 730 parts per million arsenic. The mineralized subcrop is situated 200 meters west of a volcanic-granodiorite contact and is oriented in an east-west direction. A sample (#459085) of the carbonate-chlorite-quartz altered, volcanic host rock with 2% pyrite returned weakly anomalous gold (75 ppb), silver (11.0 ppm)



and base metal values (<200 ppm).

#### 16) Quartz-carbonate Vein

This occurrence outcrops 200 meters southeast of the above showing (Figure 7E). The showing consists of a 10 centimeter wide, quartz-carbonate alteration zone which is hosted in a mafic volcanic unit. Sampling of the galena, sphalerite, pyrite and trace chalcopryite mineralization returned 4.42 ounces per ton silver, 1.98% lead, and 4.42% zinc in sample #459096. Gold values in this sample are below detection and the copper concentration is 1475 parts per million copper. This zone grades into a 20 centimeter wide, quartz-carbonate vein with higher sulphide concentrations. Grab sample #459098 of this better mineralized vein material contained 28.40 ounces per ton silver, 4410 parts per million copper, 5.92% lead, and 3.54% zinc but only 25 parts per billion gold. The zone trends 268° and lies approximately 100 meters west from a faulted, volcanic-granodiorite contact. Traces of mariposite were noted in the mineralized zones.

#### 17) Quartz-carbonate Vein

Located 100 meters to the east of above showing, a quartz-carbonate vein is hosted in a shear zone at the contact of mafic volcanics and a granodiorite body (Figure 7E). The shear zone is 1 to 2 meters wide and exposed for 350 meters along a 330° trend. A number of sulphide pods containing up to 60% pyrite are localized along the shear zone. Grab sample #459099 taken from quartz-carbonate veining, containing 5% pyrite and minor chalcopryite, assayed 3.76 ounces per ton silver with geochemical values of 160 parts per billion gold and 430 parts per million copper. A number of grab samples were taken along this mineralized trend and the results of these samples are tabled below.

TABLE 7.2.1

#### OCURRENCE 16 SAMPLING RESULTS

| SAMPLE | WIDTH<br>(m) | GOLD<br>(ppb) | SILVER<br>(ppm) | COPPER<br>(ppm) | LEAD<br>(ppm) | ZINC<br>(ppm) |
|--------|--------------|---------------|-----------------|-----------------|---------------|---------------|
| 459099 | 1-2          | 160           | 3.76*           | 4110            | 430           | 5430          |
| 459100 | 1-2          | 210           | 86.0            | 2960            | 180           | 600           |
| 459101 | 1-2          | <5            | 11.0            | 3410            | 255           | 1840          |
| 459102 | 1-2          | 115           | 5.0             | 2120            | 85            | 242           |
| 459103 | 0.3          | 575           | 13.0            | 5160            | 175           | 136           |
| 459104 | 2.0          | 15            | 13.0            | 4100            | 20            | 312           |
| 459105 | 2.0          | 5             | 6.5             | 1805            | 10            | 410           |
| 459106 | 2.0          | 40            | 4.5             | 1520            | 5             | 646           |
| 459107 | 2.0          | 5             | 2.5             | 1070            | 15            | 39            |

\* denotes assay in ounces per ton



#### 18) Limestone-hosted Sulphide Vein

A narrow, malachite- and azurite-stained vein was located in a creek valley near the toe of the glacier on the east side of map-sheet 3 (Figure 7E). Where exposed on surface, the vein is 16 centimeters wide and is comprised of 60% pyrite with minor chalcopyrite. The vein is hosted in limestone up slope from a granodiorite body. A grab sample (#459114) of typical vein material returned a fire assay of 0.094 ounces per ton gold and geochemical values of 44.0 parts per million silver, 7250 parts per million copper, 120 parts per million lead, 2710 parts per million zinc and 2200 parts per million arsenic. A second sample (#459115) was taken two meters along strike the vein width is 20 centimeters. Analytical results from this sample include 240 parts per billion gold and values of 9.5, 4260, 35, 1210 and 1600 parts per million for silver, copper, lead, zinc and arsenic, respectively.

#### 19) Mineralized Float

At 1840 meters elevation in the central part of map-sheet 3, a piece of bleached, silicic-pyritic float was sampled (Figure 7E). The float was penetrated by sulphide stringers (5%) containing pyrite, sphalerite, and galena. Grab sample #459506 returned 0.676 ounces per ton gold, 154 parts per million silver, 674 parts per million copper, 7770 parts per million lead, and 1.26% zinc. The float location rests on top of a conglomerate and lapilli-tuff unit, at the edge of a glacier. The source of the float is thought to be close at hand and it is not known whether this mineralization is related to the sulphide vein, Occurrence 10, located 200 meters to the northwest.

#### 20) Felsic Dykes

A series of fault-controlled felsic dykes occur on the west side of the first small glacier east of Galore Creek (Figure 7W). The dykes cover an area approximately 100 meters wide by 600 meters long. The majority of dykes trend 020° with a secondary set oriented 000°, 035°, 250° and 340° at 50 meter intervals. The dykes are sub-vertical, 1.0 to 1.5 meters wide and strongly carbonate and potassium feldspar altered. An average of 5% finely disseminated pyrite is found within the dykes. Small chalcopyrite veinlets occur for 10 centimeters along the margin of one of these dykes; sample #459389 selected from the copper-rich veinlet assayed 0.272 ounces per ton gold, 21.5 parts per million silver and 1.18% copper.

#### 21) Shear-hosted veins

Two shear zones, north and south of the above occurrence, were found to be auriferous (Figure 7W). Both shear zones are hosted in Stuhini Group volcanoclastics and their mineralization consists

of veinlets and disseminations of pyrite. The southern occurrence which is located 450 meters south of sample location #459389, is 40 centimeters wide and exposed for 7 meters. The fault trends 345° and dips 80° to the east. A selected grab sample, #459385, of a pyritic pod within the shear assayed 0.238 ounces per ton gold with low silver and base metal values. A quartz-chlorite vein mineralized with pyrite and galena was located 250 meters west-southwest of sample #459385. A grab sample (#459276) representative of this vein assayed 0.046 ounces per ton gold and 0.93% lead with geochemical values of 7.5 parts per million silver, 765 parts per million copper and 4330 parts per million zinc.

The second zone is exposed for 20 meters at a point 100 meters north of sample location #459389. The width of the alteration zone around the fault structure exceeds 1.0 meter, although massive pyritic veinlets within the shear zone vary from 2 to 15 centimeters in width. The shear strikes 004° with a 85° easterly dip (Figure 7W). A gold assay of 0.046 ounces per ton was returned from grab sample #459388 of a massive pyritic veinlet. Silver, copper, lead and zinc values were 18.5, 2150, 1440 and 464 parts per million, respectively.

## 8.0 GEOCHEMISTRY

Eleven silt samples were taken from streams draining the Trophy Gold property during the course of a 1987 regional geochemical survey conducted by the federal and provincial geological surveys (GSC, 1988). Several of these were anomalous (exceeding the 90th percentile for all streams sampled in the Telegraph Creek and Sumdum map sheets) to very anomalous (exceeding the 99th percentile) in one or more of the base and precious metals. Results are summarized in Table 8.0.1 and will be discussed below, jointly with results of 1989 stream sediment sampling.

TABLE 8.0.1

### GOVERNMENT REGIONAL SILT SAMPLING RESULTS

| Sample Number | Gold (ppb) | Silver (ppm) | Copper (ppm) | Lead (ppm) | Zinc (ppm) | Arsenic (ppm) |
|---------------|------------|--------------|--------------|------------|------------|---------------|
| 873347        | 79**       | 0.2          | 278***       | 21*        | 48         | 7**           |
| 873352        | 42*        | 0.6**        | 130*         | 32**       | 72         | 15            |
| 873353        | 35*        | 0.1          | 138**        | 17*        | 52         | 2             |
| 873373        | 30*        | 0.5**        | 77           | 27**       | 389**      | 37**          |
| 873372        | 3          | 0.1          | 134*         | 8          | 38         | 3             |
| 873374        | 11         | 0.4**        | 41           | 14         | 56         | 18*           |
| 873375        | 8          | 0.1          | 44           | 12         | 60         | 20*           |

\* Indicates sample exceeded the 90th percentile, N=1291

\*\* Indicates sample exceeded the 95th percentile, N=1291

\*\*\* Indicates sample exceeded the 99th percentile, N=1291  
(GSC Open File 1646, 1988)

During the 1989 field season, 110 stream sediment samples were collected. This sampling consisted of both field-sieved stream sediment samples and more conventional silt samples. Unfortunately, field designations as to which sample procedure was used for a number of the individual samples was not noted; therefore, a statistical analysis of the results can not be completed and anomalous levels for each individual element are conservatively set as follows: gold-40 ppb, silver-0.5 ppm, copper-150 ppm, lead-25 ppm, zinc-200 ppm and arsenic-35 ppm. The silt sample results would be expected to be comparable to the government results listed above and field-sieved stream sediment samples would have variably enhanced geochemical values due to the sieving process. Individual anomalous values are too numerous to discuss in detail; hence, the following discussion will be restricted to multi-element or multiple station anomalies.

Camp Creek and the drainages immediately to the north have returned highly anomalous gold and to a lesser extent, copper values (Figures 5, 7W). The government silt sample #873347, taken at the mouth of Camp Creek exceeded the 99th percentile in copper (278 ppm), the 95th percentile for gold (79 ppb) and the 90th percentile for lead (21 ppm). Samples #447177 and #463047, which were taken higher up Camp Creek, and the sample series extending two kilometers north of Camp Creek (#172363-172365, #459201-459213), also returned gold values greater than 40 parts per billion (max. value-1980 ppb) with copper values generally greater than 100 parts per million (max. value-1565 ppm). Zinc values increase towards the northern end of this series of anomalous drainages. The soil contour line sampled through this area returned similar anomalous results.

The next major drainage to the north of Camp Creek was sampled during the government survey with positive geochemical results (Figure 7W). Silt sample #873352, taken near the mouth of Friendly Creek, returned values above the 90th percentile for gold (42 ppb), 95th percentile for silver (0.6 ppm), 90th percentile for copper (130 ppm) and 95th percentile for lead (32 ppm). Sample #459452, taken just above the government sample location, repeated these results with 60 parts per billion gold, 153 parts per million copper and 54 parts per million lead. Further sampling upstream indicates that anomalous gold, silver, lead and to a lesser extent, copper values come from south fork of Friendly Creek on the Glacier 5 and 7 claims. Samples #459456-459460, taken along the southern fork, returned the following ranges of anomalous values: gold (35-115 ppb), silver (0.4-1.2 ppm), copper (115-135 ppm) and lead (<2-48 ppm). The source of the stream sediment anomalies would be caused in part by the auriferous base metal mineralization from Occurrences 10, 19, 20 and 21.

Government silt sample #463335, taken at Bear Creek near its confluence with Galore Creek (Figures 10W, 10E), contained 35 parts per billion gold and 138 parts per million copper, both of which

are above the 90th percentile mark. The series of samples (#459290, #459291, #459298-459300 and #459590-459594) up the southern fork of Bear Creek trace the copper (150-552 ppm) and gold (25-85 ppb) anomalies to the gold-bearing mineralization of Occurrence 8 and the pyrite-chalcopyrite vein at sample location #459546. Although, the gold values show no consistent pattern, the copper values definitely increase closer to the source of the mineralization.

The most northerly fork of Bear Creek and the western fork of a creek draining north into the Scud River on the Glacier 10 claim both have an anomalous zinc signature with significant silver and copper values (Figures 10W, 10E). The northern drainage follows a faulted contact between an Early Jurassic intrusive body and Permian limestones. Zinc values range from 360 to 1520 parts per million in samples #459915-459920. The source of this anomaly likely occurs between 700 and 900 meters elevation as the samples taken at this elevation not only have the highest zinc values but copper, silver and gold values are anomalous at one or more of the three sample sites (#459916-459918). The north fork of Bear Creek lies along the southern extension of the above noted fault. As with the previous drainage, zinc values and to a lesser extent silver and copper values are enhanced. Values ranging up to 552 parts per million zinc, 146 parts per million copper and 0.6 parts per million silver were returned from stream sediment samples #459280-459284. To date, the source of these two anomalous areas have yet to be determined.

Government silt sample #873373, sampled from a tributary of the South Scud River (Figure 8), contained results above the 95th percentile for silver (0.5 ppm), lead (27 ppm), zinc (389 ppm) and arsenic (37 ppm) with a gold value (30 ppb) above 90th percentile. The argentiferous, base metal mineralization found at Occurrences 15 through 18 is one apparent source of this anomaly.

The 10 kilometer soil contour line on the east side of Galore Creek was designed to locate new occurrences in areas of favourable geology and anomalous stream geochemistry. The samples were collected in four segments labelled 800M-E, 800M-S, 800M-N, 650M-N and TR-ROAD-N. A total of 400 soil samples were taken during the survey. Table 8.0.2 summarizes the 90th percentile, maximum and minimum values for the significant elements, as calculated from these samples. Values above or equal to the 90th percentile are considered anomalous. A correlation matrix for the results indicates a strong positive correlation for arsenic-silver-zinc, silver-zinc and a weaker correlation for silver-copper-lead and copper-gold. For presentation purposes, only the anomalous copper and gold values have been plotted.



TABLE 8.0.2

## ANOMALOUS LEVELS FOR SOIL GEOCHEMISTRY

| PERCENTILE   | GOLD<br>(ppb) | SILVER<br>(ppm) | COPPER<br>(ppm) | LEAD<br>(ppm) | ZINC<br>(ppm) | ARSENIC<br>(ppm) |
|--------------|---------------|-----------------|-----------------|---------------|---------------|------------------|
| 90th         | 40            | 0.5             | 145             | 20            | 112           | 16               |
| Maximum val. | 550           | 4.0             | 6990            | 260           | 1430          | 205              |
| Minimum val. | <5            | <0.5            | 2               | <5            | 18            | <1               |

A number of anomalous trends were uncovered by the survey as outlined below:

1. L800M 2+75E-13+75E (Figures 5, 7W): This area lies north of Camp Creek and is defined by anomalous gold and lead values with spotty arsenic and silver values. The strongest gold values are from 10+00E to 13+00E where eight of thirteen soil samples contained greater than 150 parts per billion gold.

2. L800M 18+75E-24+25E (Figure 7W): An anomalous gold trend with weaker copper values occur over 550 meters of the soil line. The geochemical values increase at the northern end of the anomaly between 23+50E and 24+25E: gold (65-550 ppb), copper (197-326 ppm), lead (30-50 ppm), zinc (126-148 ppm) and arsenic (20-55 ppm). The anomalous area is underlain by Upper Triassic Stuhini Group volcanics.

3. L650M 0+25N-1+00N, 4+00N-5+75N, 7+75N-10+25N (Figure 10W): These three areas, which straddle Friendly and Bear Creeks, are characterized by copper-only anomalous values. The strongest of three areas lies between 4+00N and 5+75N where four of eight soil samples returned copper values in excess of 400 parts per million. At this point, the anomalous stations lie within volcanic rocks south of an intrusive contact.

4. TR-ROAD 14+75N-24+75N (Figure 10W): This anomaly is defined by a strong zinc signature with values ranging up to 1430 parts per million. Spot high gold (415 ppb), silver (3.0 ppm), copper (310 ppm), lead (260 ppm) and arsenic (205 ppm) values occur within the larger zinc anomaly. The area underlain by the anomaly is mapped as being within a large intrusive body downslope from a limestone contact. The source of the anomaly is expected to be in close proximity to the intrusive contact as there is marked increase in geochemical values where the contact crosses the road at 25+00N.

## 9.0 DISCUSSION

Although concentrated exploration initiatives have been completed on specific areas (i.e. Ptarmigan Zone) on the Trophy Gold project, many areas on the property have received very little detailed exploration work.

Two separate mineralizing events have been identified which are related to the emplacement of the Middle Triassic-Early Jurassic and Tertiary intrusives. The first group of intrusives include the older Hickman batholith in the northeast corner of the property, the Early Jurassic monzonite-granodiorite body mapped northwest of Trench Lake and the Early Jurassic 'Galore Creek' syenite south of Camp Creek. Mineralization found within the Hickman batholith includes the copper-magnetite zones on the Scotch 12 claim and silver-bearing quartz-carbonate veins adjacent to the intrusive contact on the Glacier 5 and 6 claims. The gold-silver-copper-lead-zinc mineralization in the vicinity of Trench Lake likely resulted from the emplacement of the monzonite-granodiorite intrusive to the northwest. Anomalous zinc and copper stream geochemical values occur in the creeks draining the margin of this intrusive. The 'Galore Creek' syenites have been shown throughout the camp to have a strong copper-gold association and a distinctive magnetic signature. The mineralization at the Ptarmigan, Eagle and Hummingbird showings is presumed, by way of lead isotope dating, to be related to the emplacement of the Tertiary-aged intrusive.

To date, a large number of auriferous mineral occurrences have been discovered on the property, although most of these occurrences are very narrow and are not continuous along strike. However, several areas have demonstrated potential for hosting significant gold- or silver-bearing mineralization including the Ptarmigan Zone, the area north of Camp Creek, Occurrence 12 and the multiple showings on the eastern half of map-sheet 3.

The Ptarmigan Zone has received the most exploration in the past but it still remains the best exploration target on the property. The Ptarmigan Zone is a Tertiary zone of gold-bearing sericitization and silicification oriented along the north-northwest trending Ptarmigan Fault. It is hosted within the Ptarmigan Breccia, which is thought to be a magmatic-hydrothermal breccia pipe situated above an unexposed Eocene plug. The Ptarmigan Zone exhibits many of the features of other Tertiary precious metal mineralization in the Galore Creek camp such as:

- a) sulphide mineralogy comprises a wide range of base metals, with pyrite, arsenopyrite, sphalerite and galena dominant;
- b) sericitization is the dominant alteration type; base and precious metals are associated with silicification within a more extensive sericitization envelope;

- c) gold:silver ratios average approximately 1:10 (as opposed to 1:1 for Jurassic alkalic mineralization);
- d) major steeply-dipping, northerly-trending faults exert strong structural control on alteration and mineralization;
- e) alteration and mineralization forms wide zones (up to 30 meters wide for the Ptarmigan Zone on surface).

Twelve diamond drill holes have been drilled at the Ptarmigan Zone in 1988. Much of the data from the 1988 drilling program is of limited use, as all but two holes paralleled the controlling Ptarmigan Fault and its lenticular envelope of quartz-sericite-sulphide alteration and associated precious metal mineralization.

The area north of Camp Creek is defined by strong gold soil and stream sediment geochemistry in an area of poor outcrop exposure. This anomaly is underlain by volcanic rocks of the Upper Triassic Stuhini Group north of a faulted contact with an Early Jurassic syenite body. An induced polarization anomaly was outlined upslope from the soil contour line during a 1965 geophysical survey (Falconer, 1965). The strongest part of the anomaly parallels Camp Creek and then swings in a northwesterly direction for approximately 500 meters. To date, the source of the geophysical and geochemical anomalies have not been located. The potential in this geological environment exists for both porphyry-style gold-copper mineralization and mesothermal vein-type gold mineralization.

The potential of the subtle style of mineralization found at Occurrence 12 is unknown. The mineralization is described as fracture-controlled and disseminated pyrite in augite and plagioclase porphyritic volcanics. In 1988, two samples of this type of mineralization contained anomalous gold values including 25200 and 3285 parts per billion gold. Both samples did not contain significant base metal values. To date, little work has been done in this area and more detailed work is required to determine the size of the mineralized structures and what characteristic geological features may account for the gold enrichment.

A large number of gold- and silver-bearing mineral occurrences are hosted within Stuhini Group rocks on map-sheet 3. Individual grab samples have returned gold assays up to 0.676 ounces per ton and silver assays up to 33.30 ounces per ton. Although, some of these occurrences are narrow structures and have limited strike potential, the density of mineral showings and the anomalous gold-silver-copper-lead stream geochemistry in Friendly Creek indicate that further, more detailed work is required in this area.

The Trophy Gold property is underlain by favourable geology and alteration, similar to that hosting most major precious metals

occurrences in the Galore Creek district. The discovery of strong, well-altered structures, numerous gold-bearing mineral occurrences and very encouraging stream and soil geochemical results provides abundant incentive to conduct further exploration work on this property.

## 10.0 RECOMMENDATIONS

### 10.1 Program

#### Phase I:

It is recommended that the airborne survey started in the fall of 1989 be completed. Upon completion of the survey, an interpretation of results should be done in order that potential targets be identified before the Phase II program is started.

#### Phase IIa:

The Phase IIa portion of the program shall consist of geological mapping, prospecting, geochemical and geophysical surveys followed by trenching of promising targets and drilling of the Ptarmigan Zone. Geological mapping, prospecting and stream geochemistry should be conducted on areas not thoroughly examined to date. In addition, targets generated from previous work programs should be followed-up including:

- detailed geological mapping and sampling of the strike extensions of the Ptarmigan Fault to determine the mineral potential of this structure outside of the Ptarmigan Breccia.
- anomalous creek drainages including Friendly Creek, Bear Creek and the western fork of the main creek on the Glacier 10 claim.
- the large number of precious metal-bearing structures on the east half of map-sheet 3 to see if any connection between the various occurrences can be found.
- the Stuhini Group volcanics in proximity to the Tertiary stock mapped on the Scotch 8 and 10 claims.
- the auriferous pyritic mineralization at Occurrence 12 on the Saddle 14 claim to determine width, grade and strike length potential of this mineralization.
- source of the mineralized float at Occurrence 17.

More detailed grid-oriented soil geochemistry, geophysics and geological mapping should be carried out over Camp Creek and the



area to the north defined by anomalous gold soil and silt geochemistry and an I.P. geophysical anomaly. The grid baseline should be cut in a north-south direction for a distance of two kilometers north from the southern claim boundary of the Saddle 5 claim. Crosslines should extend to the west to the break in slope to avoid sampling glacial till and to the east as far as permitted by topography. Lines should be established every 100 meters with sample stations every 50 meters. Magnetometer and VLF-EM surveys should be conducted over the grid.

The Ptarmigan Zone is the mineral occurrence on the Trophy Gold property which has received the most exploration in the past, but is also the one which demonstrates the need for further work to determine its potential. The Ptarmigan Fault should be tested by drilling both within the Ptarmigan Breccia and along strike to the northwest and southeast. Detailed geological mapping and sampling of the strike extensions of the Ptarmigan Fault will provide a good indication of its potential. A 900 meter drill program is proposed for the Ptarmigan zone on four sections of perpendicular to the controlling fault and spaced approximately 120 meters apart.

#### Phase IIb:

A second phase of exploration consisting of up to 1750 meters of diamond drilling may be warranted to continue drilling on the Ptarmigan Zone and to test targets developed during Phase IIa of the program. Advancement to this phase will be contingent upon favourable results from Phase IIa.

### 10.2 Budget

#### Phase IIa:

##### WAGES

|                         |               |           |
|-------------------------|---------------|-----------|
| Project Geologist       |               |           |
| 28 days @ \$400/day     | \$ 11,200     |           |
| Project Manager         |               |           |
| 28 days @ \$300/day     | 8,400         |           |
| Geologist               |               |           |
| 26 days @ \$350/day     | 9,100         |           |
| Prospectors             |               |           |
| 2 @ 26 days @ \$300/day | 15,600        |           |
| Samplers                |               |           |
| 2 @ 28 days @ \$200/day | <u>11,200</u> |           |
|                         |               | \$ 55,500 |

## RENTALS

|                        |            |
|------------------------|------------|
| VLF-EM                 |            |
| 2 weeks @ \$250/week   | \$ 500     |
| Magnetometer           |            |
| 2 weeks @ \$300/week   | 600        |
| Truck                  |            |
| 4 days @ \$80/day      | 320        |
| Truck Stand-by         |            |
| 24 days @ \$10/day     | 240        |
| Rock Drill             |            |
| 7 days @ \$60/day      | 420        |
| General Equipment      |            |
| 24 days @ \$40/day     | 960        |
| Hand-held Radio Rental |            |
| 7 @ 24 days @ \$5/day  | <u>840</u> |

3,880

## SUBCONTRACTS

|                            |                |
|----------------------------|----------------|
| Geophysical Report         | \$ 2,500       |
| Diamond Drilling (NQ Core) |                |
| (all inclusive cost)       |                |
| 900 meters @ \$250/meter   | <u>225,000</u> |

227,500

## CHEMICAL ANALYSES

|                                  |              |
|----------------------------------|--------------|
| Soil Geochemical (Au+10 element) |              |
| 750 @ \$15.50                    | \$ 11,625    |
| Rock Geochemical (Au+10 element) |              |
| 300 @ \$18.50                    | 5,550        |
| Silt Geochemical (Au+32 element) |              |
| 100 @ \$15.00                    | 1,500        |
| Assays (Au, Ag, Cu, Pb, Zn)      |              |
| 50 @ \$25.00                     | <u>1,250</u> |

19,925

## MATERIALS AND SUPPLIES

|                       |            |
|-----------------------|------------|
| Explosives            | \$ 500     |
| Geochemical Supplies  | 400        |
| Office/Field Supplies | <u>500</u> |

\$ 1,400

## SUPPORT

|                           |    |              |
|---------------------------|----|--------------|
| Accomm. Galore Cr. Camp   |    |              |
| 192 mandays @ \$120/night | \$ | 23,040       |
| Communications            |    | 200          |
| Helicopter                |    |              |
| 30 hours @ \$700/hr       |    | 21,000       |
| Fixed Wing Aircraft       |    | 6,000        |
| Expediting                |    | 700          |
| Freight                   |    | 700          |
| Printing                  |    | 100          |
| Travel Expenses           |    | <u>4,000</u> |
|                           |    | 55,740       |

|                    |  |        |
|--------------------|--|--------|
| REPORT PREPARATION |  | 14,000 |
|--------------------|--|--------|

## RECORDING FEES

|                 |    |               |
|-----------------|----|---------------|
| 5% on \$350,000 |    | <u>17,500</u> |
|                 | \$ | 395,445       |

MANAGEMENT FEE @ 15%

|    |               |
|----|---------------|
|    | <u>59,317</u> |
| \$ | 454,762       |

CONTINGENCY @ 10%

|    |               |
|----|---------------|
|    | <u>45,476</u> |
| \$ | 500,238       |

The recommended Phase IIa program will cost approximately \$500,000 to implement.

PHASE IIb (contingent on Phase IIa results):

## DIAMOND DRILLING

|                                     |    |         |
|-------------------------------------|----|---------|
| 1750 meters (NQ core) @ \$250/meter |    |         |
| (all inclusive cost)                | \$ | 437,500 |

MANAGEMENT FEE @ 15%

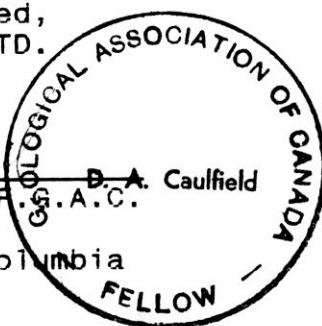
|    |               |
|----|---------------|
|    | <u>63,625</u> |
| \$ | 503,125       |

Total Phases IIa & IIb Say \$ 1,000,000  
=====

Respectfully submitted,  
EQUITY ENGINEERING LTD.

*D. A. Caulfield*  
David A. Caulfield, F.G.A.C.

Vancouver, British Columbia  
January, 1990



## APPENDIX A

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## APPENDIX B

### GEOLOGY OF THE PTARMIGAN ZONE

Excerpt from Gigi Resources Ltd. report "Geology of the Ptarmigan Zone on the Trophy Project" by Awmack, H.J. and Gerasimoff, M. (1990).

(Note: Figures 2 through 4 from the report have been omitted in this excerpt)

## 1.0 INTRODUCTION

The Ptarmigan Zone is the most thoroughly explored mineral occurrence on the Trophy Project of Gigi Resources Ltd. and Continental Gold Corporation, located in the Galore Creek area of northwestern British Columbia. A reconnaissance VLF-EM geophysical survey and extensive diamond drilling were conducted during 1988 on the Ptarmigan Zone, but due to an unfortunate choice of geological model, the results were not presented in a form allowing easy interpretation. Equity Engineering Ltd. was retained by Gigi Resources Ltd. to compile the 1988 drilling and VLF-EM results and determine the significance and potential of the Ptarmigan Zone.

To avoid confusion, a distinction has been made throughout this report between the Ptarmigan Zone (the gold-bearing zone of mineralization) and the Ptarmigan Breccia (the breccia pipe which hosts the Ptarmigan Zone). The major fault which trends north-northwest through the center of the Ptarmigan Breccia and appears to control alteration and mineralization within the Ptarmigan Zone has been termed the Ptarmigan Fault.

## 2.0 GEOLOGICAL SETTING

The Ptarmigan Breccia is a breccia pipe of roughly equidimensional surface exposure and subvertical extension to unestablished depth, which is hosted along the contact between Upper Triassic Stuhini Group volcanic strata and the Hickman Pluton. The Hickman Pluton is part of the composite Hickman Batholith which also encompasses the Nightout and Yehiniko plutons. Potassium-argon isotopic dates from a concordant hornblende ( $221 \pm 8$  Ma) and biotite ( $209 \pm 7$  Ma) mineral-separate pair (Holbek, 1988) indicate that the Hickman Pluton is no younger than Late Triassic.

Six hundred meters to the west-northwest of the Ptarmigan Breccia lies the Hummingbird and Eagle Zones which are skarn-hosted and breccia-hosted mineral showings, respectively. The Hummingbird skarn is spatially associated with a small granodiorite plug and felsic dykes on its south side. The age of these intrusions is unknown, but Read (1989) considers them likely of Eocene age because of similarities in composition and orientation to other Eocene intrusions in the Galore Creek area.

Permian limestone forms the bedrock in the valley of the South Scud River west of the Ptarmigan Breccia. On the west side of the South Scud River, Permian limestones are in reverse-faulted contact with Stuhini Group volcanics and with intrusive rocks which may correlate with the Hickman Pluton (Read, 1989; Logan and Koyanagi, 1989b). On the east side of the South Scud River, the Permian strata adjoin Upper Triassic Stuhini Group rocks but Middle Triassic siliciclastic strata form an intervening wedge over a strike length of 3.5 kilometers. According to Read (1989), the

Middle Triassic unit is tightly folded, steeply dipping and overturned towards the southwest; fold axes plunge towards the southeast at the southern end of the wedge-like Middle Triassic exposure. Because the Permian limestone in the valley of the South Scud River is in reverse-faulted contact on the west side, and in steeply dipping-to-overturned attitude on the east side, the South Scud River must mark the position of either: 1) an anticlinorium with Permian limestone exposed in the core and limbs deformed to form an upward-flaring mushroom-like structure; or 2) a "pop-up zone" formed from a combination of southwest- and northeast-verging conjugate reverse faults. A structure which combines elements of each of these is also possible, such as a mushroom-like anticlinorium with faulted limbs.

Several sets of fault orientations in the region centered on the Galore Creek porphyry copper deposit have combined to form a mosaic of fault-bounded blocks. The largest of these faults strike northwesterly, like the Cone Mountain Fault and the Ambition Fault (Brown and Gunning, 1989a), while faults of lesser length strike northeasterly, northerly, and east-west. Two faults of different orientations appear to converge in the area of the Ptarmigan Breccia and this may be an important factor in localizing the brecciation without necessarily being the breccia-forming mechanism.

### 3.0 GEOLOGY OF THE PTARMIGAN BRECCIA

#### 3.1 Geometry

The shape of the Ptarmigan Breccia has been described as roughly elliptical with dimensions of 400 meters by 200 meters and elongated around a northeasterly axis (Heinrich et al., 1989), but is in fact more rhomb-like and, when the marginal breccia facies are included, equidimensional (Figure 1). The shorter diagonal of the rhomb forms part of the north-northwest trending faulted contact between the Hickman Pluton and the Stuhini Group. The contacts between the intrusive and monolithic breccia facies on the east and north sides are demonstrably planar, while the western volcanic-monolithic breccia contact could be more planar than even the gently curvi-planar contact interpreted by Continental geologists. On the south side, the contacts of the breccia body with the host rocks are partly concealed by a glacier, but reasonable extensions of the exposed contacts indicate that only a small fraction of the Ptarmigan Breccia is subglacial.

At the surface, contacts between the various breccia facies and the enclosing host rocks are subvertical, suggesting that the Ptarmigan Breccia is pipe-like or prismatic in form. Diamond drilling confirms the steep-sided nature of some of the facies contacts.



The size of the Ptarmigan Breccia pipe is of the same order of magnitude as many breccia pipes from around the world which are associated in some way with intrusive rocks, as compiled and tabulated by Sillitoe (1985, p. 1471). These range in size from less than 70 meters across to about 1.3 kilometers, with the vast majority in the realm of a few hundred metres in maximum surface dimension.

### 3.2 Structure and Petrography

Rock types in the Ptarmigan Breccia can be systematically divided into two protoliths, the Stuhini Group volcanics and the Hickman Pluton monzonite/granodiorite/quartz diorite. The various breccia types result from the fragmentation of these protoliths individually and their admixture. The breccia types are described by Continental geologists as monolithic "intrusive breccia," monolithic "volcanic breccia," and heterolithic breccia comprised of both volcanic and igneous fragments<sup>1</sup>.

Fragments range from angular to rounded in shape with subangular-to-subrounded fragments predominating and little identifiable rock flour. Most clasts are of pebble or larger size. Drill logs supplied by Continental Gold Corporation indicate that clast-supported breccias and clast-rich matrix-supported breccias are volumetrically dominant in the Ptarmigan pipe. The clast-rich nature of the Ptarmigan Breccia and the presence of vugs, veins and stockworks requires development of open spaces within the breccia. These could have been produced due to the loss of fluidized fines (McCallum, 1985) to the earth's surface, leaving spaces between clasts unoccupied by rock flour, by uplift associated with breccia formation and by the sericitization of feldspar in the clasts derived from the Hickman Pluton. Sillitoe (1985, p.1478) notes that the sericitization of feldspar results in the production of significant amounts of void space equal to 15 to 20% of the volume of feldspar sericitized.

The breccia lithologies are distributed in concentric shells within the Ptarmigan pipe, with heterolithic breccia generally

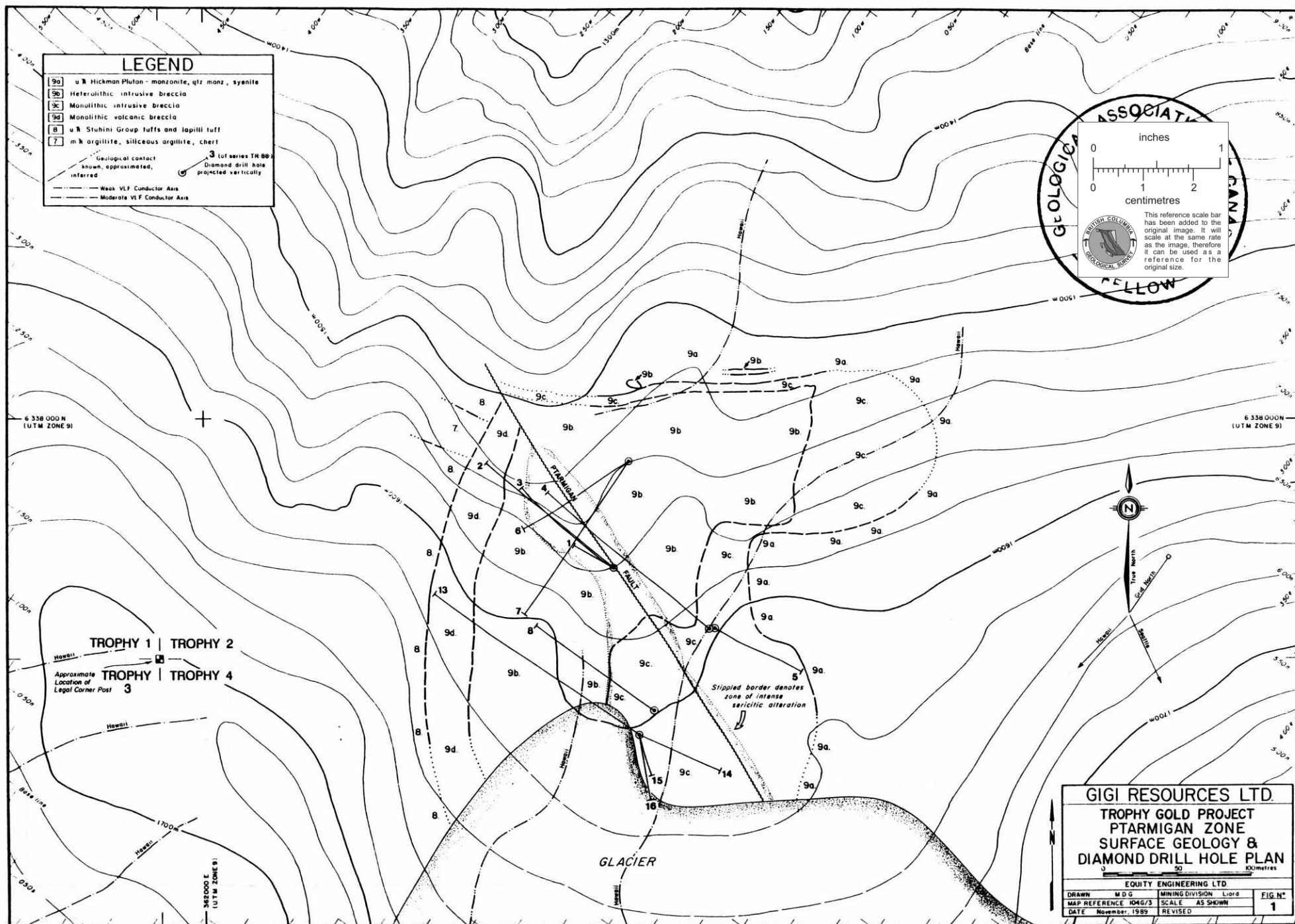
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<sup>1</sup>There has been a misuse of the Greek prefixes mono- and hetero- in previous rock descriptions. Mono- means singular or alone and when used in conjunction with -lith it forms a word meaning literally a single rock. What is required for describing the Ptarmigan breccias, which are formed from one type of fragment, is the Greek prefix homo-, which means same. So in fact we should refer to homolithic breccias and heterolithic breccias meaning those with fragments which are from the same type of rock and those which are from different kinds of rock. To avoid confusion with previous reports, however, the prefix "mono" has been used throughout this report.

forming the axial core of the pipe and monolithic breccias forming marginal facies between unfragmented country rock (either Hickman Pluton or Stuhini Group volcanics) and the lithologically mixed breccias in the centre of the pipe.

Unlike most breccia pipes, the Ptarmigan Breccia demonstrates strong fault and fracture control. The north northwest-trending, steeply-dipping Ptarmigan Fault bisects the Ptarmigan Breccia and locally marks the contact between the Hickman Pluton and the Stuhini Group volcanics. It also effectively divides marginal, monolithic facies of "intrusive" and "volcanic" breccias on the northeast and southwest sides of the fault, respectively. Northwest of the Ptarmigan Breccia, Read (1989) has mapped the Ptarmigan Fault with the Stuhini Group in the hanging wall and the Hickman Pluton in the footwall and concludes that it dips about 25 degrees to the southwest but notes that the fault steepens to dip more than 60 degrees southwest as one approaches the Ptarmigan Breccia. The 1988 drilling suggests that the fault steepens through the vertical and actually dips northeasterly within the Ptarmigan Breccia pipe, thereby reversing the hanging wall/footwall relationships. Read (1989) suggests that the Ptarmigan Fault has undergone two periods of movement: an earlier one accounting for most of the motion and resulting in the loss of the fine-grained, chilled margin of the Hickman Pluton as well as the contact metamorphosed Stuhini Group volcanics (both of which are known from other locations), and a later movement which was quite minor and resulted in some fault gouge and re-brecciation. It appears that the Ptarmigan Breccia is located at the intersection of the Ptarmigan Fault with the inferred tip-line of the southeastern extension of the Cone Mountain Fault, which is marked on surface by a ductile deformation zone mapped by Read (1989). Elsewhere in the Galore Creek camp, Eocene plugs (such as the one thought to underlie the Ptarmigan Breccia) are localized along other major faults.

As for structural control of mineralization within the Ptarmigan Zone, Continental geologists noted the presence of two sets of fractures within the envelope of intense sericitic alteration, dominantly northeast-trending (AZ 020°-040°). A lesser set trends northwest (AZ 310°-330°) and is observed to be locally offset by the northeast-trending set (Heinrich et al, 1989). Continental geologists apparently believed that the mineralized, northeast-trending fractures defined the controlling structure for mineralization and failed to realize that they were only a small part of the much larger northwest-trending Ptarmigan Fault system. Evidence that the Ptarmigan Fault controlled hydrothermal fluid circulation in the post-brecciation phase of alteration and mineralization is given by alignment of the large sericitic alteration envelope along it (see Figure 1 following this page).



### 3.3 Alteration and Mineralization

The Ptarmigan Breccia is light grey to mauve or maroon on fresh surfaces and rust coloured on weathered surfaces, with highly altered portions weathering to bright yellow or orange (Heinrich et al, 1989). The entire breccia pipe is propylitized, with pervasive carbonate+chlorite+epidote alteration.

Along the Ptarmigan Fault, this propylitization has been overprinted by later hydrothermal alteration comprising steeply dipping, northwest striking, lenticular zones of weak-to-intense sericitization and silicification and the presence of polymetallic, auriferous sulphides. This alteration is marked by silica flooding, sericitization, pyritization of clasts and moderate to weak carbonate alteration. The highest-grade sections are associated with a stockwork of centimeter-scale quartz-carbonate-sulphide veins. The breccia matrix consists of crystalline and chalcedonic quartz, iron carbonate, calcite, pyrite, galena, sphalerite, chalcopryrite and arsenopyrite filling open spaces with minor rock flour (Heinrich et al., 1989).

Examination of drill logs (eg. TR88-6 at 124 meters depth) reveals that sulphide-bearing quartz-carbonate veinlets cut across hematitic, maroon breccias and superimpose a bleached sericitic halo upon the host, clearly establishing the relative timing of propylitic and sericitic alteration. Sillitoe (1985, p. 1475) notes for other mineralized breccias that "the alteration (replacement) stage in breccia pipes took place immediately after, and perhaps also during, fragmentation; it was followed by an episode of open-space filling during which both gangue and metallic minerals were precipitated."

### 3.4 Origin of the Ptarmigan Breccia and Zone

The Ptarmigan Breccia is magmatic-hydrothermal in origin, produced by the explosive release of hydrothermal fluids (magmatic, connate, meteoric or oceanic) from a magma chamber. Sillitoe (1985) lists six characteristics of magmatic-hydrothermal breccias which distinguish them from phreatic, phreatomagmatic, intrusion and tectonic breccias. These are:

- 1) Pipes are subvertical, with more depth extent than width [the Ptarmigan Breccia is subvertical; its depth extent is unknown, but it has been drilled over a vertical range of 350 meters, roughly equivalent to its horizontal dimensions, and remains open to depth];
- 2) Contacts with wall rocks are abrupt, sometimes marked by sheeted vertical fractures and shingle breccia around the pipe walls [noted within the marginal monolithic breccia facies at Ptarmigan];



- 3) Fragments are generally angular to subrounded [true for Ptarmigan];
- 4) Lithologies of fragments closely match those of wall rocks, with little mixing [demonstrated well at Ptarmigan, with heterolithic breccia mainly confined to the core];
- 5) Sericitization is the most common alteration type [true for the Ptarmigan Zone, along with propylitization];
- 6) Small volumes of fine-grained porphyritic intrusive rock are commonly associated with brecciation [Eocene(?) rhyolite dyke clasts are found at Ptarmigan];
- 7) Mineralization is produced by a single event; rebrecciation of early mineralization is absent [true for Ptarmigan];
- 8) Intrusion breccias are differentiated from magmatic-hydrothermal breccias by their igneous matrix. Tectonic breccias are generally tabular and have associated fine-grained cataclases and slickensides.

Magmatic-hydrothermal breccia pipes are located in the upper parts of plutons and stocks, or above them. It appears likely, therefore, that a buried stock underlies the Ptarmigan Breccia at depth. The age of brecciation is constrained by the presence of fragments of rhyolite dykes within the breccia, post-dating their emplacement. These rhyolites are similar to those near the Hummingbird skarn which Read (1989) considered to be Eocene. Lead isotope dating of galena from the Ptarmigan Zone indicates that mineralization "has isotope ratios similar to Tertiary model-ages" (Logan and Koyanagi, 1989a). The mineralogy and alteration of the Ptarmigan Zone are also very similar to those of other Tertiary mineral occurrences elsewhere in the Galore Creek area, with a high silver:gold ratio, dominant quartz-sericite alteration, and a wide spectrum of base metal sulphides (Gerasimoff and Caulfield, 1990).

#### 4.0 1988 DIAMOND DRILLING

##### 4.1 Results

Table 4.1.1 summarizes location and orientation data for the 1988 diamond drill holes on the Ptarmigan and Hummingbird Zone. Weighted averages for mineralized intersections have been recalculated and are summarized in Table 4.1.2.

TABLE 4.1.1  
1988 DRILL HOLE LOCATION DATA

| Hole Number | Zone        | Azimuth (degrees) | Dip (degrees) | Length (m) |
|-------------|-------------|-------------------|---------------|------------|
| TR88-1      | Ptarmigan   | 300               | -45           | 42.7       |
| TR88-2      | Ptarmigan   | 300               | -60           | 219.8      |
| TR88-3      | Ptarmigan   | 300               | -75           | 288.7      |
| TR88-4      | Ptarmigan   | 300               | -65           | 340.5      |
| TR88-5      | Ptarmigan   | 120               | -50           | 99.4       |
| TR88-6      | Ptarmigan   | 240               | -75           | 307.6      |
| TR88-7      | Ptarmigan   | 215               | -50           | 192.9      |
| TR88-8      | Ptarmigan   | 305               | -58           | 175.9      |
| TR88-9      | Eagle       | 125               | -55           | 142.7      |
| TR88-10     | Eagle       | 355               | -60           | 122.2      |
| TR88-11     | Eagle       | 305               | -57           | 158.2      |
| TR88-12     | Hummingbird | 212               | -50           | 64.0       |
| TR88-13     | Ptarmigan   | 305               | -60           | 331.9      |
| TR88-14     | Ptarmigan   | 115               | -60           | 117.3      |
| TR88-15     | Ptarmigan   | 165               | -60           | 57.1       |
| TR88-16     | Ptarmigan   | 171               | -75           | 172.8      |

TABLE 4.1.2  
SIGNIFICANT DRILL INTERSECTIONS

| Hole Number | Depth (m)      | Width (m) | Au (oz/t) | Ag (oz/t) | Zn (%) |
|-------------|----------------|-----------|-----------|-----------|--------|
| TR88-1      | 37.6-42.6      | 5.0*      | 0.023     | 1.29      | 0.51   |
| TR88-2      | 56.0-88.9      | 32.9      | 0.078     | 2.43*     | 1.62*  |
| incl.       | 58.9-61.9      | 3.0       | 0.163     | 9.46      | 4.26   |
| and         | 72.9-77.9      | 5.0       | 0.141     | 1.27      | 1.82   |
| TR88-3      | 90.0-104.7     | 14.7      | 0.058     | 0.56      | 0.71   |
|             | 114.4-119.3    | 4.9       | 0.014*    | 0.11*     | 0.06*  |
|             | 231.1-231.6    | 0.5       | 0.193     | 0.11      | 0.11   |
| TR88-4      | 207.5-208.5    | 1.0       | 0.428     | 0.41*     | 0.01#  |
|             | 213.2-236.5    | 23.3      | 0.101     | 0.75      | 1.01*  |
| incl.       | 213.2-216.6    | 3.4       | 0.224     | 1.64*     | 1.27   |
| TR88-5      | 8.9-11.5       | 2.6       | 0.018     | 3.21*     | 0.26*  |
|             | 14.2-20.1      | 5.9       | 0.042     | 2.01      | 0.14#  |
| TR88-6      | 106.2-107.5    | 1.3       | 0.122*    | 0.19*     | 0.54*  |
|             | 124.5-126.3    | 1.8       | 0.062     | 0.32      | 0.63   |
| TR88-7      | 72.0-76.0      | 4.0       | 0.084     | 1.91      | 0.67   |
|             | 98.8-105.4     | 6.6       | 0.050*    | 0.17*     | 0.13#  |
| incl.       | 98.8-100.1     | 1.3       | 0.107     | 0.21      | 0.18   |
|             | 120.7-125.2    | 4.5       | 0.074     | 1.01      | 1.11   |
|             | 127.2-128.3    | 1.1       | 0.116     | 3.08      | 2.24*  |
| TR88-8      | 53.8-60.5      | 6.7       | 0.054     | 1.09      | 0.10   |
| incl.       | 53.8-56.8      | 3.0       | 0.094     | 1.90      | 0.16   |
| TR88-9      | HOLE ABANDONED |           |           |           |        |

\* Change from value reported in Heinrich et al (1989)

# No value reported in Heinrich et al (1989)

TABLE 4.1.2 (cont'd)  
SIGNIFICANT DRILL INTERSECTIONS

| Hole Number      | Depth (m)      | Width (m) | Au (oz/t) | Ag (oz/t) | Zn (%) |
|------------------|----------------|-----------|-----------|-----------|--------|
| TR88-10          | 17.4-20.4      | 3.0       | 0.031     | 0.03#     | 0.01#  |
|                  | 49.8-51.8      | 2.0       | 0.086     | 0.53      | 0.03#  |
|                  | 76.8-77.4      | 0.6       | 0.034     | 1.84      | 0.32#  |
| TR88-11          | 4.3-23.2       | 18.9      | 0.017     | 0.11#     | 0.09#  |
|                  | 28.5-45.0      | 16.5      | 0.019     | 0.13#     | 0.03#  |
| TR88-12          | HOLE ABANDONED |           |           |           |        |
| TR88-13<br>incl. | 31.6-35.9      | 4.3       | 0.040     | 0.44*     | 0.25#  |
|                  | 32.9-34.2      | 1.3       | 0.097     | 0.18      | 0.08#  |
|                  | 38.3-40.3      | 2.0       | 0.040     | 0.64      | 0.25#  |
| TR88-14          | 11.2-13.9      | 2.7       | 0.076     | 2.46      | 0.29#  |
|                  | 67.2-69.1      | 1.9*      | 0.116     | 4.15*     | 3.08*  |
|                  | 78.0-81.2      | 3.2       | 0.009*    | 0.14*     | 0.02#  |
|                  | 81.2-84.1      | 2.9#      | 0.054#    | 0.20#     | 0.10#  |
|                  | 87.2-90.2      | 3.0       | 0.055     | 0.20      | 0.14#  |
|                  | 116.0-117.3    | 1.3*      | 0.039     | 2.28      | 0.49#  |
| TR88-15          | 16.1-18.1      | 2.0       | 0.046     | 2.62      | 0.67#  |
|                  | 20.1-21.2      | 1.1       | 0.108     | 0.63      | 0.08#  |
|                  | 29.2-30.2      | 1.0       | 0.033     | 5.73      | 4.08   |
|                  | 43.9-45.1      | 1.2       | 0.054     | 4.83      | 1.32   |
| TR88-16          | 15.0-17.0      | 2.0       | 0.063     | 1.01      | 0.28#  |
|                  | 19.8-23.5      | 3.7       | 0.034     | 1.67      | 0.07#  |
|                  | 29.5-30.5      | 1.0*      | 0.072     | 1.93      | 0.81   |
|                  | 50.0-51.1      | 1.1       | 0.108     | 0.43      | 0.12#  |
|                  | 62.0-64.0      | 2.0       | 0.095     | 6.20      | 0.89   |
|                  | 71.0-72.0      | 1.0*      | 0.098     | 11.01     | 0.54   |
|                  | 106.9-108.0    | 1.1       | 0.025     | 3.21      | 0.45   |
|                  | 110.8-112.0    | 1.2       | 0.038     | 3.38      | 0.93   |
|                  | 113.5-114.5    | 1.0       | 0.051     | 7.19      | 1.40   |
|                  | 125.5-127.5    | 2.0       | 0.057     | 8.92      | 2.31   |

\* Change from value reported in Heinrich et al (1989)

# No value reported in Heinrich et al (1989)

#### 4.2 Interpretation

Three vertical sections through the Ptarmigan Zone were drawn to illustrate its lithology, alteration and mineralization (Figures 2-4), using data generated by the 1988 Continental drilling. Due to the geological model pursued by Continental, in which mineralization was controlled by northeast-striking fault and fracture structures, most of the diamond drill holes were oriented northwest or southeast. Only two holes (TR88-6 and TR88-7) were drilled across the major northwest-trending Ptarmigan Fault which appears to control sericitization, silicification and mineralization (Figure 1).

In order to construct the sections, the drill holes were divided into three groups. All the holes from each of these groups

were projected onto a single section-plane, with pierce-points from other groups where appropriate.

Holes TR88-6 and TR88-7 form a natural grouping because of their southwest-trending orientation and common collar location. In a vertical cross-section looking towards AZ330° (Figure 3), the correlation from surface geology through each of these two holes is excellent. In particular, the monolithic volcanic breccia can be traced in drill hole intersections from its mapped surface exposure to a depth of more than three hundred vertical meters with very little variation in width. Extension of the Ptarmigan Fault where mapped on the surface in a gully, through each of two "fault" intersections in TR88-6 and TR88-7 indicates that it dips steeply to the northeast within the Ptarmigan Breccia, with the drill holes collared in its hanging wall and penetrating the footwall at depths of 65 meters (TR88-7) and 72 meters (TR88-6). Correlation of alteration patterns between the two drill holes and on surface suggests that there are several discrete, lenticular zones of intense quartz-sericite-sulphide alteration and mineralization which roughly parallel the Ptarmigan Fault. The largest of these zones is developed around the Ptarmigan Fault, but several smaller ones exist beneath it in the footwall and perhaps again in the hanging wall. Extensive core assaying of TR88-6 and TR88-7 revealed only three intersections with grades in excess of 0.05 ounces gold per ton (an arbitrary cutoff adopted for this discussion) in TR88-7 and two intersections in TR88-6. These intersections are related to intense quartz-sericite alteration and/or veins, vugs, and stockworks.

With the current data, which are limited by the poor choice of drill hole orientation, the size of, and continuity between, each of these alteration/mineralization lenses are subject to interpretation. However, it appears that two, or perhaps three, auriferous alteration zones are present, paralleling the Ptarmigan Fault. The first of these is the down-dip extension of the "A-zone" (cf. Heinrich et al., 1989) encountered at depths of 74 metres in TR88-7 and 106 meters in TR88-6. This probably correlates with the intersection of auriferous mineralization found in TR88-2 centered at a depth of 70 meters. When projected perpendicularly to the plane of Section TR88-6/TR88-7 (approximately along the strike of the fault and its alteration envelope), the auriferous intersection in TR88-2 lies directly beneath the "A-zone", as indicated by the hollow bar and notes on Figure 3. Two en-echelon zones of intense quartz-sericite alteration lie beneath the A-zone. The first of these may be just a splay from the A-zone; it correlates with the intersection in drill hole TR88-3 at a depth of about 97 meters (indicated by a hollow bar and note on Figure 2). The deeper auriferous intersection in TR88-7 corresponds to a zone of intense sericite alteration which, at least in this sectional view, appears to be disconnected from the other zones. This separate zone may correlate with the deepest intersection of intense sericitic



alteration and auriferous mineralization in TR88-4 at a depth of about 225 meters. This auriferous mineralization is about 40 meters (horizontally) to the southeast of the TR88-6/TR88-7 section-plane, and has been indicated by a hollow bar and note where it has been projected perpendicularly onto that plane.

One unexpected result of the drilling program was the intersection of heterolithic breccia between the supposedly marginal volcanic-monolithic breccia and rocks of the Stuhini Group which form the host to the Pipe on the southeast flank. This indicates a greater degree of complexity in the distribution of the heterolithic breccia than is apparent from surface mapping.

A second drill section (Figure 2) combines holes TR88-1, -2, and -3, collared at one location, with holes TR88-4, and -5 collared at another location. Drill hole TR88-4 was chosen to lie within the plane of the section, which looks towards AZ040° with other holes projected horizontally and perpendicularly to the chosen section-plane. This section is not perpendicular to the controlling Ptarmigan Fault, so correlation between holes and sections is more difficult.

Drill holes TR88-1, -2, and -3 are collared on the southwest (footwall) side of the Ptarmigan Fault, whereas drill holes TR88-4 and -5 are collared to the southeast in the hanging wall. Diamond drill hole TR88-4 (collared in the hanging wall) encountered a nine-meter section of sandy gouge, oxidized rock fragments with very poor recovery and a 3.5 meter void in the interval from 78 meters to 87 meters, representing the Ptarmigan Fault. Beyond a depth of 87 meters, drill hole TR88-4 shares the footwall of the Ptarmigan Fault with holes TR88-1, -2, and -3 but correlations of lithology, alteration, and mineralization are obscured by the oblique section view. The holes intersect this "stratigraphy" at low angles giving exaggerated thicknesses, and even relatively small variations in attitude cause narrow lenticular units to appear very different in each hole.

Drill hole TR88-5 intersected monzonitic rocks of the Hickman Pluton at a depth of only 21 meters. Together with the location of surface exposures of the pluton, this indicates that the southeast corner of the Ptarmigan Breccia is underlain by a contact with the intrusive that dips gently, but steepens abruptly in the direction of the breccia pipe. This gives the Ptarmigan Breccia a flared-upward appearance in cross-section. A zone of faulted, rusty, "weathered", broken and crushed core from about 36 meters depth to 46 meters depth in TR88-5 has been interpreted as a probable zone of exfoliation (spalling) that parallels the contact between the Hickman Pluton and the Ptarmigan Breccia.

A third section in the plane of TR88-13 and looking towards AZ035 was drawn with projections from holes TR88-8, -14, -15, and -16 (Figure 4). This section, like Figure 2, is hampered by an

alteration pattern which lies at an oblique angle to the plane of the section. It is not very useful in defining mineralization patterns or the structure of the Ptarmigan Breccia pipe, although it reinforces the interpretation of an upward-flaring form and indicates that the monolithic volcanic breccia exposed at the surface on the western flank of the pipe must pinch-out at depth to place heterolithic breccia in contact with Stuhini Group tuffs. Like the wedge of heterolithic breccia which intervenes between the Stuhini Group and the marginal-facies of monolithic volcanic breccia in Figure 3, this pinch-out probably indicates extensive fluidization in the axial core of the Ptarmigan Breccia. This fluidization eroded marginal, monolithic crackle breccias and mixed them with intrusive rock fragments, forming the heterolithic breccia core.

## 5.0 1988 VLF-EM GEOPHYSICAL SURVEY

A VLF-EM ground geophysical survey was carried out in 1988 over the Ptarmigan Breccia on a grid with crosslines oriented at AZ305°, in order to cross the supposed northeast-trending controlling fault. Crosslines were spaced 50 meters apart, with stations every 25 meters, and dip angle profiles were plotted along the crosslines by Continental. This technique makes it more difficult to interpret features parallel to the northwest-trending Ptarmigan Fault, which runs roughly parallel to the crosslines.

A brief interpretation of the data by Alan Scott is attached in Appendix B (Figure 1). The Ptarmigan Breccia is roughly outlined by two weak VLF conductors considered to "mark the edges of broad zones of relatively low resistivity as opposed to discrete steeply dipping features" (Scott, 1989). The data does not permit the delineation of the Ptarmigan Fault.

## 6.0 DISCUSSION

The Ptarmigan Zone is a Tertiary zone of gold-bearing sericitization and silicification oriented along the north-northwest trending Ptarmigan Fault. It is hosted within the Ptarmigan Breccia, which is thought to be a magmatic-hydrothermal breccia pipe situated above an unexposed Eocene plug. The Ptarmigan Zone exhibits many of the features of other Tertiary precious metal mineralization in the Galore Creek camp:

- a) sulphide mineralogy comprises a wide range of base metals, with pyrite, arsenopyrite, sphalerite and galena dominant;
- b) sericitization is the dominant alteration type; base and precious metals are associated with silicification within a more extensive sericitization envelope;

- c) gold:silver ratios average approximately 1:10 (as opposed to 1:1 for Jurassic mineralization);
- d) major steeply-dipping, northerly-trending faults exert strong structural control on alteration and mineralization;
- e) alteration and mineralization forms wide zones (up to 30 meters wide for the Ptarmigan Zone on surface).

It has not yet been established whether the Ptarmigan Zone shares other characteristics of Tertiary mineralization in Galore Creek. The most important of these are good strike length (minimum 1,400 meters for the Wiser Deluxe Zone) and down-dip continuity (950 meters vertical exposure for the Wiser Deluxe Zone). Although not gold-bearing throughout their extent, these Tertiary structures have the size to host significant deposits.

The path of the hydrothermal fluids which altered and mineralized the Ptarmigan Zone has not been established. They may have originated below the Breccia pipe and migrated upward to encounter the Ptarmigan Fault or entered along the Fault and mushroomed out in the structurally prepared Ptarmigan Breccia. This will have a bearing on further exploration of the Ptarmigan Zone. The second alternative, which appears more likely by comparison to other Tertiary mineralization in the area, would allow potential for more extensive alteration and mineralization. The style of mineralization outside the Ptarmigan Breccia could be quite different: probably much less diffuse, due to the absence of pre-mineralization void space.

The Ptarmigan Zone is the mineral occurrence on the Trophy property which has received the most exploration in the past, but is also the one which demonstrates the most need for further work to determine its potential. Much of the data from the 1988 drilling program is of limited use, as all but two holes paralleled the controlling Ptarmigan Fault and its lenticular envelope of quartz-sericite-sulphide alteration and associated precious metal mineralization. Future drilling should cross the Ptarmigan Fault at right angles (Azimuth 235°). Wherever possible, future holes should be drilled from the hanging wall (northeast) side of the Fault with low dips, stepping back to the northeast to test the down-dip extensions of the zone. The Ptarmigan Fault should be tested by drilling both within the Ptarmigan Breccia and along strike to the northwest and southeast. Detailed geological mapping and sampling of the strike extensions of the Ptarmigan Fault will provide a good indication of its potential and the source of hydrothermal fluids.

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APPENDIX C

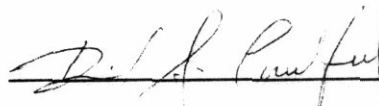
STATEMENTS OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, DAVID A. CAULFIELD, of 3142 Gambier Street, Coquitlam, in the Province of British Columbia, DO HEREBY CERTIFY:

1. THAT I am a Consulting Geologist with offices at Suite 207, 675 West Hastings Street, Vancouver, British Columbia.
2. THAT I am a graduate of the University of British Columbia with a Bachelor of Science degree in Geology.
3. THAT I am a Fellow of the Geological Association of Canada.
4. THAT this report is based on fieldwork carried out by personnel of Equity Engineering Ltd. in August, September and October, 1989 under the direction Marthe Archambault, a geologist employed by Equity Engineering Ltd., government publications and assessment reports filed with the Province of British Columbia. I have examined parts of the property and I have extensive experience in the Galore Creek district.
5. THAT I own no shares, directly or indirectly, in Gigi Resources Ltd. or Continental Gold Corp., nor do I expect to acquire any shares. I have no interest, directly or indirectly, in the Trophy Gold property.
6. THAT I consent to the use by Gigi Resources Ltd. of this report in a Statement of Material Facts or any such document as may be required by the Vancouver Stock Exchange or the Office of the Superintendent of Brokers.

DATED at Vancouver, British Columbia, this 12 day of March, 1990.



David A. Caulfield, F.G.A.C.

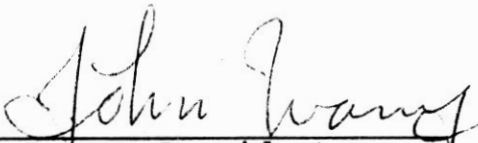


**CERTIFICATE OF THE DIRECTORS  
AND PROMOTERS OF THE ISSUER:**

The foregoing constitutes full, true and plain disclosure of all material facts relating to the securities offered by this Statement of Material Facts as required by the Securities Act and its regulations.

DATED as of this 28th day of March, 1990.

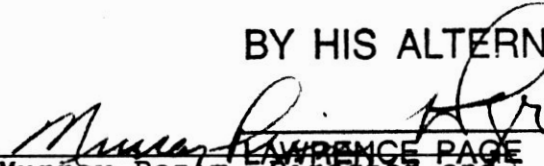
**GIGI RESOURCES LTD.**

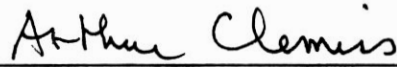

  
John Ivany, President  
and Chief Executive Officer

  
Robert Gayton,  
Chief Financial Officer

**ON BEHALF OF THE BOARD OF DIRECTORS**

**BY HIS ALTERNATE**

  
~~LAWRENCE PAGE~~  
Murray Pezim, Director and  
Chairman of the Board

  
Arthur Clemis, Director -  
by his attorney in fact  


CERTIFICATE OF THE AGENTS

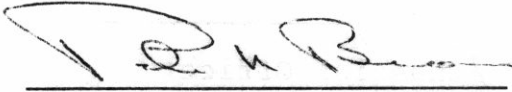
To the best of our knowledge, information and belief, the foregoing constitutes full, true and plain disclosure of all material facts relating to the securities offered by this Statement of Material Facts as required by the Securities Act and its regulations.

DATED this 28th day of March, 1990.

L.O.M. Western Securities Ltd.

Yorkton Continental  
Securities Inc.

By:



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By:



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