Middle Vein Prospec 92F/2

THIS PROSPECTUS CONSTITUTES A PUBLIC OFFERING OF THESE SECURITIES ONLY IN THOSE JURISDICTIONS WHERE THEY MAY BE LAWFULLY OFFERED FOR SALE AND THEREIN ONLY BY PERSONS PERMITTED TO SELL SUCH SECURITIES. NO SECURITIES COMMISSION OR SIMILAR AUTHORITY IN CANADA HAS IN ANY WAY PASSED UPON THE MERITS OF THE SECURITIES OFFERED FOR SALE BY THIS PROSPECTUS AND ANY REPRESENTATION TO THE CONTRARY IS AN OFFENCE.

006466

NEW ISSUE

Victoria / GP

PROSPECTUS

CANADIAN IMPERIAL MINES INC.

(the "Issuer") (Incorporated in British Columbia)

DEC 1 7 1991

Geological Survey Branch

COMMON SHARE OFFERING: 600,000 COMMON SHARES

		(1)	Net Proceeds
	Price to Public	Commission ⁽¹⁾	to the $Issuer^{(2)}$
Per Share	\$0.40	\$0.04	\$0.36
Total	\$240,000	\$24,000	\$216,000

FLOW-THROUGH COMMON SHARE OFFERING: 200,000 COMMON SHARES

	Price to Public	Commission ⁽¹⁾⁽³⁾	Net Proceeds to the Issuer	
Per Share	\$0.40	Nil	\$0.40	
Total	\$80,000	Nil	\$80,000	

(1) In addition, the Agent will be granted Agent's Warrants as described in the section captioned "Plan of Distribution".

(2) Before deduction of the balance of costs of this Prospectus estimated at \$30,000.

(3) The Issuer will pay a fee of \$8,000 to the Agent, from general working capital, in respect of the sale of the Flow-Through Common Shares.

THE PRICE TO THE PUBLIC WAS ESTABLISHED PURSUANT TO NEGOTIATIONS BETWEEN THE ISSUER AND THE AGENT.

THERE IS PRESENTLY NO MARKET THROUGH WHICH THE SECURITIES OF THE ISSUER MAY BE SOLD AND A PURCHASE OF THE SHARES OFFERED BY THIS PROSPECTUS MUST BE CONSIDERED A SPECULATION. THE ISSUER'S MINERAL PROPERTY IS IN THE PRELIMINARY STAGES OF EXPLORATION AND DEVELOPMENT AND THERE IS NO KNOWN BODY OF COMMERCIAL ORE PRESENT ON THE PROPERTY. REFERENCE IS MADE TO THE SECTIONS CAPTIONED "RISK FACTORS" AND "DILUTION".

NO PERSON IS AUTHORIZED BY THE ISSUER TO PROVIDE ANY INFORMATION OR TO MAKE ANY REPRESENTATION OTHER THAN THOSE CONTAINED IN THIS PROSPECTUS OR IN CONNECTION WITH THE ISSUE AND SALE OF THE SECURITIES OFFERED BY THE ISSUER.

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THE OFFERING OF FLOW-THROUGH COMMON SHARES IS INTENDED TO ALLOW INVESTORS TO ACHIEVE CERTAIN TAX BENEFITS IN THE YEAR OF SUBSCRIPTION. THE ACHIEVING OF SUCH BENEFITS BY THE INVESTORS AND THE INCURRING OF EXPENDITURES BY THE ISSUER ON BEHALF OF THE INVESTORS ARE SUBJECT TO RISK AND UNCERTAINTY WHICH ARE DESCRIBED IN THE SECTIONS CAPTIONED "CANADIAN INCOME TAX CONSIDERATIONS OF FLOW-THROUGH SHARES" AND "RISK FACTORS".

ONE OR MORE OF THE DIRECTORS OF THE ISSUER ARE DIRECTORS OF OTHER NATURAL RESOURCE COMPANIES AND HAVE POTENTIAL CONFLICTS OF INTERESTS WHEN SERVING IN SUCH CAPACITIES. REFERENCE IS MADE TO THE SECTION CAPTIONED "DIRECTORS AND OFFICERS".

FOR COMPARISON OF THE SHARES BEING OFFERED TO THE PUBLIC FOR CASH AND THOSE ISSUED TO PRO-MOTERS, DIRECTORS AND OTHER INSIDERS, REFERENCE IS MADE TO THE SECTION CAPTIONED "PRINCI-PAL SHAREHOLDERS". UPON COMPLETION OF THIS OFFERING, THE SECURITIES OFFERED HEREUNDER WILL REPRESENT 29.244% OF THE ISSUED SHARES OF THE ISSUER THEN OUTSTANDING WHILE THE DIRECTORS AND SENIOR OFFICERS OF THE ISSUER WILL HOLD 49.323% OF THE ISSUED SHARES THEN OUTSTANDING. THE PUBLIC WILL EXPERIENCE DILUTION OF \$0.28 PER SHARE OR 70%. REFERENCE IS MADE TO THE SECTIONS CAPTIONED "DILUTION" AND "PRINCIPAL SHAREHOLDERS".

THE AGENT'S WARRANTS HAVE BEEN DISTRIBUTED UNDER THIS PROSPECTUS. ANY SHARES ACQUIRED BY THE AGENT UNDER THE GUARANTEE WILL ALSO BE DISTRIBUTED UNDER THIS PROSPECTUS THROUGH THE FACILITIES OF THE VANCOUVER STOCK EXCHANGE AT THE MARKET PRICE AT THE TIME OF SALE. REFERENCE IS MADE TO THE SECTION CAPTIONED "PLAN OF DISTRIBUTION".

THE VANCOUVER STOCK EXCHANGE HAS CONDITIONALLY LISTED THE SECURITIES OFFERED PURSUANT TO THIS PROSPECTUS. LISTING IS SUBJECT TO THE ISSUER FULFILLING ALL THE LISTING REQUIREMENTS OF THE EXCHANGE ON OR BEFORE DECEMBER 11, 1991 INCLUDING PRESCRIBED DISTRIBUTION AND FINANCIAL REQUIREMENTS.

WE, AS AGENT, CONDITIONALLY OFFER THESE SECURITIES SUBJECT TO PRIOR SALE, IF, AS AND WHEN ISSUED BY THE ISSUER AND ACCEPTED BY US IN ACCORDANCE WITH THE CONDITIONS CONTAINED IN THE AGENCY AGREEMENT REFERRED TO IN THE SECTION CAPTIONED "PLAN OF DISTRIBUTION".

THIS PROSPECTUS IS DATED THE 4TH DAY OF NOVEMBER, 1991.

AGENT

BRINK HUDSON & LEFEVER LTD. 1200 - 595 Burrard Street Vancouver, B.C. V7X 1J1

EFFECTIVE DATE: NOVEMBER 5, 1991

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PROSPECTUS SUMMARY

The Offering

- **Issuer:** CANADIAN IMPERIAL MINES INC. is in the business of acquiring, exploring and developing natural resource properties. Reference is made to the section captioned "Business and Property of the Issuer".
- Securities600,000 Common SharesOffered:200,000 Flow-Through Common Shares

Gross Proceeds: \$320,000

Net Proceeds: \$296,000

Price: \$0.40 per common share

Commission: \$0.04 per common share

The Agent has also been granted a nontransferable warrant entitling it to purchase up to 200,000 common shares of the Issuer at \$0.40 per common share, which shares are also qualified by this Prospectus for sale to the public, at any time up the close of business one year following the date on which the shares of the Issuer are listed and called for trading on the Vancouver Stock Exchange.

- Use of The sum of \$75,000 derived from net proceeds of this Offering will be used to conduct an exploration program on the Middle Vein Prospect recommended in the report of Dr. Richard E. Kucera, dated September 20, 1991; the balance will be used to pay the estimated costs of this Prospectus, the property payments as they become due and the remainder will be added to the Issuer's working capital.
- Key Personnel: The Directors and Officers who are key to the success of the Issuer are Mr. Tom K.T. Cheng, Mr. Michael I-Kuo Terng and Mr. Peter Tsaparas.
- **Dividend Policy:** All dividends paid by the Issuer on shares of any class shall be declared and paid according to the number of such shares held.
- Risk Factors: Investment the common shares in must be considered a speculation due to the nature of the Issuer's business and the present stage of its development. Exploration for minerals is speculative. There is no known body of commercial ore on the natural resource

properties of the Issuer and the marketability of any minerals which may be found by the Issuer may be affected by numerous factors beyond the Issuer's control. The Issuer has no history of earnings or dividend record. Reference is made to the sections captioned "Risk Factors" and "Dilution".

THE FOREGOING IS A SUMMARY ONLY AND SHOULD BE READ IN CONJUNCTION WITH THE MORE DETAILED INFORMATION CONTAINED ELSEWHERE IN THIS PROSPECTUS.

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NAME AND INCORPORATION OF THE ISSUER

The Issuer, Canadian Imperial Mines Inc., was incorporated on September 18, 1987 as a limited company pursuant to the laws of British Columbia by the registration of memorandum and articles with the British Columbia Registrar of Companies.

The head office of the Issuer is located at No. 120, 13751 Mayfield Place, Richmond, British Columbia, V6V 2G9. The registered and records office of the Issuer is located at #100, 200 Granville Street, Vancouver, British Columbia, V6C 1S4.

PLAN OF DISTRIBUTION

Offering

The Issuer by its Agent hereby offers (the "Offering") to the public through the facilities of the Vancouver Stock Exchange (the "Exchange") 600,000 common shares (the "Common Shares") of the Issuer and 200,000 flow-through common shares (the "Flow-Through Common Shares") of the Issuer (the Common Shares and the Flow-Through Common Shares collectively referred to as the "Shares") at a price of \$0.40 per Share (the "Offering Price"), which price was established pursuant to negotiations between the Issuer and the Agent.

The Offering will be made in accordance with the rules and policies of the Exchange on a day (the "Offering Day") determined by the Agent and the Issuer, with the consent of the Exchange, within a period of 180 days from the date on which the Shares are conditionally listed on the Exchange.

Those Directors and other insiders of the Issuer who are residents of British Columbia may purchase Shares from the Offering.

Appointment of Agent

By Agreement dated August 2, 1991 (the "Agency Agreement") the Issuer appointed its agent, Brink Hudson & Lefever Ltd. (the "Agent") to offer the Shares to the public through the facilities of the Exchange.

The Agent will receive a commission of \$0.04 per Common Share sold under the Offering and a cash fee of \$8,000 in the event all of the Flow-Through Common Shares are sold, which cash fee shall be paid from the Issuer's general working capital.

The Agent reserves the right to offer selling group participation, in the normal course of the brokerage business, to selling groups of licensed broker-dealers, brokers and investment dealers, who may or may not be offered part of the commissions or bonuses derived from the Offering. The obligations of the Agent under the Agency Agreement may be terminated prior to the opening of the market on the Offering Day at the Agent's discretion on the basis of its assessment of the state of the financial markets and may also be terminated upon the occurrence of certain stated events.

The Issuer has granted the Agent a right of first refusal to provide further public equity financing to the Issuer for a period of twelve months from the date on which the Superintendent of Brokers for British Columbia issues a receipt for a final Prospectus of the Issuer with respect to the Offering (the "Effective Date").

There are no payments in cash, securities or other consideration being made, or to be made, to a promoter, finder or any other person or company in connection with the Offering.

Flow-Through Common Share Offering

The Flow-Through Common Shares being offered to the public hereunder on a first come first served bassis are common shares of the Issuer which will be issued to investors in the denominations and in the names provided by the Agent.

Pursuant to the Flow-Through Share Subscription Agreement included in this Prospectus as Schedule "A", the Issuer has agreed to:

- (a) incur a specified amount of Canadian Exploration Expenses ("CEE") as defined under the <u>Income Tax Act</u> (Canada) (the "Act") within a period of 18 months from the Offering Day; and
- (b) within the said 18 month period (or up to 30 days thereafter) renounce the CEE to the investors.

The persons whose names appear on the list of investors provided to the Issuer by the Agent will be required to execute the Power of Attorney attached to this Prospectus as Schedule "B", which appoints a Director or Senior Officer of the Issuer as attorney for the purpose of executing the Flow-Through Share Subscription Agreement on their behalf. Failure to execute and deliver the Power of Attorney to the Issuer will preclude the investor from deducting any CEE incurred by the Issuer pursuant to the terms of the Flow-Through Share Subscription Agreement.

The Flow-Through Common Shares will entitle the investors to CEE as defined under the Act.

The gross proceeds from the sale of the Flow-Through Common Shares will constitute exploration funds (the "Exploration Funds"). Until expended, the Issuer will hold the Exploration Funds in an interest-bearing account with a Canadian chartered bank separate from the Issuer's other funds. Any interest accruing to this account will be solely for the benefit of the Issuer and will be added to working capital. The Issuer will expend the Exploration Funds to incur expenditures which will qualify as CEE.

Please refer to the section captioned "Canadian Income Tax Considerations of Flow-Through Shares" for particulars of the income tax treatment of the Exploration Funds.

It is the Issuer's intention to expend the Exploration Funds by February 29, 1992 and any funds not expended by that date will be expended by February 28, 1993. Investors will be advised by the Issuer of the amount of the Exploration Funds expended on their behalf by not later than March 31, 1992 or March 31, 1993, as the case may be. At the same time the Issuer will advise investors of the amount of CEE incurred on their behalf.

The Issuer has previously issued flow-through common shares; reference is made to the sections captioned "Prior Sales" and "Interest of Management and Others in Material Transactions" for particulars thereof.

Agent's Guarantee

The Agent has agreed to purchase up to 800,000 Shares not sold at the conclusion of the Offering. In consideration therefor, the Agent has been granted non-transferable share purchase warrants (the "Agent's Warrants") entitling it to purchase up to 200,000 common shares of the Issuer at any time up to the close of business one year from the date on which the Issuer's common shares are listed, posted and called for trading on the Exchange, at a price of \$0.40 per share.

The Agent's Warrants will contain, among other things, antidilution provisions and provision for appropriate adjustment of the class, number and price of shares issuable pursuant to any exercise thereof upon the occurrence of certain events, including any subdivision, consolidation or reclassification of the shares or the payment of stock dividends.

Additional Offering

This Prospectus also qualifies the issuance of the Agent's Warrants and the sale to the public, at the market price for the shares at the time of sale, of any shares purchased by the Agent hereunder. The Issuer will not receive any proceeds from the sale of any such shares by the Agent, all of which proceeds will accrue to the Agent.

Conditional Listing on the Exchange

The Vancouver Stock Exchange has conditionally listed the securities offered pursuant to this Prospectus. Listing is subject to the Issuer fulfilling all the listing requirements of the Exchange on or before December 11, 1991 including prescribed distribution and financial requirements.

USE OF PROCEEDS

If all the Shares offered pursuant to this Prospectus are sold, the net proceeds to the Issuer will be \$296,000 which, after deducting the Issuer's working capital deficit of \$86,703 as at September 30, 1991, will total approximately \$209,297. The total available funds, in order of priority, will be expended as follows:

1.	To pay the balance of the estimated costs of this Prospectus	\$ 30,000
2.	To pay the Agent's fee with respect to the Flow-Through Common Share Offering	\$ 8,000
3.	To pay the estimated costs of the explora- tion program on the Issuer's Middle Vein Property recommended in the report of Dr. Richard E. Kucera dated September 20, 1991	\$ 75,000*
4.	To pay property payments on the Issuer's Middle Vein Property	\$ 35,000
5.	Reserve for working capital	\$ <u>61,297</u>
	Total:	\$ <u>209,297</u>

* This estimated amount will be paid from the proceeds of the sale of the Flow-Through Common Shares forming part of this Offering.

Any proceeds from the exercise of the Agent's Warrants will be added to working capital.

The foregoing represents the Issuer's best estimate as to how the proceeds of the Offering will be expended. The Issuer intends to use the proceeds for the purposes set out in the above table. The Issuer has retained Dr. Richard Kucera to act as its consultant in regard to the exploration and development of the Middle Vein Property. The Issuer will not discontinue or depart from the recommended exploration program on the Middle Vein Property unless advised in writing to do so by its consultant. An amendment to this Prospectus will be filed if changes or departures to the recommended exploration program are contemplated during the primary distribution of the Issuer's securities.

No part of the proceeds will be used to invest, underwrite or trade in securities other than those that qualify as investments in which trust funds may be invested under the laws of the jurisdictions in which the Shares offered by this Prospectus may be lawfully sold except as may be permitted by the policies of the Superintendent of Brokers for British Columbia (the "Superintendent") and/or the Exchange should the shares of the Issuer become Should the Issuer propose to use the listed on the Exchange. proceeds to acquire other than trustee-type securities after the distribution of offered by this the Shares Prospectus, shareholder approval must be obtained and the consent of the Superintendent or the Exchange, as the case may be, and any other regulatory authority having jurisdiction over the sale of the Shares offered by this Prospectus, will be obtained.

An amendment to this Prospectus will be filed in the event of any material change in the affairs of the Issuer during the primary distribution of its securities; following completion of the primary distribution, notice of any such material change will be given to the Issuer's shareholders, in accordance with the requirements of the appropriate regulatory authorities.

DILUTION

Based upon the balance sheet of the Issuer as at June 30, 1991, the following table reflects the dilution which will result from the purchase of the Shares offered pursuant to this Prospectus:

Dilution per Share

Offering price per share	\$0.40
Net tangible book value before the Offering	\$0.04
Increase of net tangible book value attributable to the Offering	\$0.08(1)
Net tangible book value after	
the Offering	\$0.12
Dilution to the public	\$0.28(2)
Percentage of dilution in relation	
to the Offering price	70%

- (1) After deduction of the Agent's commission and the balance of the estimated costs of this Prospectus.
- (2) Does not give effect to the exercise of the Agent's Warrants or the incentive stock options granted to the directors.

RISK FACTORS

The Shares offered hereby are considered speculative due to the nature of the Issuer's business and the present stage of its development. A prospective investor should consider carefully the following factors:

1. There is no current market for the shares of the Issuer and there can be no assurances given that one will develop.

2. Exploration for minerals is a speculative venture involving risk. Expenditures made on mineral properties may not result in the discovery of commercial quantities of ore. Based on the speculative nature of mineral exploration, the Issuer cannot predict if or when mining operations would be profitable and dividends paid to shareholders.

3. There is no known body of commercial ore present on the property of the Issuer.

4. The marketability of the minerals acquired by the Issuer may be affected by numerous factors beyond the control of the Issuer. The exact effect of these factors, which include mineral market fluctuations, cost and availability of processing equipment and government regulation (including regulations pertaining to royalties, importing, exporting and environmental protections) cannot be accurately determined.

5. Five of the seven reverted crown grant two post claims comprising the Middle Vein Property have not been surveyed and, in accordance with the mining laws of the Province of British Columbia, their precise location and area may be in doubt. The existence of a title report should not be construed as suggesting that the Issuer will be able to obtain good and marketable title to the property described in this Prospectus. The Issuer follows the usual industry practice in obtaining title reports with respect to its properties.

6. The Issuer has no history of earnings and has not paid and does not expect, for the forseable future, to pay any dividends on its common shares.

7. The 800,000 Shares offered by this Prospectus represent 29.244% of the total common shares which will be issued and outstanding if all Shares are sold pursuant to this Offering. In the event that all Shares are sold, 49.323% of the Issuer's common shares will be held by Officers and Directors and 50.768% of the common shares will be held by the public.

DIRECTORS AND OFFICERS

The names and municipality of residence of all the Directors and Officers of the Issuer, as well as their respective principal occupations within the five preceding years, are as follows:

Name, Municipality of Residence and Position with the Issuer

TOM K.T. CHENG Richmond, B.C.

President and Director

STEPHEN KHEE VUN YAP Vancouver, B.C.

Director

MICHAEL I-KUO TERNG Montebello, California

Director

LIAN THYE FONG North Vancouver, B.C.

Director and Secretary

PETER TSAPARAS Burnaby, B.C.

Vice-President, Explorations

Principal Occupations

Businessman; President of Innotrend Investments Ltd., a private investment holding company.

Independent Real Estate Developer, President of Winner Land Inc., 1985 to present.

Businessman, hotelier and investor; Chairman of Lida (Canada) Holding Ltd.; President of the Winpeace International Group, 1985 to present.

Self-employed; managing director of Low Cost Pharmacy Ltd. at Main and Pender, Vancouver, B.C., 1985 to present.

Professional Geological Engineer since 1974; Chief Geologist for Bethlehem Copper from 1969 to 1974; Exploration Manager for Cominco Europe from 1974 to 1976; Independent Consultant for past 10 years. Director of Briana Resources Ltd., 1986 to 1988; Director of Moche Resources Inc., 1986 to 1988; President and Director of Minera Rayrock Inc. (formerly Westlake Industries Ltd.), 1984 to 1990; Vice-President of St. Philips Resources Ltd., 1990 to early 1991; Director of Moondust Ventures Inc. until May, 1991; Presently President and Director of San Andreas Resources Corp. (formerly Pizza Patio Management Ltd.)

The Directors will devote all necessary time and effort to the affairs of the Issuer to ensure that the affairs of the Issuer are properly carried out.

Certain of the Directors may also serve as directors of other public companies and, to the extent that such other companies may participate in ventures in which the Issuer may participate, the Directors of the Issuer may have a conflict of interest in negotiating and concluding terms respecting the extent of such participation. From time to time several companies may participate in the acquisition, exploration and development of natural resource properties thereby allowing for their participation in larger programs, permitting involvement in a greater number of programs and reducing financial exposure in respect of any program. It may also occur that a particular company will assign all or a portion of its interest in a particular program to another of these companies due to the financial position of the company making the assignment.

In accordance with the laws of British Columbia, the Directors of the Issuer are required to act honestly, in good faith and in the best interests of the Issuer. In determining whether or not the Issuer will participate in a particular program and the interest therein to be acquired by it, the Directors will primarily consider the degree of risk to which the Issuer may be exposed and its financial position at that time.

PROMOTERS

Michael I-Kuo Terng, a Director of the Issuer, is the promoter of the Issuer as that term is defined by the British Columbia <u>Securities Act</u> (the "Act").

Mr. Terng has entered into transactions with the Issuer as disclosed in the sections captioned "Escrowed Shares" and "Options to Purchase Shares".

BUSINESS AND PROPERTY OF THE ISSUER

The Issuer is engaged in the acquisition, exploration and development of natural resource properties. The Issuer owns an interest in the mining property described hereunder and intends to seek and acquire additional properties worthy of exploration and development.

Middle Vein Property, Victoria Mining Division, British Columbia

The Option

By Option Agreement dated October 16, 1989, as amended by Amending Agreement dated July 15, 1991, with Edward Clive

Ashworth of 4491 Marine Drive, West Vancouver, British Columbia ("Ashworth"), the Issuer was granted the sole and exclusive option (the "Option") to acquire a 100% interest in and to seven reverted crown grant mineral claims located in the Victoria Mining Division, British Columbia, more particularly described as follows:

Name	Lot No.	Tenure No.	Expiry Date
Apex	99G	260731	September 9, 1994
Skyline	100G	260732	September 9, 1994
War Lion	152G	260710	July 4, 1994
Conqueror Majestic	153G 154G	260711 260712	July 4, 1994 July 4, 1994
Empress of India	154G 155G	260713	July 4, 1994
IXL	156G	260714	July 4, 1994

(the "Middle Vein Property")

In order to exercise the Option, the Issuer must pay to Ashworth the sum of \$90,000 (of which \$20,000 has been paid) as follows: the sum of \$25,000 within 10 days of the listing of the shares of the Issuer on the Vancouver Stock Exchange, \$10,000 on or before January 1, 1992, \$10,000 on or before January 1, 1993 and the balance of \$25,000 on or before September 1, 1993. In addition, the Issuer must issue to Ashworth 100,000 shares in its capital stock in four equal installments of 25,000 shares each, the first installment to be issued within 10 days of the listing of the shares of the Issuer on the Vancouver Stock Exchange and thereafter, upon the completion of each of the first, second and third phases of a program of exploration of the Middle Vein Property but, in any event, on or before January 1, 1992, January 1, 1993 and September 1, 1993, respectively. Neither an insider nor a promoter of the Issuer has held any interest in the Middle Vein Property during the past three years.

The Property

The Middle Vein Property is located about 20km southeast of Port Alberni, British Columbia and is accessible by helicopter or by foot. There are no roads, surface or underground plants, equipment or developments on the Middle Vein Property.

The Middle Vein Property is underlain by the lower part of the Sicker Group rocks, represented by the Duck Lake Formation, composed of grey to greenish andesite, dacite tuffs and breccias. Mineralization on the Middle Vein Property consists of lenticular guartz-carbonate veins up to 5 metres long and 20 cm wide, associated with a very strong and persistent NNE trending shear zone 2 to 3 metres wide that cuts light to dark brown weathered andesite. The shear zone, although obscured in places by overburden, is exposed for a distance of 350 metres on the northern portion of the property. The veins strike N10° - 18°E and dip 78° - 85° E and some are found associated with lightcoloured feldspar-hornblende dykes that are as much as 2 metres wide. One 20 cm. channel sample assayed 0.88 oz/ton Au.

Exploration by the Issuer during 1989 and 1991 included establishing grid lines, collecting chip and channel samples, geological mapping and geophysical surveying. Individual quartz veins assayed up to 1.4 oz Au/ton across widths of up to 10 cm.

The Report

The report of Dr. Richard E. Kucera, Ph.D., F.G.A.C., dated September 20, 1991 (the "Report"), a copy of which is annexed to and forms part of this Prospectus, reviews the recent exploration work conducted on the Middle Vein Property.

As stated by Dr. Kucera at page 25 of his Report:

"The 1980 and 1983 program by Lode Resources, the 1989 work program by Ashworth Explorations Limited and the 1991 program by Hi-Tec Resource Management on the Middle Vein Prospect have demonstrated the presence of gold. Gold values range up to 2900 ppb across 100 cm. of the shear zone whereas individual quartz-carbonate veins assay up to 1.4 oz Au/ton across widths of up to 10 cm."

He concludes that:

"(the) Exploration potential of the Middle Vein Prospect is judged to be good. Further development of this property is justified."

Dr. Kucera recommends that the Issuer conduct a two-stage program of exploration and development of the Middle Vein Property; the first stage of such program is to consist of aerial photo coverage, stereo-photo interpretation, detailed geological mapping, legal surveying, compilation of a topographic base map and extensive sampling and surface trenching and is estimated to cost \$75,000.

The Issuer intends to undertake such recommended program of exploration with the proceeds from the sale of the Flow-Through Common Shares forming part of this Offering.

As at September 30, 1991, the Issuer had incurred exploration expenditures aggregating \$111,369 in respect of the Middle Vein Property.

TO THE KNOWLEDGE OF THE ISSUER THE MIDDLE VEIN PROSPECT IS WITHOUT A KNOWN BODY OF COMMERCIAL ORE AND ANY PROGRAM CONDUCTED THEREON MUST BE CONSIDERED AN EXPLORATORY SEARCH FOR ORE.

ACQUISITIONS

The only material acquisitions made by the Issuer during the past two years were pursuant to the Option Agreement dated October 16, 1989, as amended by Amending Agreement dated July 15, 1991, between Edward Clive Ashworth and the Issuer (the "Middle Vein Agreement"), and the Option Agreement dated for reference October 16, 1989, between Edward Clive Ashworth and the Issuer (the "Plat/Census Agreement"). The Middle Vein Agreement provides for the acquisition by the Issuer of a 100% interest in the Middle Vein Property and the Plat/Census Agreement provided for the acquisition by the Issuer of a 100% interest in the Plat/Census Property. The Issuer has since abandoned the Plat/Census Property and the Plat/Census Agreement has been terminated.

Reference is made to the section captioned "Business and Property of the Issuer" for particulars of the Middle Vein Agreement.

SHARE AND LOAN CAPITAL STRUCTURE

The authorized capital of the Issuer consists of 25,000,000 common shares without par value of which 1,935,570 shares have been issued as fully paid and non-assessable.

The common shares of the Issuer rank equally as to dividends, voting rights and as to any distribution of assets on winding-up or liquidation.

The share and loan capital structure of the Issuer is as follows:

Designa- tion of Security	Authorized	Outstanding as of 30th September 1991	Outstanding as of the date of this Prospectus	Outstanding on Comple- tion of Offering
common shares	25,000,000	1,935,570	1,935,570	2,735,570(1) (2)

- (1) Does not give effect to the exercise of the Agent's Warrants or the incentive stock options granted to directors of the Issuer.
- (2) Does not include the 100,000 common shares of the Issuer that may be issued pursuant to the terms of the Option Agreement described in the section captioned "Business and Property of the Issuer".

The Issuer had an accumulated deficit of \$266,701 as at September 30, 1991.

PRIOR SALES

Since incorporation to the date of this Prospectus, the Issuer has sold 1,935,570 common shares for cash as follows:

Designation of Class	Number of Shares	Price Per Share	Commissions Paid	Net Proceeds to Issuer
common shares	750,000(1)	\$0.01	Nil	\$ 7,500
common shares	1,077,000	\$0.25	Nil	\$269,250
common shares	15,000	\$0.35	Nil	\$ 5,250
common shares	5,000	\$0.40	Nil	\$ 2,000
common shares	88,570(2)	\$0.35	Nil	\$ 31,000
5.142.05			TOTAL:	<u>\$315,000</u>

- (1) These shares are held in escrow and reference is made to the section captioned "Escrowed Shares" for further details.
- (2) These shares were issued as flow-through common shares; reference is made to the section captioned "Interest of Management and Others in Material Transactions".

POOLED SHARES

There are no shares of the Issuer held in pool.

ESCROWED SHARES

There are a total of 750,000 common shares of the Issuer held in escrow as follows:

Designation	Number of Shares	Percentage of
_of Class	Held in Escrow	Class
common shares	750,000	38.748%

The 750,000 common shares of the Issuer (the "Principals' Shares") were issued for cash at \$0.01 per share to the persons ("Principals") as follows:

EXECUTIVE COMPENSATION

The Issuer has one executive officer: Tom K.T. Cheng, President and a Director of the Issuer.

Since incorporation, Mr. Cheng has received no remuneration from the Issuer.

Mr. Cheng has been granted an incentive stock option to purchase 100,000 shares of the Issuer, the particulars of which are disclosed in the section captioned "Options to Purchase Shares".

OPTIONS TO PURCHASE SHARES

The Issuer has granted incentive stock options as follows:

Optionee	Number of Common Shares under Option	Exercise Price and Term
2 Directors who are Senior Officers	120,000	<pre>\$0.45 per share exercisable at any time up to</pre>
2 Directors who are not Senior Officers	150,000	 and inclusive of the fifth anniversary of the date of the receipt for the Prospectus.

AUDITORS, TRANSFER AGENT AND REGISTRAR

The Auditors of the Issuer are Ellis Foster, Chartered Accountants, of #304, 1867 West Broadway, Vancouver, British Columbia, V6J 4W1.

The Registrar and Transfer Agent for the Issuer is Montreal Trust Company of Canada, 510 Burrard Street, Vancouver, British Columbia, V6C 3B9.

CANADIAN INCOME TAX CONSIDERATIONS OF FLOW-THROUGH SHARES

The following is a summary of the principal federal income tax consequences arising under the <u>Income Tax Act</u> of Canada (the "Act"), the Regulations thereunder and any proposed amendments to the Act or Regulations announced by the Federal Minister of Finance as of the date hereof, and throughout this subheading, reference to "Flow-Through Shares" and "Shares" is reference to the Shares offered under this Offering. In the opinion of Thorsteinssons, tax lawyers, the following is, as of the date hereof, a fair and accurate summary of the principal federal income tax consequences arising under the Act to an investor who is resident in Canada, who acquires Flow-Through Shares of the Issuer under this Offering, to whom such shares represent capital property and to whom resource expenses are renounced by the Issuer in accordance with the terms of the Flow-Through Share Subscription Agreement annexed hereto as Schedule "A", and the renunciation provisions of the Act.

The income tax consequences will not be the same for all investors but may vary depending on a number of factors, including the province of residence of the investor, whether the shares of the Issuer acquired by him will be characterized as capital property and the amount that his taxable income would be but for his participation in this Offering. THE FOLLOWING DISCUSSION OF THE CANADIAN INCOME TAX CONSEQUENCES IS, THEREFORE, OF A GENERAL NATURE ONLY AND IS NOT INTENDED TO CONSTITUTE A COMPLETE ANALYSIS OF THE INCOME TAX CONSEQUENCES AND SHOULD NOT BE INTERPRETED AS LEGAL OR TAX ADVICE TO ANY PARTICULAR INVESTOR. EACH PROSPECTIVE INVESTOR SHOULD OBTAIN ADVICE FROM HIS OWN TAX ADVISOR AS TO BOTH THE FEDERAL AND PROVINCIAL INCOME TAX CONSEQUENCES OF HIS PARTICIPATION IN THIS OFFERING.

This summary does not address the federal income tax consequences of investors who are:

- (a) not residents of Canada;
- (b) corporations, whose principal business is related to the exploitation of natural resources (referred to in paragraph 66(15)(h) of the Act as "principal business corporations");
- (c) traders or dealers in resource properties referred to in subsection 66(5) of the Act;
- (d) agents acting on behalf of the Issuer in completing a flow-through share offering; or
- (e) partnerships or trusts.

Canadian Exploration Expenses

Any eligible Canadian Exploration Expense ("CEE") incurred by the Issuer and renounced by it to an investor in Flow-Through Shares in accordance with the terms of the Flow-Through Share Subscription Agreement and pursuant to the Act will, at the effective date of such renunciation, be considered as CEE incurred by the investor and a corresponding amount will be added to the investor's cumulative CEE pool. Subject to certain restrictions imposed by the Act, it is possible for the Issuer to renounce, with an effective date of December 31 of a particular year, CEE (to the extent that it was an expense described in paragraph 66.1(6)(a)(iii) of the Act, i.e. a "grass roots" exploration expense as opposed to a preproduction expense) incurred by it under a flow-through share arrangement within the first 60 days of the year following the particular year.

Under the Act, the Issuer will be precluded from renouncing any amount of CEE which constitutes Canadian Exploration and Development Overhead Expenses ("CEDOE") as prescribed under the Regulations to the Act. In addition, the amount of CEE that the Issuer can renounce must be net of the amount of any assistance the Issuer receives, is entitled to receive or may reasonable be expected to receive, at any time, in respect of the exploration activities to which the CEE relates.

The cumulative CEE pool of an investor will be reduced by the amount of any assistance which he becomes entitled to receive in respect of CEE that has been incurred. An investor will be entitled to deduct, in computing his income from all sources for a taxation year, any amount that he may claim, not exceeding 100% of the balance of his cumulative CEE pool at the end of that taxation year. Deductions claimed by an investor will reduce his cumulative CEE pool by a corresponding amount. To the extent that an investor does not deduct the balance of his cumulative CEE pool at the end of a taxation year, the balance will be carried forward indefinitely and deductions may be made therefrom by the investor in subsequent taxation years in accordance with the provisions of the Act.

In the event that the balance of an investor's cumulative CEE pool is negative at the end of a taxation year, which may occur should any person receive or become entitled to receive assistance payments in the taxation year which relate to CEE incurred in a prior year or through unrelated adjustments to his CEE, the negative amount must be included in the investor's income for that taxation year and the balance of his cumulative CEE will thereupon become nil.

Adjusted Cost Base of Common Shares

Each Flow-Through Share issued to an investor under the Flow-Through Share Subscription Agreement will initially be deemed to have a cost to that investor of nil.

Any non-flow-through shares acquired pursuant to this Offering will initially have a cost to that investor of the price that such share is acquired or offered at hereunder as determined by the Issuer and the Agent in accordance with the rules and policies of the Exchange.

The adjusted cost base of each share of the Issuer owned by an investor at any particular time, including Flow-Through Shares and shares of the same class, will be the average of the adjusted cost base to him of all shares of the Issuer owned by him at that time.

Disposition of Shares

The characterization of the Flow-Through Shares issued under this Offering as capital property or as inventory to any particular investor will be determined according to the rules ordinarily applicable to the characterization of shares of a corporation.

Generally, the disposition of a share held as capital property will result in a taxable capital gain (or an allowable capital loss) equal to three-quarters of that amount by which the proceeds of disposition exceed (or are exceeded by) the adjusted cost base of the investor for that share and his costs of disposition. The disposition of a share which is not held as capital property will result in an income gain (or loss), the full amount of which is to be included in computing an investor's income.

Under the Act, individuals resident in Canada, other than trusts, are entitled to a special deduction when computing federal income in respect of capital gains realized up to a lifetime limit of \$100,000 of capital gains.

All or part of the capital gain that my be realized by an investor from the disposition of shares held as capital property may not be subject to tax under the Act if the investor has not, by reason of other dispositions, exceeded his cumulative capital gains exemption limit and if he is also not subject to tax under the alternative minimum tax provisions of the Act. The alternative minimum tax provisions are discussed below. An investor's entitlement to claim a special deduction in respect of a specific capital gain and hence his ability to shelter taxable capital gains may be affected by his cumulative capital gains exemption limit, which takes into account the amount of special deductions previously claimed, the amount of any net capital losses and any allowable business investment losses deducted in a taxation year ending after 1984. In addition, the investor's entitlement to claim such a deduction will be restricted to the extent that certain defined cumulative investment expenses after 1987 exceed defined cumulative investment income after 1987. An investor's investment expenses for the year will include, among other things, the following items to the extent that they have been deducted in computing his income:

- (a) interest expense incurred to acquire income producing property; and
- (b) 50% of resource expenses, including CEE, attributed to the investor under the Flow-Through Share Subscription Agreement.

Any balance in an investor's cumulative CEE account at the time he disposes of a share will remain with the Investor and will not be transferred to the purchaser of the share. THIS IS SCHEDULE "A" TO THE PROSPECTUS OF CANADIAN IMPERIAL MINES INC. DATED THE 4TH DAY OF NOVEMBER, 1991.

THIS AGREEMENT IS TO BE EXECUTED ONLY BY INVESTORS WISHING TO PARTICIPATE IN THE FLOW-THROUGH OFFERING OF 200,000 FLOW-THROUGH COMMON SHARES PURSUANT TO THE PROSPECTUS OF CANADIAN IMPERIAL MINES INC. DATED NOVEMBER 4, 1991.

FLOW-THROUGH SHARE SUBSCRIPTION AGREEMENT

THIS FLOW-THROUGH SHARE SUBSCRIPTION AGREEMENT MUST BE DULY EXECUTED AND RETURNED BY THE INVESTOR, OR HIS DULY APPOINTED ATTORNEY, TO THE ISSUER, THE AGENT OR A SELLING PARTICIPANT WITHIN 28 DAYS AFTER THE OFFERING DAY AS DEFINED IN THE PROSPECTUS, OR THE INVESTOR WILL NOT BE ENTITLED TO RECEIVE ANY "FLOW-THROUGH" TAX TREATMENT FOR HIS SUBSCRIPTION.

THIS AGREEMENT is made and dated for reference the _____ day of _____ , 199 .

BETWEEN:

CANADIAN IMPERIAL MINES INC., a company incorporated pursuant to the laws of the Province of British Columbia and having a business office at No. 120, 13751 Mayfield Place, Richmond, B.C., V6V 2G9

(hereinafter called the "Issuer")

OF THE FIRST PART

AND:

EACH OF THE PERSONS LISTED IN APPENDIX I HERETO WHO HAVE SUBSCRIBED FOR FLOW-THROUGH COMMON SHARES IN THE CAPITAL OF THE ISSUER PURSUANT TO THE PROSPECTUS OF THE ISSUER DATED NOVEMBER 4, 1991

(each of such persons being referred to herein as an "Investor" and collectively referred to as the "Investors")

OF THE SECOND PART

WHEREAS:

A. The Issuer has certain interests in mining resource property situated in Canada (the "Property");

B. The principal business of the Issuer is mining or exploring for minerals;

C. The Issuer intends to carry out one or more exploration programs on the Property that may include geophysical surveying, seismic testing, underground and surface diamond drilling, metallurgical studies and underground drifting to determine the existence, location, extent and quality of the mineral resources located thereon (the "Exploration Program");

D. The expenses incurred in performing the Exploration Program will constitute Canadian Exploration Expense within the meaning of subparagraph 66.1(6)(a)(iii) of the <u>Income Tax Act</u> of Canada (the "ITA"), other than expenses which constitute "Canadian Exploration and Development Overhead Expenses" ("CEDOE") as prescribed for the purposes of paragraph 66.12(6)(b) of the ITA (such expenditures are hereinafter referred to as "CEE");

E. Pursuant to a Prospectus of the Issuer dated the 4th day of November, 1991 (the "Prospectus"), the Investor has agreed to subscribe for flow-through common shares (the "Flow-Through Common Shares") at a price of \$0.40 (the "Offering Price") per Flow-Through Common Shares and the Issuer has agreed to issue the Flow-Through Common Shares to the Investor;

F. The Flow-Through Common Shares will constitute "flowthrough" shares for the purposes of the ITA, all as more particularly described in the Prospectus;

G. The Issuer has agreed to apply the subscription funds allocable to the Flow-Through Common Shares to be provided by the Investor towards carrying out the Exploration Program and to renounce the expenditures associated therewith to the Investor in accordance with the terms of this Agreement;

NOW -THEREFORE THIS AGREEMENT WITNESSETH that in consideration of the foregoing and of the mutual covenants and agreements herein contained, the parties agree as follows:

Subscription

1. Each Investor hereby subscribes, at the Offering Price (as defined in the Prospectus), for that number of Flow-Through Common Shares as is indicated beside his name in Appendix I hereto and concurrently with the execution of this Agreement agrees to pay to the Issuer the proceeds of such subscription (hereinafter referred to as the "Subscriber's Proceeds" and collectively as the "Subscribers' Proceeds"), as indicated beside each Investor's name in Appendix I hereto. Deposit of Subscribers' Proceeds and Issuance of the Common Shares

- 3. The Issuer will:
 - (a) following receipt of the Subscribers' Proceeds, deposit into a separate bank account (the "Exploration Fund") established by the Issuer for the purpose of financing the Exploration Program; and
 - (b) upon receipt of all necessary securities regulatory approvals, issue the Flow-Through Common Shares to the Investor and deliver a share certificate representing the Flow-Through Common Shares to the Investor.

Additional Investors to Participate in Exploration Program

The Investor acknowledges that the Issuer has entered 4. into and will be entering into agreements similar to this Agreement with other persons. Such agreements shall be made and dated for reference the same date as this Agreement. The funds paid to the Issuer pursuant to this Agreement shall also be deposited in the Exploration Fund. Should the Issuer intend, to issue additional "flow-through" however, common shares pursuant to a private placement or pursuant to a different public offering, any subscription funds received from such private placement or public offering shall be deposited into a bank account separate from the Exploration Fund and shall not be commingled with the funds comprising the Exploration Fund, it being the intention of the parties that a separate subscribers' such exploration account be established for each private placement or public offering. The Issuer shall expend such subscriber's exploration accounts in chronological order with reference to:

- (a) the reference date of the flow-through common share funding and renunciation agreements entered into for such private placement; and
- (b) the date of closing such public offering,

such that the subscription funds from the oldest "flow-through" financing shall always be spent first and renunciation made in respect of such expenditures before any renunciations are made in respect of any exploration expenditures that are financed from subsequent "flow-through" financings.

Application of Exploration Fund

5. Subject to the Issuer's right to revise the Exploration Program as provided for in this Agreement, the Issuer shall apply all funds deposited in the Exploration Fund exclusively for the purpose of performing the Exploration Program and the Issuer will only apply such funds to incur expenses ("Exploration Expenditures") which qualify as CEE .

Accrued Interest on Exploration Fund

6. The Investor acknowledges that any interest accruing on funds in the Exploration Fund shall accrue to the sole benefit of the Issuer and may be applied by the Issuer for general corporate purposes.

Schedule for Incurring Exploration Expenditures

7. The Issuer shall use its best efforts to expend the Exploration Fund between the date of this Agreement and February 29, 1992.

In the event that any balance remains in the Exploration Fund at that date, such balance will be expended by the Issuer to fund Exploration Expenditures as soon as it is practical in the circumstances but, in any event, on or before February 28, 1993.

Exploration Benefits

8. The Investor shall not acquire any rights in the properties of the Issuer, including property acquired with the Exploration Fund.

Filing of Agreement

9. The Issuer shall file with Revenue Canada, Taxation together with a copy of this Agreement, the prescribed form referred to in subsection 66(12.68) of the ITA on or before the last day of the month following the earlier of:

- (a) the month in which this Agreement is entered into; and
- (b) the month in which any "selling instrument" as that term is defined in paragraph 66(15)(h.1) of the ITA, relating to this Agreement is first delivered to an Investor or other potential investors of the Issuer.

Issuer to Renounce CEE

10. The Issuer will renounce by March 31, 1992 in favour of each Investor in accordance with the provisions of subsections 66(12.6) and 66(12.66) of the ITA, with an effective date of December 31, 1991, the amount of CEE incurred by the Issuer on or before March 1, 1992 from the Subscriber's Proceeds for that Investor as shown in Appendix I hereto. If CEE is incurred after March 1, 1992, the Issuer will renounce such CEE to the Investor as soon as practicable, but in any event no later than March 1, 1993 with an effective date no later than December 31, 1992. The Issuer shall have no right to claim any deduction for CEE or depletion of any sort in respect of the Exploration Expenditures. The Issuer will file with Revenue Canada in respect of each renunciation before the last day of the month following the date of such renunciation, an information return in the form prescribed in subsection 66(12.7) of the ITA.

Allocation of Exploration Expenditures

11. For the purposes of determining the extent to which the Subscribers' Proceeds have been the subject of renunciation, the total amount expended from the Exploration Fund on Exploration Expenditures shall be allocated among all Investors who have contributed to the Exploration Fund on a basis pro-rata to the relative amounts of their respective Subscriber's Proceeds.

Issuer to Account to Investor

12. The Issuer will maintain proper accounting books and records relating to the Exploration Expenditures. On the completion of the Exploration Program, the Issuer shall account to the Investor in respect of the application of the Exploration Fund.

No Dissemination of Confidential Information

13. The Issuer shall be entitled to hold confidential all exploration information relating to any program on which any portion of the Exploration Fund is expended pursuant to this Agreement and it shall not be obligated to make such information available to any Investor except in the manner and at such time as it makes any such information available to its shareholders or to the public pursuant to the rules and policies of any stock exchange or laws, regulations or policies of any province.

Execution of Additional Documents

14. The parties hereto each covenant and agree to execute and deliver such further agreements, documents and writings and provide such further assurances as may be required by the parties to give effect to this Agreement and, without limiting the generality of the foregoing, to do all acts and things, execute and deliver all documents, agreements and writings and provide such assurances, undertakings, information, pooling agreements and investment letters as may be required from time to time by all regulatory or governmental bodies or stock exchanges having jurisdiction over the Issuer's affairs or as may be required from time to time under the ITA and the Regulations thereunder.

Force Majeure

Subject to paragraph 7, if the Issuer is prevented or 15. delayed from performing any of its obligations hereunder or from incurring Exploration Expenditures or in carrying out anv programs contemplated hereby by reason of any act of God, strike, labour dispute, lockout, threat of imminent strike, fire, flood, interruption or delay in transportation, war, insurrection or mob violence, requirements or regulation of government or statute, unavoidable casualties, shortgage of labour, equipment or materials, plant breakdown or failure of operating equipment, or any disabling cause without regard to the foregoing enumeration beyond its control, or which cannot be overcome by the means normally employed in performance, then and in every such event, any such prevention or delay will not constitute a breach of this Agreement but subject to the requirements of the ITA concerning renunciation of CEE to the Investor of "flow-through shares", performance of any of the said obligations or requirements to incur Exploration Expenditures on behalf of the Investor or to perform any such program shall be suspended during such period of disability and the period of all such delays resulting from any such causes will be excluded in computing the time within which anything required to be permitted by the Issuer is to be done hereunder, it being understood that the time within which anything is to be done, or made pursuant thereto, shall be extended by the total period of all such delays.

Governing Laws

16. This Agreement is deemed to have been made in British Columbia and will be governed by and construed exclusively in accordance with the laws of British Columbia.

Time of the Essence

17. Time is of the essence of this Agreement.

Interpretation

18. Whenever the singular or neuter are used throughout this Agreement, the same shall be construed as meaning the plural or feminine or masculine or a body corporate where the context of the parties so require.

Entire Agreement

19. This Agreement supercedes all prior negotiations between the parties with respect to the matters herein referred to and contains the entire agreement between the parties hereto and may be modified only by an instrument in writing signed by the party against whom modification is asserted. Enurement

20. This Agreement shall enure to the benefit of and be binding upon the parties hereto and each of their heirs, executors, administrators, successors and assigns.

IN WITNESS WHEREOF the parties hereto have executed this Agreement as of the day and year first above written.

THE COMMON SEAL of CANADIAN IMPERIAL MINES INC. was hereto affixed in the presence of:))))))))
SIGNED, SEALED and DELIVERED by, as Attorney for each of the Investors listed in Appendix I attached hereto, in the presence of:)))))
Signature)
Address	
Occupation)

APPENDIX I

Name, Address and Social Insurance No. of Investor

No. of Flow-Through Common Shares Subscribed Subscriber's Proceeds

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THIS IS SCHEDULE "B" TO THE PROSPECTUS OF CANADIAN IMPERIAL MINES INC. DATED THE 4TH DAY OF NOVEMBER, 1991.

THIS POWER OF ATTORNEY FORM IS TO BE EXECUTED ONLY BY INVESTORS WISHING TO PARTICIPATE IN THE OFFERING OF 200,000 FLOW-THROUGH COMMON SHARES PURSUANT TO THE PROSPECTUS OF CANADIAN IMPERIAL MINES INC. DATED NOVEMBER 4, 1991.

POWER OF ATTORNEY FORM

THIS POWER OF ATTORNEY MUST BE DULY EXECUTED AND RETURNED BY THE UNDERSIGNED TO THE AGENT OR SELLING PARTICIPANT WITHIN 28 DAYS AFTER THE OFFERING DAY, OR THE UNDERSIGNED WILL NOT BE ENTITLED TO RECEIVE ANY "FLOW-THROUGH" TAX TREATMENT FOR HIS SUBSCRIPTION.

TO: CANADIAN IMPERIAL MINES INC. (the "Issuer")

No. 120, 13751 Mayfield Place, (Suite No., Street)

Richmond, British Columbia, V6V 2G9 (City, Province and Postal Code)

RE: Flow-Through Share Subscription Agreement and Participation in the Offering of Flow-Through Common Shares pursuant to the Issuer's Prospectus dated the 4th day of November, 1991. (the "Prospectus")

The undersigned investor hereby irrevocably nominates, constitutes and appoints Tom K.T. Cheng, or failing him, any other director or senior officer of the Issuer (the "Attorney"), with full power of substitution, as his agent and true and lawful attorney to act on behalf of the undersigned with full power and authority in his name, place and stead to execute, acknowledge, date, deliver, file and record as and where the Attorney considers it appropriate, the Flow-Through Share Subscription Agreement in the form which accompanies the Prospectus as Schedule "A" thereto, and any amendment, change or modification of that agreement.

The undersigned agrees to be bound by any representation and action of the Attorney made or taken in conformity with this Power of Attorney. This Power of Attorney shall be irrevocable and shall bind the undersigned, his heirs, executors, administrators, successors and assigns, as the case may be, notwithstanding the death, incapacity or bankruptcy of the undersigned. The Attorney shall have the power to execute the Flow-Through Share Subscription Agreement in the name of the undersigned pursuant to this Power of Attorney by affixing the Attorney's signature thereto with the indication that the Attorney is acting on behalf of the undersigned.

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)

DATED this day of , 199.

IF THE UNDERSIGNED IS AN INDIVIDUAL:

SIGNED, SEALED and DELIVERED by the Undersigned in the presence of:

Signature of Undersigned

Signature of Witness

Name of Undersigned

Name of Witness

Address

Address of Witness

Occupation of Witness

IF THE UNDERSIGNED IS A CORPORATION:

THE COMMON SEAL of Undersigned was hereto affixed in the presence of:

Authorized Signatory

Name of Signatory (Print)

Position

Name of Corporation

Address of Corporation

City Province

Postal Code

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C/S

CANADIAN IMPERIAL MINES INC.

FINANCIAL STATEMENTS

JUNE 30, 1991

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Chartered Accountants

3rd FLOOR, 1867 WEST BROADWAY VANCOUVER, B.C. CANADA V6J 4W1 Telephone (604) 734-1112 Fax 734-1502

AUDITORS' REPORT

TO THE SHAREHOLDERS OF

CANADIAN IMPERIAL MINES INC.

We have audited the balance sheets of Canadian Imperial Mines Inc. as at June 30, 1991, 1990, 1989 and 1988 and the statements of loss and deficit and changes in financial position for the periods then ended. These financial statements are the responsibility of the company's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with generally accepted auditing standards. Those standards require that we plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In our opinion, these financial statements present fairly, in all material respects, the financial position of the company as at June 30, 1991, 1990, 1989 and 1988 and the results of its operations and the changes in its financial position for the periods then ended in accordance with generally accepted accounting principles. As required by the Company Act of British Columbia, we report that, in our opinion, these principles have been consistently applied.

5 this Foster

Chartered Accountants

Vancouver, Canada July 3, 1991

CANADIAN IMPERIAL MINES INC.

Balance Sheet

Exhibit A

June 30,

Assets

		1990	1989	1988
Current				
Cash and term deposit Accounts receivable	\$ 18,033 	\$ 18,661 	\$ 32,885	\$121,525 <u>3,895</u>
	20,097		32,885	125,420
Resource Properties (Note 3)	<u>131,369</u>	<u> 99,843</u>	_116,560	_40,000
Fixed, at cost				
Equipment Furniture	2,120 4,781	2,120 4,781	2,120 	-
	6,901	6,901	4,639	
Accumulated depreciation	<u>3,078</u>	2,122	<u> </u>	••••••••••••••••••••••••••••••••••••••
	3,823	4,779		
	<u>\$155,289</u>	<u>\$123,283</u>	<u>\$153,156</u>	<u>\$165,420</u>
	Liabilities			
Current				
Accounts payable and accrued liabilities	<u>\$ 82,165</u>	<u>\$ 60,481</u>	<u>\$_3,447</u>	<u>\$ 2,000</u>
Shareholders' Equity				
Share Capital (Note 4)	315,000	244,000	244,000	173,500
Deficit - Exhibit B	<u>(241,876</u>)	<u>(181,198</u>)	<u>(94,291</u>)	<u>(10,080)</u>
	_73,124	62,802	149,709	163,420
	<u>\$155,289</u>	<u>\$123,283</u>	<u>\$153,156</u>	<u>\$165,420</u>

Approved By The Directors

um Robert Voong Lian Thye Fong

The accompanying notes form an integral part of these financial statements.

CANADIAN IMPERIAL MINES INC.

Statement of Loss and Deficit

Exhibit B

	Year Ended June 30, <u>1991</u>	Year Ended June 30, 1990	Year Ended June 30, 1989	Sept. 18, 1987 to June 30, 1988
Administrative Expenses				
Accounting and audit	\$ 4,165	\$ 5,439	\$ 2,686	\$ 2,000
Automobile	12,310	\$,435 8,012	φ 2,000 -	Ψ 2,000
Bank charges and interest	12,510	66	101	-
Depreciation	956	1,195	928	-
Legal	15,969	8,080	21,124	1,105
Listing and filing fees	3,985	180	6,026	-
Management fees	21,600	21,600	21,600	3,600
Office	62	447	4,822	45
Printing	-	-	1,425	-
Rent	· · · •	5,000	12,000	2,000
Secretarial	-	3,200	9,600	1,600
Telephone	. –	29	1,267	-
Transfer agent	-	-	500	-
Travel and promotion	2,641	4,189	7,379	-
Interest income	<u>(1,135</u>)	<u>(2,508</u>)	<u>(5,247</u>)	<u>(270)</u>
	60,678	54,929	84,211	10,080
Loss On Abandonment Of Plat/Census				
Properties		<u>31,978</u>		
Loss For The Period	60,678	86,907	84,211	10,080
Deficit, beginning of period	<u>181,198</u>	94,291	10,080	
Deficit, end of period - Exhibit A	<u>\$241,876</u>	<u>\$181,198</u>	<u>\$94,291</u>	<u>\$10,080</u>
Loss Per Share	<u>\$0.03</u>	<u>\$0.05</u>	<u>\$0.01</u>	<u>\$0.01</u>

The accompanying notes form an integral part of these financial statements.

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CANADIAN IMPERIAL MINES INC.

Statement of Changes in Financial Position

Exhibit C

	Year Ended June 30, <u>1991</u>	Year Ended June 30, 1990	Year Ended June 30, 1989	Sept. 18, 1987 to June 30, 1988
Cash Provided By (Used For) Operatin	g Activities			
Operations Loss for the period - Exhibit B Items not involving cash:	\$(60,678)	\$(86,907)	\$(84,211)	\$(10,080)
- depreciation - loss on abandonment of	956	1,195	928	-
resource property	-	<u> 31,978</u>	•	-
Cash provided by non-cash working capital	(59,722)	(53,734)	(83,283)	(10,080)
	<u> 19,620</u>	57,034	5,342	<u>(1,895</u>)
	<u>(40,102)</u>	3,300	<u>(77,941</u>)	<u>(11,975</u>)
Cash Provided By Financing Activities				
Proceeds from share capital	71,000			173,500
Cash Provided By (Used For) Investing Activities				
Acquisition and exploration of resource properties Acquisition of fixed assets	(31,526)	(15,262) (2,262)	(76,560) <u>(4,639</u>)	(40,000)
	<u>(31,526</u>)	<u>(17,524</u>)	<u>(81,199</u>)	<u>(40,000)</u>
Increase (Decrease) In Cash Position	(628)	(14,224)	(88,640)	121,525
Cash Position, beginning of period	<u> 18,661</u>	32,885	121,525	
Cash Position, end of period	<u>\$ 18,033</u>	<u>\$ 18,661</u>	<u>\$ 32,885</u>	<u>\$121,525</u>

The accompanying notes form an integral part of these financial statements.

Notes to Financial Statements

June 30, 1991

Note 1: <u>Nature of Operations</u>

These financial statements have been prepared on a going concern basis which assumes that the Company will be able to realize assets and discharge liabilities in the normal course of business for the foreseeable future. As at June 30, 1991, the Company has a working capital deficiency of \$62,068. The continued operations of the Company and the recoverability of the amounts shown for resource properties and related deferred costs are dependent upon the existence of economically recoverable reserves, the ability of the Company to obtain necessary financing to complete the development, and upon future profitable production (see Note 7).

Note 2: <u>Significant Accounting Policies</u>

a) Resource Properties

The Company follows the policy of deferring all acquisition, exploration and development costs relating to the resource properties. These costs are either amortized against revenue from future production or written off if the property is abandoned or sold. At the present time, management has determined each project to be a cost centre. The amounts shown under resource properties represent costs incurred to date and are not intended to reflect present or future values.

Depletion of costs capitalized on projects put into commercial production will be recorded using the unit-of-production method when estimated proven reserves are determined.

The Company does not accrue the estimated costs of maintaining its mineral properties in good standing.

b) Option Agreements

From time to time, the Company acquires or disposes of properties pursuant to the terms of option agreements. Due to the fact that options are exercisable entirely at the discretion of the optionee, the amounts payable or receivable are not recorded. Option payments are recorded as resource property costs or recoveries when the payments are made or received.

Notes to Financial Statements

June 30, 1991

Note 2: Significant Accounting Policies

c) Fixed Assets

Depreciation is provided on a declining-balance basis as follows:

Office furniture and equipment 20% per annum

Note 3: <u>Resource Properties</u>

a) The Company has incurred the following costs on its resource properties:

	Property Acquisition <u>Costs</u>	Deferred Exploration <u>Costs</u> (Schedule 1)	Abandoned	Balance <u>1991</u>
Middle Vein Properties	\$20,000	\$111,369	\$-	\$131,369
Plat/Census Properties	10,000	<u> 21,978</u>	<u>(31,978</u>)	
	<u>\$30,000</u>	<u>\$133,347</u>	<u>\$(31,978</u>)	<u>\$131,369</u>

b) Middle Vein Properties - An option to acquire a 100% interest in seven claims located in the Victoria Mining Division, British Columbia, Canada.

The option agreement requires the Company to issue a total of 100,000 shares and to pay \$90,000 to the optionor as follows:

		Amount Paid
i)	\$10,000 on or before December 31, 1988	\$10,000
ii)	\$10,000 on or before February 15, 1989	\$10,000
iii)	\$25,000 and 25,000 common shares within 10 days following the approval date of the Company's prospectus	

Notes to Financial Statements

June 30, 1991

Note 3: <u>Resource Properties</u> (continued)

- iv) \$10,000 and 25,000 free trading common shares before January 1, 1992, subject to the completion of the first phase of a program of exploration and development of the Properties and the recommendation of a duly qualified engineer that a further work program should be undertaken.
- v) \$10,000 and 25,000 free trading common shares on or before January 1, 1993, subject to the completion of the second phase of a program of exploration and development of the Properties and the recommendation of a duly qualified engineer that a further work program should be undertaken.
- vi) \$25,000 and 25,000 free trading common shares on or before September 1, 1993, subject to the completion of a subsequent phase of a program of exploration and development of the Properties and the recommendation of a duly qualified engineer that a further work program should be undertaken.

Note 4: <u>Share Capital</u>

- a) Authorized: 25,000,000 common shares with no par value.
- b) Subscribed:

	Shares	Amount
At \$0.01 per share At \$0.25 per share At \$0.35 per share At \$0.40 per share	750,000 635,000 15,000 <u>5,000</u>	\$ 7,500 158,750 5,250 2,000
Balance, June 30, 1988	1,405,000	173,500
At \$0.25 per share	282,000	<u> 70,500</u>
Balance June 30, 1989 and June 30, 1990	1,687,000	244,000
At \$0.25 per share	160,000	40,000
At \$0.35 per share, "flow-through shares"	88,570	31,000
Balance, June 30, 1991	<u>1,935,570</u>	<u>\$315,000</u>

Notes to Financial Statements

June 30, 1991

Note 4: <u>Share Capital</u> (continued)

- c) The 750,000 shares subscribed for at \$0.01 per share will be held in escrow; the release of the shares is subject to the direction of the regulatory authorities.
- d) Flow-through Share Funding

Pursuant to flow-through share funding agreements with investors, the Company is committed to incur \$31,000 in Canadian Exploration Expenditures on its resource property. The shares are flow-through shares and as such the Company is required to renounce as income tax deduction of \$31,000 of exploration and development expenses.

Note 5: <u>Remuneration of Directors and Senior Officers</u>

Management fees were paid or accrued to a corporation owned by a director of the Company.

Note 6: Lease Commitment

The Company has commitments under operating lease for an automobile which call for future lease payments as follows:

1992	\$9,720
1993	\$2,431

Note 7: Subsequent Event

The Company has entered into an agency agreement to offer a total of 800,000 common shares to the public for estimated net proceeds after commission of \$296,000.

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CANADIAN IMPERIAL MINES INC.

Schedule of Deferred Exploration Costs

Schedule 1

	Year Ended June 30, 1991	Year Ended June 30, 1990	Year Ended June 30, 1989	Sept. 18, 1987 to June 30, 1988
Accommodation and supplies	\$ 2,99 1	\$-	\$ 4,860	\$ -
Assessment and assays	561	10,383	-	-
Project preparation and mobilization	2,804	; -	6,245	-
Rentals and transportation	9,112	950	8,295	-
Report and database	3,455	3,487	2,000	30,000
Supervision and report	888	-	3,500	,
Survey	-	-	5,000	-
Wages and fees	11,715	441	26,660	-
J				
Deferred Costs For The Period	31,526	15,261	56,560	30,000
Deferred Costs, beginning of period	<u> 79,843</u>	_86,560	30,000	<u> </u>
	111,369	101,821	86,560	30,000
Deferred Costs, written off		<u>(21,978</u>)		<u> </u>
Deferred Costs, end of period	<u>\$111,369</u>	<u>\$79,843</u>	<u>\$86,560</u>	<u>\$30,000</u>
Allocated As Follows: -				
Middle Vein Properties Plat/Census Properties	\$111,369 	\$79,843 	\$76,000 <u>10,560</u>	\$30,000
	\$ 111,369	<u>\$79,843</u>	<u>\$86,560</u>	<u>\$30,000</u>

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CANADIAN IMPERIAL MINES INC.

FINANCIAL STATEMENTS

SEPTEMBER 30, 1991

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Chartered Accountants

3rd FLOOR, 1867 WEST BROADWAY VANCOUVER, B.C. CANADA V6J 4W1 Telephone (604) 734-1112 Fax 734-1502

REVIEW ENGAGEMENT REPORT

TO THE SHAREHOLDERS OF

CANADIAN IMPERIAL MINES INC.

We have reviewed the balance sheet of Canadian Imperial Mines Inc. as at September 30, 1991 and the statements of loss and deficit and changes in financial position for the period then ended. Our review was made in accordance with generally accepted standards for review engagements and accordingly consisted primarily of enquiry, analytical procedures and discussion related to information supplied to us by the company.

A review does not constitute an audit and consequently we do not express an audit opinion on these financial statements.

Based on our review, nothing has come to our attention that causes us to believe that these financial statements are not, in all material respects, in accordance with generally accepted accounting principles.

Vancouver, Canada October 31, 1991

Ellis Foster

Chartered Accountants

Exhibit A

September 30, 1991

Balance Sheet

(Unaudited)

Assets

Current	
Cash and term deposit	\$ 11,581
Accounts receivable	2,094
	13,675
Resource Properties (Note 3)	131,369
Office Furniture and Equipment, less	
accumulated depreciation of \$3,268	3,633
	<u>\$ 148,677</u>
Liabilities	<u> </u>
Current	• • • • • • • •
Accounts payable and accrued liabilities	\$ 93,378
Advances from a director	7,000
	100,378
Shareholders' Equity	
Share Capital (Note 4)	315,000
Deficit - Exhibit B	<u>(266,701</u>)
	48.299

<u>\$ 148,677</u>

Approved By The Directors Director Tom K.T. Cheng

1 cm Director

Lian Thye Fong

The accompanying notes form an integral part of these financial statements.

ELLIS FOSTER

Statement of Loss and Deficit

Exhibit B

Three Months Ended September 30, 1991

(Unaudited)

Administrative Expenses		
Accounting and audit	\$	2,600
Automobile		2,430
Bank charges and interest		52
Depreciation		190
Legal		15,053
Listing and filing fees		3,300
Office		1,337
Interest income	·	<u>(137</u>)
Loss For The Period		24,825
Deficit, beginning of period	_	241,876
Deficit, end of period - Exhibit A	<u>\$ 2</u>	266,701
Loss Per Share		<u>\$0.01</u>

The accompanying notes form an integral part of these financial statements.

Statement of Changes in Financial Position

Exhibit C

Three Months Ended September 30, 1991

(Unaudited)

Cash Provided By (Used For) Operating Activities

Operations Loss for the period - Exhibit B	\$ (24,825)
Item not involving cash: - depreciation	<u>190</u>
Cash provided by non-cash working capital	(24,635) <u>18,183</u>
Decrease In Cash Position	(6,452)
Cash Position, beginning of period	18,033
Cash Position, end of period	<u>\$ 11,581</u>

Notes to Financial Statements

September 30, 1991

(Unaudited)

Note 1: <u>Nature of Operations</u>

These financial statements have been prepared on a going concern basis which assumes that the Company will be able to realize assets and discharge liabilities in the normal course of business for the foreseeable future. As at September 30, 1991, the Company has a working capital deficiency of \$86,703. The continued operations of the Company and the recoverability of the amounts shown for resource properties and related deferred costs are dependent upon the existence of economically recoverable reserves, the ability of the Company to obtain necessary financing to complete the development, and upon future profitable production (see Note 7).

Note 2: <u>Significant Accounting Policies</u>

a) **Resource Properties**

The Company follows the policy of deferring all acquisition, exploration and development costs relating to the resource properties. These costs are either amortized against revenue from future production or written off if the property is abandoned or sold. At the present time, management has determined each project to be a cost centre. The amounts shown under resource properties represent costs incurred to date and are not intended to reflect present or future values.

Depletion of costs capitalized on projects put into commercial production will be recorded using the unit-of-production method when estimated proven reserves are determined.

The Company does not accrue the estimated costs of maintaining its mineral properties in good standing.

b) **Option Agreements**

From time to time, the Company acquires or disposes of properties pursuant to the terms of option agreements. Due to the fact that options are exercisable entirely at the discretion of the optionee, the amounts payable or receivable are not recorded. Option payments are recorded as resource property costs or recoveries when the payments are made or received.

Notes to Financial Statements

September 30, 1991

(Unaudited)

Note 2: Significant Accounting Policies (continued)

c) Fixed Assets

Depreciation is provided on a declining-balance basis as follows:

Office furniture and equipment 20% per annum

Note 3: <u>Resource Properties</u>

a) The Company has incurred the following costs on its resource properties:

	Property Acquisition	Deferred Exploration	Tetal
Middle Vein Properties	<u>Costs</u> \$20,000	<u> </u>	<u> </u>

b) Middle Vein Properties - An option to acquire a 100% interest in seven claims located in the Victoria Mining Division, British Columbia, Canada.

The option agreement requires the Company to issue a total of 100,000 shares and to pay \$90,000 to the optionor as follows:

- i) \$10,000 on or before December 31, 1988, which was paid.
- ii) \$10,000 on or before February 15, 1989, which was paid.
- iii) \$25,000 and 25,000 common shares within 10 days following the approval date of the Company's prospectus.
- iv) \$10,000 and 25,000 free trading common shares before January 1, 1992, subject to the completion of the first phase of a program of exploration and development of the Properties and the recommendation of a duly qualified engineer that a further work program should be undertaken.
- v) \$10,000 and 25,000 free trading common shares on or before January 1, 1993, subject to the completion of the second phase of a program of exploration and development of the Properties and the recommendation of a duly qualified engineer that a further work program should be undertaken.

Notes to Financial Statements

September 30, 1991

(Unaudited)

Note 3: <u>Resource Properties</u> (continued)

vi) \$25,000 and 25,000 free trading common shares on or before September 1, 1993, subject to the completion of a third phase of a program of exploration and development of the Properties and the recommendation of a duly qualified engineer that a further work program should be undertaken.

Note 4: <u>Share Capital</u>

- a) Authorized: 25,000,000 common shares with no par value.
- b) Subscribed: 1,935,570 shares.

There had been no change in the share capital during the period.

- c) The 750,000 shares subscribed for at \$0.01 per share will be held in escrow; the release of the shares is subject to the direction of the regulatory authorities.
- d) The Company has granted its directors stock options to purchase 270,000 shares at \$0.45 per share for a period of five years from the date of the receipt of the Company's prospectus.

Note 5: <u>Remuneration of Directors and Senior Officers</u>

During the period, there were no management fees paid or accrued to directors and senior officers of the Company.

Note 6: Lease Commitment

The Company has commitments under operating lease for an automobile which call for future lease payments as follows:

1992	\$9,720
1993	\$2,431

Notes to Financial Statements

September 30, 1991

(Unaudited)

Note 7: Subsequent Event

The Company has entered into an agency agreement to offer a total of 800,000 common shares to the public for estimated net proceeds after commission of \$296,000.

Note 8: <u>Comparative Figures</u>

Comparative figures for the corresponding period in 1990 are not available.

92 F/2 Latitude: 49°06'N Longitude: 124°35'W

REVISED GEOLOGICAL REPORT

MIDDLE VEIN PROSPECT

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Mount McQuillan Area Victoria Mining Division, B.C.

for

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CANADIAN IMPERIAL MINES INC. #777 - 1177 West Hastings Street Vancouver, B.C. V6E 2K3

By

Kucera & Associates Consultants Richard E. Kucera, Ph.D.

September 20, 1991



SUMMARY

Canadian Imperial Mines Inc. holds seven reverted Crown Grants (Middle Vein Prospect) in the Mt. McQuillan area, located 21 kilometres southeast of Port Alberni, Vancouver Island, B.C. (92F/2). Elevations range from 1200 to 1500 metres. Present access to the property is either by helicopter or by trail from China Creek or Nitinat River. The end of an old logging road lies 2.2 kilometres southeast of the property.

The Middle Vein Prospect is located on the Cowichan-Horn Lake Uplift, a geologically favourable area and contains past producers of the Mt. McQuillan-China Creek mining camps. The property is largely underlain by the lower part of the Sicker Group rocks, represented here by the Duck Lake Formation, composed of grey to greenish andesite, dacite tuffs and breccias. Gabbroic rocks (Island Intrusions) also occur locally.

Mineralization on the property consists of lenticular quartz-carbonate veins, up to 5 metres long and 20 cm wide, associated with a very strong and persistent NNE trending shear zone 2 to 3 metres wide that cuts light to dark brown weathered andesite. This mineralized zone has been referred to as the Middle Vein. The Middle Vein is exposed only in the Middle Vein workings for a distance of 5 metres. The veins and shear zone at this locality strike N 10 degrees to 18 degrees East and dip 78 degrees to 85 degrees East. Some of the veins are found associated with light-coloured feldspar-hornblende dykes that are as much as 2 metres wide. One 20 cm channel sample assayed 0.88 oz/ton Au.

Although the shear zone is largely obscured by overburden, it is also exposed for a distance of 350 metres on the northern portion of the property. There is no indication of the Middle Vein shear zone by VLF-EM survey on the Apex and Skyline claims nor on the War Lion and Conqueror claims. Exploration by Canadian Imperial Mines Inc. in 1989 and 1991 included establishing grid lines, collecting chip and channel samples, geological mapping and geophysical surveys. The writer has taken no independent check samples but he directed sampling by employees of the vendor.

Individual quartz veins assay up 1.4 oz/ton Au across widths of up to 10 cm. Sampling by Sawyer Consultants (1980) reported values of up to 2.20 oz/ton Au and 2.09 oz/ton Ag.

The Middle Vein is judged to be a good target. A two stage exploration program is recommended. Stage One would consist of detailed geological mapping and sampling, aerial photo interpretation and trenching. Stage Two would consist mainly of diamond drilling.

APPENDICES

- Appendix A Rock Sample Descriptions (1989, 1991)
- Appendix B Analytical Results (1980, 1983, 1989, 1991)
- Appendix C Interpretation of the Geophysical Survey on the Apex Group, Figure G-1, G-2, G-3
- Appendix D Geophysical Field Data Worksheets (1989, 1991)
- Appendix E Geophysical Equipment Specifications
- Appendix F Petrographic Analysis Reports (1989, 1991)

INTRODUCTION

This report was prepared at the request of Mr. Clive Ashworth, on behalf of Canadian Imperial Mines Inc. The purpose of this report is to describe the results of geological exploration and assess the potential of the Middle Vein Prospect (seven reverted Crown grants) held by Canadian Imperial Mines Inc. in the Mt. McQuillan area, southeast of Port Alberni, Vancouver Island.

The report discusses the results of mapping, sampling and geophysical surveys carried out by Ashworth Explorations Limited in 1989 and Hi-Tec Resource Management Ltd. in 1991. In addition, observations made in conjunction with a drilling program carried out on an adjacent property in the early 1980's have been useful in this report.

The primary target is a mineralized zone (Middle Vein) consisting of quartzcarbonate veins associated with a very strong and persistent NNE trending shear zone. Examination of existing data followed by the 1989 and 1991 work programs have demonstrated the presence of gold anomolies in rocks with values up to 1.4 oz/ton across widths of up to 10 cm.

Certain recommendations are made in this report to explore the Middle Vein on the surface as well as at depth. The writer judges the exploration merit of the property to be good.

SOURCE OF INFORMATION

The primary source of information of which this report is based on included geological data, maps, and assays contained in a report by Mr. Hugo Laanela, Consulting Geologist, Nanaimo, B.C. In his report of August 8, 1989, for Ashworth Explorations Ltd., he summarized the work done on the property during the late 1970's and early 1980's by Lode Resources Corp. Laanela also reports on some geophysics and prospecting carried out in the summer of 1989 by Ashworth Explorations Ltd.

In addition, the present writer has drawn upon other appropriate sources including Annual Reports by the Minister of Mines, GSC Papers, and unpublished geological and geophysical reports on adjoining properties. He also had numerous discussions with Mr. Fayz Yacoub, Project Geologist for Ashworth Explorations Ltd.

The writer examined the northern part of the Middle Vein Prospect on October 16, 1989 and mapped a portion of the geology in the vicinity of the Middle Vein on the Apex claim. He was also accompanied by Mr. Yacoub and supervised sampling of the Middle Vein workings.

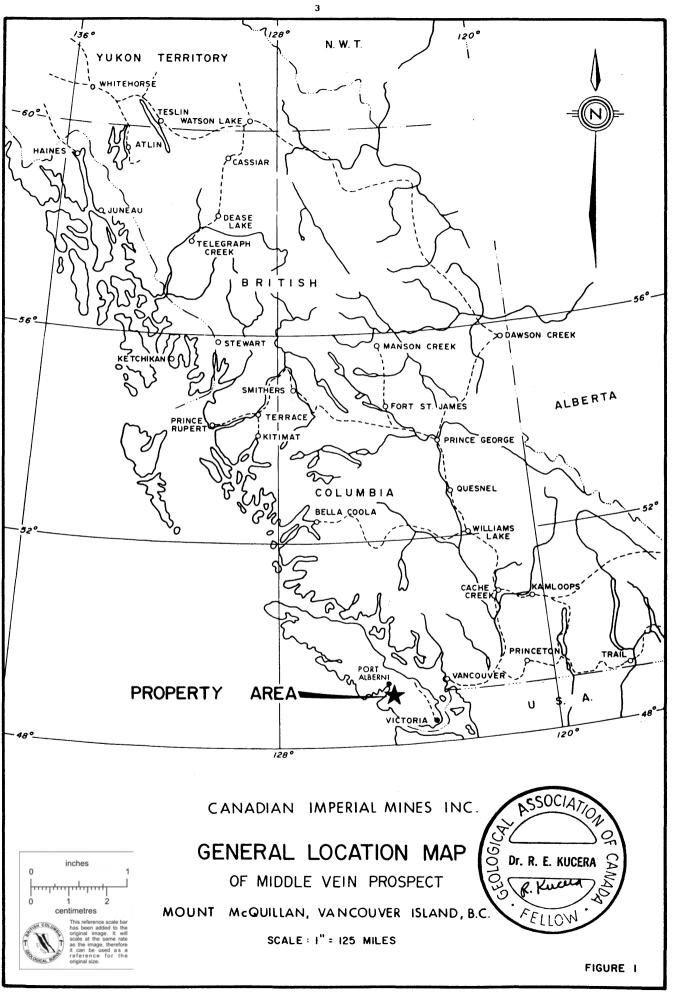
The results of geologic mapping, rock sampling and geophysical work by Hi-Tec Resource Management during June 1991 have been incorporated in this revised report.

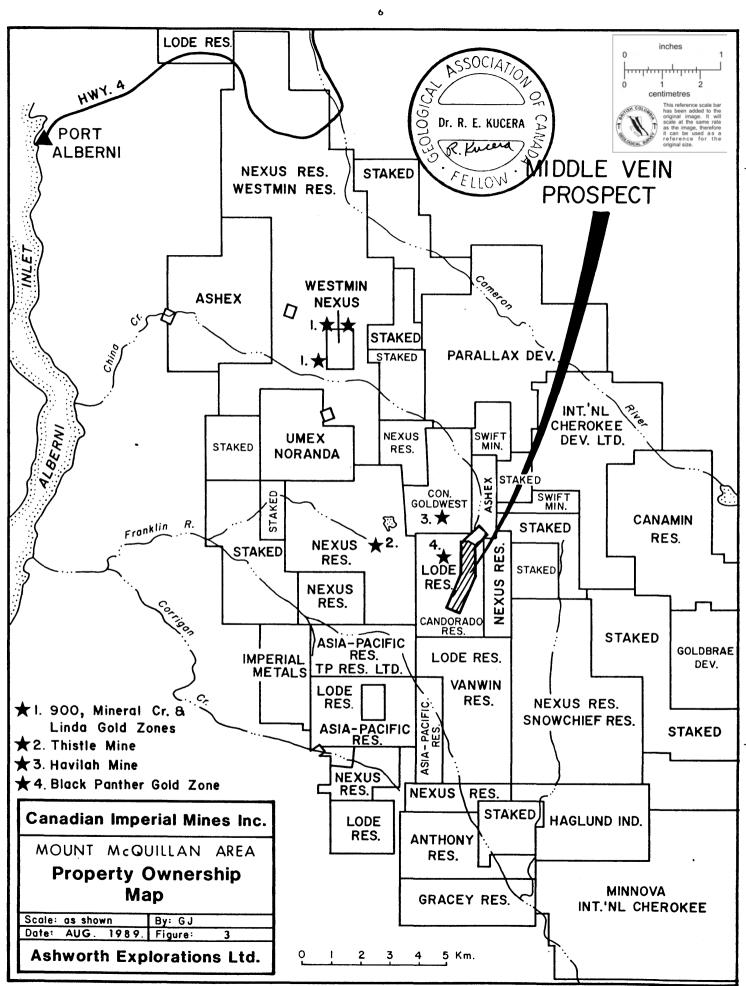
LOCATION AND ACCESS

The Middle Vein Prospect is located 21 kilometres southeast of Port Alberni, Vancouver Island, B.C. (NTS map sheet 92 F/2). The geographical coordinates are 49 degrees 06'N, 124 degrees 35'W in the Victoria Mining Division.

The property is located along the east flank of McQuillan Ridge, the southern spur of Mt. McQuillan. The area lies west of the headwaters of the Middle Fork of Nitinat River.

Present access to the property is either by helicopter (12 minutes from Nanaimo) or by trail from China Creek or Nitinat River. However, a network of roads do exist in the area. The terminus of an old logging road located at the headwaters of the Middle Fork of Nitinat River lies 2.2 kilometres southeast of the workings at the Middle Vein.





The Crown grants and claims are shown on the B.C. Dept. of Energy, Mines and Petroleum Claim Map M92 F/2E as well as on Figures 2, 3, and 5 of this report. The locations of the 7 Crown Grant claims were not verified in the field as none of the claim posts or survey pins were inspected.

HISTORY OF EXPLORATION

1

--- The following summary of exploration and mining activity in the general area of the Middle Vein Prospect is condensed from a report by Mr. H. Laanela, 1989, Consulting Geologist.

Gold in the area was first discovered in the gravels of China Creek, just north of the Middle Vein property in 1862, followed by staking rushes and much mining activity. The Mt. McQuillan-China Creek area contains several modest past producers and numerous Au-Ag prospects, mostly vein-type, including the Black Panther mine, Havilah, Debbie Propsect, Golden Eagle, plus several less explored prospects in the area. These various mineral occurrences and the old mines are described by Stevenson (1945) in his report on the China Creek area.

During the 1960's Gunnex Ltd. carried out various regional and detailed surveys for minerals on the E and N Railway Land Grant on Vancouver Island. The results of these programs later led to the staking of favourable properties on Mt. McQuillan.

During the late 1970's and early 1980's Lode Resources Corp. had secured most of the favourable ground in the Mt. McQuillan area, including the High Grade Vein and Middle Vein area. Lode Resources sampled and drilled several of these properties including the High Grade Vein with encouraging results during 1980 and 1983. The High Grade Vein is located just west and outside of the Middle Vein Prospect, dipping steeply to the west of the property boundary. (See Figure 5).

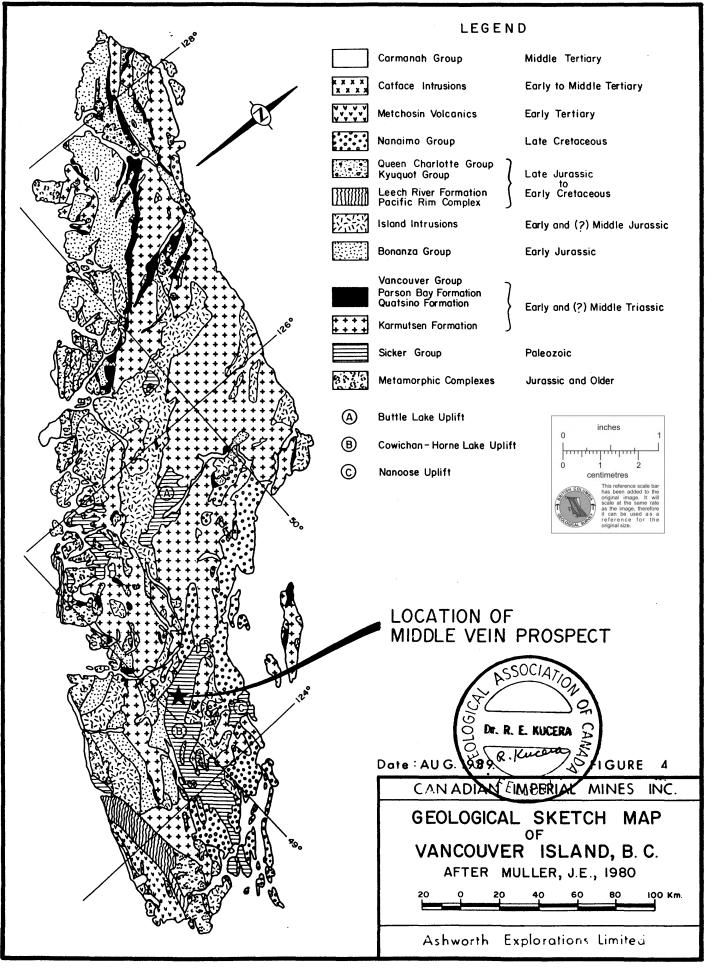
REGIONAL GEOLOGY

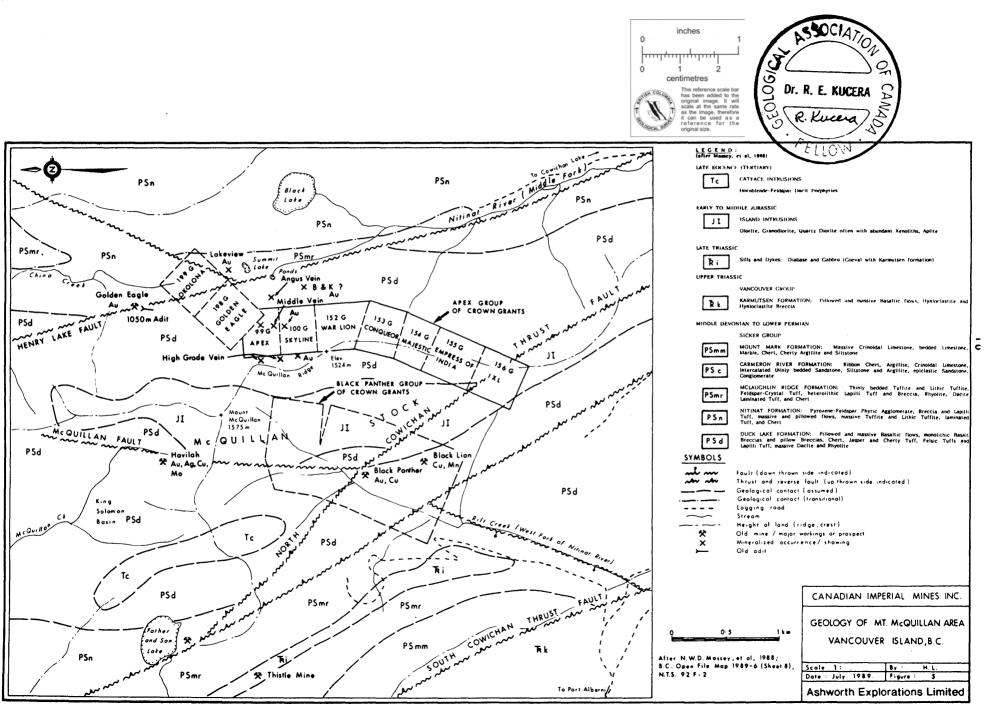
The Middle Vein Claim Group is located on the Cowichan-Horn Lake Uplift, a geologically and economically favourable area on Vancouver Island. This uplift is some 125 kilometres long and 15-22 kilometres wide and it contains the past producers of the Mt. McQuillan - China Creek mining camps. The area is underlain by the Sicker Group volcanics and associated sedimentary rocks. (Figure 4).

Stratigraphy

The regional stratigraphy has been studied by the GSC (Muller, 1977, 1980 and updating of the Sicker Group by Massey et al, 1988). Laanela, 1989, summarizes the pertinent stratigraphy related to Mt. McQuillan.

Era	Period or Epoch	Name	Lithology
CENOZOI	Early to C Middle Tertiary	Catfish Intrusions	Sills, dykes and small plutons of feld- spar hornblende-plagioclase) porphyry. Associated with mineralized veins.
	Upper Cretaceous	Nanaimo Group	Conglomerate, sandstone, shale and coal
MESOZOI	Early and Middle Jurassic C	Island Intrusions	Granitoid batholiths and stocks, largely dioritic composition.
	Early Jurassic	Bonanza Group	Lava, tuff and breccia of basaltic and rhyolitic composition.
	Late to Middle Triassic	Vancouver Group	Limestone, argillites, greywackes and Karmutsen - basalts, pillow lavas, tuffs.
	Middle Penn. to Early Permian	Sicker Group	St. Marys Lake fm - volcanic sandstone and conglomerate, argillite.
			<u>Mount Mark fm</u> - crinoidal limestone, chert, argillite.
	Devonian		<u>Cameron River fm</u> - ribbon chert, argillite, limestone, sandstone.
PALEOZO	IC		McLaughlin Ridge fm - tuffite, feldspar - crystal tuff, breccia, dacite. Nitinat fm - meta basaltic lavas, agglomerate, massive tuffite.
			<u>Duck Lake fm</u> - pillowed and massive basaltic flows, breccias, cherty tuff, massive dacite and rhyolite. Largely occupies the Middle Vein property area.





Stucture and Igneous Intrusives

The Sicker Group rocks are buried under the Mesozoic cover except where they are now exposed in major uplift areas, such as the Cowichan-Horne Lake Uplift. The structure of the Sicker Group appears to be the result of a complex structural history including normal and transcurrent faulting and folding. The rocks are steeply folded and are in places highly sheared and metamorphosed to chloritic schists.

Sicker rocks in the vicinity of Mt. McQuillan were affected by several intrusive events. Triassic diabasic and gabbroic sills and dykes were probably intruded in conjunction with extrusion of Karmutsen basalt followed by early Jurassic Island Intrusions (McQuillan stock) and the early Tertiary sills and dykes composed of light-coloured hornblende-plagioclase porphyry (Catfish Intrusions).

LOCAL GEOLOGY

The Middle Vein Prospect is largely underlain by the lower part of the Sicker Group represented by the Duck Lake formation. It is composed of grey to greenish andesite, dacite, breccia and tuffs. The volcanic rocks are usually aphanitic to very fine-grained and massive. Porphyritic dacite occurs locally and features flow-banding and prominent iron-manganese staining. Veinlets of quartz are abundant that are up to 5 cm wide.

Petrographic examination by Vancouver Petrographics Ltd. show that the andesite is composed of approximately 65% plagioclase and 20% chlorite with accessory quartz and opaques.

The Duck Lake volcanics are altered to a purplish-brown colour at the location of fracture zones. Visible sulphides, mainly pyrite, occur only near geologic contacts and fracture zones. Some malachite staining was noted by Hi-Tec Resource Management geologists in two outcrops represented by rock sample numbers MV/91 FR-4 and MV/91 FR-17 during the 1991 work program. Grab samples FR-4 assayed 20 ppb Au and FR-14 assayed no detectable gold. The Middle Vein and associated shear is exposed in the early workings and in rock cuts adjacent to a small tributary creek located in the centre of the Apex claim (L99G). To the south, the shear zone is seen in a very steep rocky ravine on the Skyline claim (100G). This ravine owes its existence to differential erosion of the NNE trending shear zone.

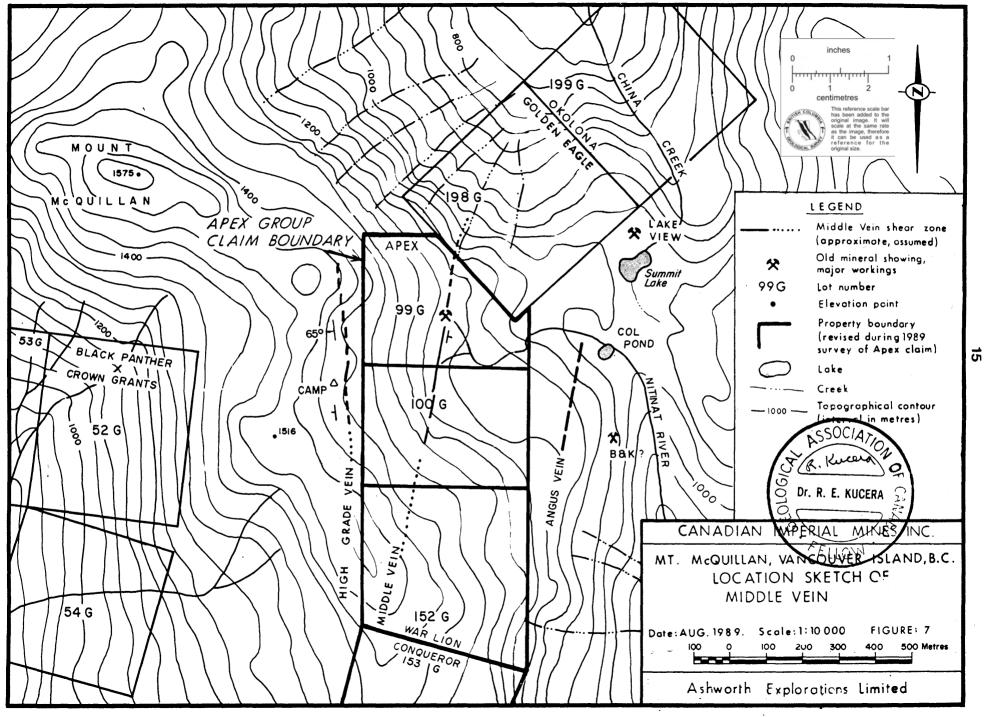
According to Laanela (1989) the shear zone becomes hidden by a small snowbank on the War Lion claim (152G) but it probably continues farther south along the steep east slope of McQuillan ridge, where it trends northeast along the line of the old Crown Grants (L153G to 156G). (See Figure 5). Recent mapping by Hi-Tec Resource Management has not confirmed the presence of the shear zone nor the Middle Vein on the War Lion and Conqueror claims (Figure 6).

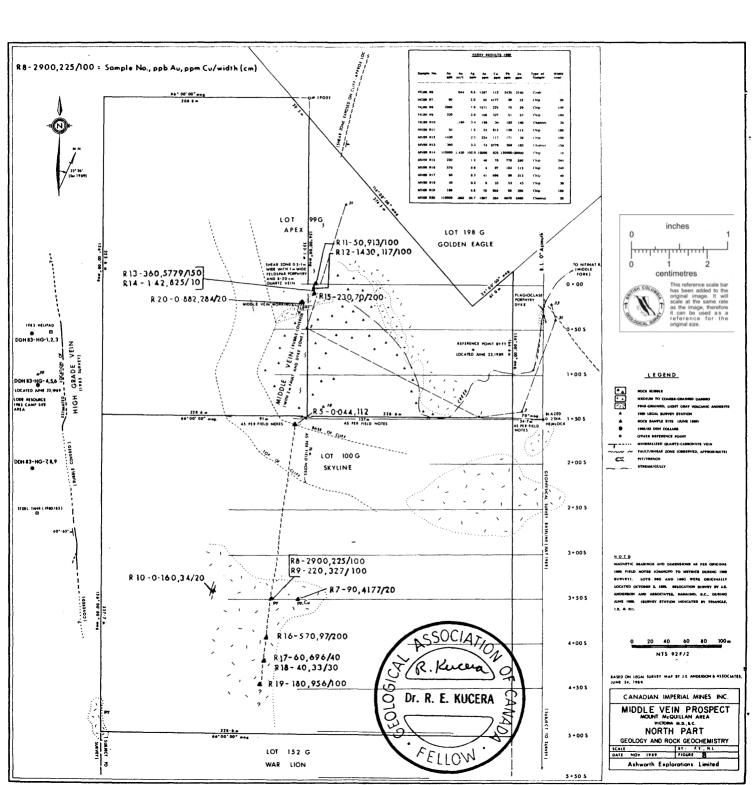
To the north, the veins and attendent shear zone, while being covered by overburden near the workings on the Apex claim, reappear in the China Creek headwaters, on the Golden Eagle claim. As Laanela (1989) points out, the Golden Eagle vein may be the northern extension of the Middle Vein, as both appear to have a similar attitude.

Immediately south of the Middle Vein workings, the Middle Vein structure is obscured for a distance of 110 metres by glacial debris, capped by rock rubble that was swept out of a ravine by debris flows and landslides from the eroded shear zone at the northern border of the Skyline claim. The presence of a quartz vein at depth is suggested by mineralized float located immediately downstream from its postulated trend.

Middle Vein Workings and Mineralization

The fault zone at the Middle Vein workings on the Apex claim consists of two distinct shears. The main shear is exposed near the base of the rocky cliffs, just south of an east flowing stream. The shear is one metre wide and strikes N 18 degrees E and dips 78 degrees E. The shear cuts grey andesite that is moderately silicified and strongly weathered with light to dark brown rusty colour. Sulphide minerals are 1-2% fine-grained pyrite with traces of malachite.





Mineralized quartz-carbonate lenses up to 10 cm thick and 5 metres long are hosted by sheared, rusty light to dark brown andesite. A 10 cm chip sample (MV89-14) across a quartz-carbonate vein assayed 1.42 oz/ton Au. Isolated pyrite-rich lenses occur in the andesite west of the shear zone. The andesite in this area is cut by intersecting joint sets of N 20 degrees W and N 40 degrees W.

The writer has observed another shear that occurs 14 metres west of the main shear. It is exposed at its top of 10 metre high bluff, along the south side of the same creek that flows past the main shear. The shear is .5 to 1.0 metre wide, strikes N 10 degrees E and dips 85 degrees E. This shear has not been sampled.

A light coloured feldspar-hornblende porphyry dike, 1-2 metres wide is found associated with this shear. The dike weathers a light brown. The feldspar porphyry dike, in which the vein occurs, is very similar in appearance to numerous Tertiary porphyry intrusions occurring elsewhere in the area. Refer to a petrographic analysis by Vancouver Petrographics of a specimen of this dyke material (Appendix F).

A mineralized quartz-carbonate vein, 8 to 20 cm wide is associated with the shear zone as mentioned in the above paragraphs. One channel sample MV89 R20 collected across 20 cm of quartz vein strikes N 10 degrees E, and dips 85 degrees E. The vein is mineralized with 20% sulphides mainly pyrite, chalcopyrite and galena. Copper staining is associated with light brown feldspar porphyry. Sample MV89 R20 assayed 0.88 oz/ton Au. An old trench, 2 metres long, occurs at creek level here. Another trench 20 metres to the south, attempted to reach the vein through rock rubble.

Samples MV89 R11 to MV89 R15 were collected from the Middle Vein structure (the shear zone) where a small quartz carbonate vein, 10 cm wide, is exposed for 5 metres. It is represented by chip sample MV89 R14 which returned a value of 1.42 oz/ton Au. Refer to Appendix A for the gold content and width of samples MV89 R11 to MV89 R15.

The writer has mapped gabbroic dike rock cutting massive andesite north of the creek about 80 metres east of the Middle Vein workings. It trends N 20 degrees to N 40 degrees W and is as much as 10 metres wide. Its southern extension is covered with overburden. (See Figure 8).

The strong shear structure and associated mineralized veins appear to terminate at this creek on the north side of the workings. Although overburden (landslides and moraine) mantle the bedrock north of the creek, it might be possible that lateral movement of a cross fault has offset this shear zone toward the northwest. Inspection of the aerial photographs reveal a subtle lineament that extends N40 degrees W from the northeast corner of the Skyline claim, across the "flat" area of the Apex claim where it fades out in the bedrock bluff northwest of the Middle Vein workings.

RECENT EXPLORATION

Canadian Imperial Mines Inc. did work on the Apex Group property during June and July, 1989 under the direction of Mr. F. Yacoub, Project Geologist, Ashworth Explorations Ltd. This work included:

- 1. Established grid lines.
- 2. Legal survey to relocate the Apex and Skyline claims on the ground by J.E. Anderson and Associates, Surveyors and Engineers.
- 3. VLF-EM and Magnetic survey by Ashworth Explorations Ltd. with interpretation by Mr. T. Matich, Geophysicist of Interpretex Resources Ltd.
- 4. At the request of Canadian Imperial Mines Inc., Dr. Kucera visited the property on October 16, 1989 and was accompanied by Mr. Yacoub. Dr. Kucera mapped a portion of the Apex claim and supervised sampling of the Middle Vein.

Hi-Tec Resource Management did work on the southern portion of the Middle Vein Prospect during June 1991. This work included geological mapping prospecting, rock sampling and a magnetometer and VLF-EM survey. Three kilometres of grid lines were surveyed on the War Lion and Conqueror claim blocks.

Geophysical Surveys

Ashworth Explorations Ltd. conducted a combined VLF-EM and magnetometer survey on the Apex and Skyline claims. The survey was run on an E-W line grid, totalling 3 line kilometres, using a Scintrex Omni Plus combined VLF-EM and magnetometer. A total of 12 lines, located at 50 metre intervals were established nearly perpendicular to the strike of the known vein system with station spacing at 12 metres.

The field data was processed, plotted and interpretated by Mr. Tom Matich, Geophysist of Interpretex Resources Ltd., Surrey, B.C. The following is condensed from the interpretive report by Mr. Matich. This entire report is enclosed here as Appendix "C".

Three magnetic trends, labelled L1, L2, and L3 on field magnetic profile and contour maps, (see figures G1, G2, G3 in Pocket) were delineated by comparing profile characteristics from line to line.

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Magnetic lineament L1 consists of two parallel magnetic high trends in the northern portions of the Apex Claim, east of the Middle Vein. Lineament L2 also consists of two parallel magnetic highs which may be the southern continuation of L1. Lineament L3 trends N-S and lies closer to the Middle Vein.

Mr. Matich interprets these lineaments to represent basic dykes containing magnetite. Kucera has mapped coarse gabbroic rocks in the same area as the L1 trend. Here, the gabbro intrudes andesitic rocks along a N20-40 degrees W trend.

The only evidence of the EM conductivity on the 1989 grid was the moderate NNW trending conductor C1 on line 2+50S to 3+50S (See figure G1). It is in the same area as the Middle Vein - shear zone structure that trends in a NNE

direction. Mr. Matich interprets C1 to be a structural feature, such as a splay fault, subparallel to the fault associated with the Middle Vein. It is possible that the location of samples R8 and R9 (see Figure 7) are on the Conductor C1 trend rather than an extension of the Middle Vein shear zone. There was no noticeable magnetic low response to the feldspar-hornblende dykes or major structure associated with the Middle Vein.

During the 1991 exploration program, a VLF-EM and a magnetometer survey was performed on the 1991 grid over sections on the War Lion and Conqueror claim blocks. An EDA Omni-Plus system was used to simultaneously measure total field magnetics data and VLF-EM data. Parameters measured were total magnetic field strength and VLF-EM field strength and in-phase dip angle. The field data was computer processed and plotted as a contour map on a 1;2,000 scale map (Figure 9). There was no indication of any continuous shear structure along the postulated Middle Vein shear from the VLF-EM surveys by Ashworth Explorations and by Hi-Tec Management.

The 1991 magnetic survey outlined a number of anomolies on the southern part of the field but no responses were evident in the VLF-EM survey (Figure 10). The magnetic anomalies at stations 3+00S - 1+00E and 3+50S - 0+50E cover an area not mapped by the 1991 program due to snow cover. However, a disseminated sulphide pod has been located at line 4+25 S - 0+90 E that measures 3 metres long and 1 metre wide. A chip sample (FR-21) collected from the pod returned values of 130 ppb Au and 411 ppm Cu over a width of 50 cm.

Results of Sampling

Laanela (1989) reported on assays of samples collected in 1980 and 1983 from various parts of the Middle Vein. Four selected samples from the Middle Vein in the old workings, gave assays ranging from 0.58 to 2.20 oz Au/ton and from 0.89 to 2.09 oz Ag/ton, while a grab sample of the andesite wallrock gave traces of Au and Ag. A mineralized boulder containing pyrite and galena from the shear zone about 200 metres south of here, assayed 0.689 oz Au/ton and 0.60 oz Ag/ton. No samples were taken from the shear zone at this locality. Chip

samples across one metre of the mineralized vein/dyke further to the south below the snowfield (Skyline Claim) assayed 0.028 oz Au/ton and 0.20 oz Ag/ton.

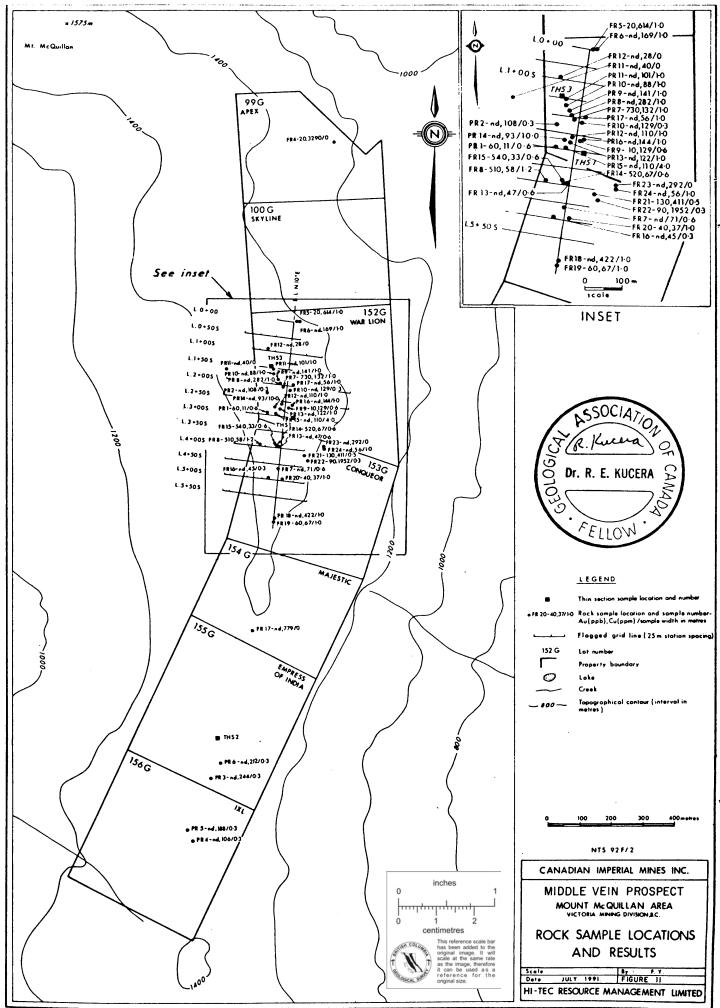
Samples collected during the 1989 exploration program include the following:

Sample #	Au	Sample Width (cm)	Туре
MV R5	0.044 oz/ton		Grab
MV R7	90 ppb	20	Chip
MV R8	2900 ppb	100	Chip
MV R9	220 ppb	100	Chip
MV R10	0.169 oz/ton	20	Channel
MV R11	50 ppb	100	Chip
MV R12	1430 ppb	100	Chip
MV R13	360 ppb	150	Channel
MV R14	1.420 oz/ton	10	Chip
MV R15	230 ppb	200	Chip
MV R16	570 ppb	200	Chip
MV R17	60 ppb	40	Chip
MV R18	40 ppb	30	Chip
MV R19	80 ppb	100	Chip
MV R20	0.882 oz/ton	20	Channel

The author took no independent check samples. Samples MV R11 to MV R15 and MV R20 were collected under the supervision of Dr. R. Kucera. The samples were brought to Vancouver and sent to Vangeochem Lab Limited under the author's direction. Sample locations for 1989 are indicated on Figure 8 (in pocket). See sample descriptions and analytical results in Appendix A and B.

Thirty-eight samples were collected during the June 1991 exploration program. The following samples contained gold values.

Sample #	<u>Au (p</u>	pb) <u>Cu</u> (ppr	n) Sample Width (cm)
MV/91 F	R4 20	3290		
MV/91 F	R5 20	614	100	
MV/91 F	R8 510	58	120	
MV/91 F	R9 10	129	60	
MV/91 F	R14 520	67	60	
MV/91 F	R15 540	73	100	
MV/91 F	R19 60	67	100	
MV/91 F	R20 40	37	100	
MV/91 F	R21 130	411	50	
MV/91 F	R22 90	1952	30	
MV/91 P	R1 60	11	60	
MV/91 P	R7 730	132	100	



Rock sample locations and analytical results for gold and copper are plotted on Figure 11 at a scale of 1:5,000.

Summary statistics for 38 rock sample analyses for Au and Cu suggest that 60 ppb Au and 130 ppm Cu might be considered geochemically anomalous and >500 ppb Au and >400 ppm Cu as highly anomalous. No predictable relationship exists between high Au and high Cu values. Because of the small sample of Au and Cu values, a statistical test is not easily supported.

CONCLUSIONS AND RECOMMENDATIONS

The 1980 and 1983 program by Lode Resources, and the 1989 work program by Ashworth Explorations Limited and the 1991 program by Hi-Tec Resource Management on the Middle Vein Prospect have demonstrated the presence of gold. Gold values range up to 2900 ppb across 100 cm of the shear zone whereas individual quartz-carbonate veins assay up to 1.4 oz Au/ton across widths of up to 10 cm. Exploration potential of the Middle Vein Prospect is judged to be good. Further development of this property is justified.

A two-stage program is recommended to explore the Middle Vein on the surface and at depth. The initial stage consists of aerial photo coverage, stereo-photo interpretation, compilation of a topographic base map, legal surveys, detailed geologic mapping, extensive sampling and surface trenching. The second stage of work, contingent on obtaining encouraging results from the first stage, is also recommended. This stage consists of 600 metres of diamond drilling to explore the Middle Vein at depth.

RECOMMENDED PROGRAM AND COST ESTIMATES

Stage I

Establish additional grid - 10 km	1,500
Topographic Base Map from photos	4,000
Aerial Photo Interpretation	2,500
Geologic Mapping (20 days @ \$500/day)	10,000
Sampling (250 samples @ \$40/sample)	10,000
Legal Surveys	7,500
Transportation (helicopter @ \$600/hr)	18,000
Trenching	8,000
Reporting and Administration	7,000
Contingency Allowance	6,500
ESTIMATED STAGE I COSTS	\$75,000

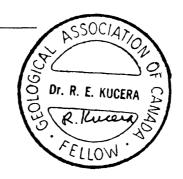
Stage II

A second stage program contingent on obtaining encouraging results from Stage I is recommended. It would include diamond drilling to test the middle vein at depth, assays and further geological work.

KUCERA & ASSOCIATES CONSULTANTS

Richard E. Kucara

Richard E. Kucera, Ph.D.



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Muller J.E., 1980: The Paleozoic Sicker Group of Vancouver Island, B.C.; Geol. Surv. Can. Paper 79-80.

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Stevenson J.S., 1945: Geology and ore deposits of China Creek area, Vancouver Island, B.C., in Annual Report of B.C.M.M., 1944, pp. A143-A161.

ASSAY RESULTS 1989

Sample No.	Au ppb	Au oz/t	Ag ppm	As ppm	Cu ppn	Pb ppm	Zn ppm	Type of Sample	Width (cm)
HG89 R5		.044	6.5	1287	112	3435	3740	Grab	
HG89 R7	90		2.0	55	4177	39	32	Chip	20
HG89 R8	2900		7.6	1571	225	70	29	Chip	100
HG89 R9	220		2.9	106	327	51	57	Chip	100
HG89 R10		.160	3.4	198	34	182	160	Channel	20
MV89 R11	50		1.5	23	913	129	115	Chip	100
MV89 R12	1430		2.5	224	117	171	39	Chip	100
MV89 R13	360		3.3	74	5779	358	183	Channel	150
MV89 R14	>10000	1.420	>50.0	>2000	825	>20000>	20000	Chip	10
MV89 R15	230		1.2	46	70	778	590	Chip	200
MV89 R16	570		0.6	4	97	103	113	Chip	200
MV89 R17	60		0.3	41	696	88	213	Chip	40
MV89 R18	40		0.2	9	33	53	43	Chip	30
MV89 R19	180		4.6	70	956	66	395	Chip	100
MV89 R20	>10000	.882	30.7	1997	284	6828	5860	Channel	20

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MIDDLE VEIN PROSPECT

Rock Sample Descriptions

1991

Sample No.	Description	Width (cm)
FR - 4	Grab Sample; rusty, dark grey to black massive volcanic basalt, mineralized with copper staining trace of fine-grained pyrite.	
FR - 5	Chip sample across one metre of altered, light grey massive volcanic andesite, strong hematitic alteration, silicification with fine to very fine-grained pyrite.	100
FR - 6	Chip; altered limonitic volcanic andesite outcrop, 1% fine-grained pyrite.	100
FR - 7	Brecciated light brown altered volcanic outcrop, moderate limonitic alteration, no sulphides. Chip sample over 60 centimetres.	60
FR - 8	Chip sample across 120 centimetres of feldspar- hornblende porphyry dyke, light brown hematite along fractures, altered hornblende.	120
FR - 9	Weathered, altered light grey, fine-grained volcanic andesite, moderate silification with up to 3% secondary quartz, fractures oriented N-20 degrees east filled with oxides (limonite). Chip sample over 60 centimetre	60 s.
FR - 10	Silicified zone hosted by fine-grained volcanic andesite, secondary quartz in cavities, the zone exposed for 5 metres, 30 centimetres wide. Chip over the width of the zone.	
FR - 11	Grab; light grey, fine-grained volcanic andesite outcrop, quartz veinlets up to 1 cm wide, minor epidote	
FR - 12	Grab; strong silicified zone at the contact between feldspar porphyry dyke and basic altered volcanic andesite, 25% brown, rusty hematite.	
FR - 13	Chip; silicified zone of subcrop volcanic andesite with up to 20% brown, hematitic quartz disseminated with $\langle 1\%$ very fine-grained pyrite, trace of galena, the zone can be followed for 10 metres, 60 centimetres wide, strike 240 degrees.	60

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Sample No.	Description	Width (cm)
PR - 12	Sheared basic volcanics with quartz blebs/veinlets, 1% disseminated pyrite, Fe/Mn stained. Chip sample.	100
PR - 13	Sheared zone of basic volcanics, 1% disseminated pyrite, Fe/Mn stained, quartz blebs and quartz veinlets. Chip sample over 1 metre.	100
PR - 14	Chip; porphyritic basic unaltered volcanic, <5 mm phenocrysts, flow/shear texture aligned with fractured direction 360 degrees/90 degrees.	1000
PR - 15	Chip over 4 metres of sheared basic volcanics, 2% disseminated pyrite. Shearing 309 degrees and vertical, fractures at 301 degrees/70 degrees south.	400
PR - 16	Grey, reddish basic volcanic hosting quartz veinlets with 1% disseminated pyrite chip over 1 metre.	100
PR - 17	Highly silicified basic volcanics, white and red bleached, rusted rocks with >30% quartz; Fe/Mn stained 3% Py mostly oxidized. Chip sample over 1 metre.	100 ,

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APPENDIX B

ANALYTICAL RESULTS (1980, 1983, 1989, 1991)

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Lode Resources Corp. Suite 1020 - 475 Howe Street Vancouver, B.C. V6C 2B3 Attention: Report No:83-01-046Page 1of 1Samples Arrived:October 3, 1983Report Completed:October 13, 1983For Project:MIDDLE VEINJob No.83-381Analyst:D. ChiuInvoice No.7554

	GEOCH	EM		ASSA	Y		
Sample Marking	Ag	Au		Ag	Au		
Sample Warking	ppm	ppb		oz/st	oz/st		
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MAIN OFFICE 1988 TRIUMPH ST VANCOUVER, B.C. V5L 1K5 • (604) 251-5656 • FAX (604) 254-5717 BRANCH OFFICES PASADENA, NFLD. BATHURST, N.B. MISSISSAUGA, ONT. RENO, NEVADA, U.S.A.

GEOCHEMICAL ANALYTICAL REPORT

CLIENT: ASHWORTH EXPLORATION LTD.

ADDRESS: 718 - 744 W. Hastings St. : Vancouver, BC : V6C 1A5 DATE: OCT. 25 1989

REPORT#: 890765 GA JOB#: 890765

PROJECT#: 287 SAMPLES ARRIVED: OCT. 18 1989 REPORT COMPLETED: OCT. 25 1989 ANALYSED FOR: Au (FA/AAS) ICP INVOICE#: 890765 NA TOTAL SAMPLES: 13 SAMPLE TYPE: 13 ROCK REJECTS: SAVED

SAMPLES FROM: MR. F. YACOUB COPY SENT TO: ASHWORTH EXPLORATION LTD.

PREPARED FOR: MR. F. YACOUB



ANALYSED BY: VGC Staff

SIGNED:

Ramon h

GENERAL REMARK: None

1988 Truspin Street, vancouver, B.c. VSL 1K5 Ph: (604) 251-5656 Far: (604) 254-5717

ICAP GEOCHEMICAL ANALYSIS

A .5 gram sample is digested with 5 ml of 3:1:2 HCl to HNO, to HyO at 35 °C for 90 minutes and is diluted to 10 ml with water. This leach is partial for Al, Ba, Ca, Cr, Fe, K, Mg, Mn, Na, P, Pd, Pt, Sn, Sr and W.

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R-10	3.4	0.20	198	40	<3	2.26	1.2	8	109	34	2.24	0.40	0.39	1405	2	0.01	9	0.01	182	<2	<2	31	<5	<3	160
Minimum Detection	0.1	0.01	3	1	3	0.01	0.1	1	1	1	0.01	0.01	0.01	1	1	0.01	1	0.01	2	2	2	1	5	3	1
Nazisus Detection	50.0	10.00	2000	1000	1000	10.00	1000.0	20000	1000	20000	10.00	10.00	10.00	20000	1000	10.00	20000	10.00	20000	2000	1000	10000	100	1000	20000
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ANOMALOUS RESULTS: FURTHER ANALYSES BY ALTERNATE METHODS SUGGESTED

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REPORT NUMBER: 890403 AA	JOB NUMBER: 890403	ASINGRTH EXPLORATION LTD.	PAGE 1 OF 1
SAMPLE #	Au oz/st		
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DETECTION LIMIT .005 1 Troy oz/short ton = 34.28 pps 1 pps = 0.00012 pps = parts per million

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signed:

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BRANCH OFFICES PASADENA, NELD BATHURST, N.B. MISSISSAUGA, ONT RENO, NEVADA, U.S.A.

ANALYTICAL ASSAY REPORT

CLIENT: ASHWORTH EXPLORATION LTD. ADDRESS: 718 - 744 W. HASTINGS ST. : Vancouver, B.C. : V6C 1A5

PROJECT#: HG SAMPLES ARRIVED: AUGUST 1 1989 REPORT COMPLETED: AUGUST 2 1989 ANALYSED FOR: Au

INVOICE#: 890403 NA TOTAL SAMPLES: 2 REJECTS/PULPS: 90 DAYS/1 YR SAMPLE TYPE: 2 ROCK

SAMPLES FROM: ASHWORTH EXPLORATION LTD. COPY SENT TO: ASHWORTH EXPLORATION LTD.

PREPARED FOR: CLIVE ASHWORTH

ANALYSED BY: Raymond Chan

SIGNED:

~2.2. ((

Registered Provincial Assayer

GENERAL REMARK: None

DATE: AUGUST 2 1989

REPORT#: 890403 AA JOB#: 890403

VGC VANGEOCHEM LAB LIMITED

MAIN OFFICE 1988 TRIUMPH ST. VANCOUVER, B.C. V5L 1K5 • (604) 251-5656 • FAX (604) 254-5717 BRANCH OFFICES PASADENA, NFLD. BATHURST, N.B. MISSISSAUGA, ONT. RENO, NEVADA, U.S.A.

REPORT NUMBER:	890765 GA JOB NUMBER	1: 890765 ASHWORTH	EXPLORATION LTD.	PAGE	1	OF	1
SAMPLE	Au						
	ppb						
MV 89 R 7	90						
MV 89 R 8	2900						
MV 89 R 9	220						
MV 89 R11	50						
NV 89 R12	1430						
NV 89 R13	360						
MV 89 R14	> 10000						
NV 89 R15	230						
MV 89 R16	570						
NV 89 R17	60						
MV 89 R18	40						
NV 89 R19	180						
MV 89 R20	> 10000						

DETECTION LIMIT nd = none detected



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1988 Triusph Street, Vancouver, B.C. V5L 1K5

Ph: (604) 251-5656 Fax: (604) 254-5717

ICAP GEOCHEMICAL ANALYSIS

A .5 gram sample is digested with 5 ml of 3:1:2 HCl to HNO, to H₂O at 95 °C for 90 minutes and is diluted to 10 ml with water. This leach is partial for Al, Ba, Ca, Cr, Fe, K, Mg, Mn, Na, P, Pd, Pt, Sn, Sr and W.

ANAL YST:

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																			-	AL 13	'' <i>C</i> -			2	
ORT #: 890765 PA		ASH	WORTH EXP	પ		Proj: 2	87		Date In	: 89/10/	18 D	ate Out:	89/10/26	Att	: F YACO	UB						Page	1 of	1	
ple Mumber	Ag	AI	As	Ba	Bi	Ca	Cď	Co	Cr	Cu	Fe	ĸ	Ng	Mn	Ko	Na	Ni	P	Pb	Sb	Sn	Sr	U	¥	Zn
	ppe	1	ppe	ppe	ppe	z	ppe	ppe	ppe	pps	I	1	I	ppe	ppe	1	ppe	1	ppe	ppe	pps	ppe	ppe	ppe	ppe
89 R 7	2.0	2.34	55	22	(3	0.17	0.7	38	28	4177	7.40	0.25	1.57	986	4	0.01	14	0.06	39	<2	<2	11	<5	<3	32
89 R 8	7.6	0.16	1571	16	<3	0.01	0.1	11	44	225	6.01	0.19	0.06	2170	2	0.01	16	0.01	70	<2	<2	3	<5	<3	29
89 R 9	2.9	2.15	106	23	<3	1.33	0.1	31	23	327	6.00	0.38	2.18	1395	1	0.01	39	0.06	51	<2	<2	28	<5	<3	57
89 R11	1.5	1.66	23	18	<3	2.64	0.1	29	26	913	5.28	0.55	2.96	1520	2	0.01	35	0.03	129	<2	<2	54	(5	<3	115
89 R12	2.5	0.38	224	17	<3	2.16	0.1	13	68	117	3.24	0.42	1.23	2387	<1	0.01	16	0.01	171	<2	<2	38	<5	(3	39
89 R13	3.3	3.78	74	14	3	0.97	1.1	61	8	5779	8.61	0.41	3.34	1456	7	0.01	22	0.07	358	<2	<2	19	<5	(3	183
89 R14	>50.0	0.16	>2000	7	3	0.03	226.3	7	97	825	>10.00	0.32	0.09	74	12	0.01	14	0.01	>20000	<2	<2	1	<5	<3	>20000
89 R15	1.2	0.35	46	246	(3	8.83	3.8	15	15	70	4.37	1.43	0.53	982	<1	0.01	. 12	0.05	778	<2	<2	74	(5	<3	590
99 R16	0.6	0.47	4	22	<3	0.28	0.1	4	64	97	1.51	0.08	0.37	312	1	0.01	6	0.03	103	<2	<2	4	<5	<3	113
89 R17	0.3	1.49	41	38	<3	3.69	0.1	25	39	696	4.79	0.70	2.64	2376	1	0.01	38	0.03	88	<2	<2	62	<5	<3	213
89 R18	0.2	0.14	9	14	<3	0.09	0.1	6	145	33	1.39	0.05	0.10	533	(1	0.02	6	0.01	53	<2	<2	2	(5	<3	43
39 R19	4.6	0.99	70	7	<3	0.04	0.7	24	29	956	9.25	0.28	0.96	568	9	0.01	11	0.02	66	<2	<2	1	(5	(3	395
89 R20	30.7	0.13	1997	7	<3	0,17	62.3	9	54	284	4.21	0.15	0.10	237	4	0.01	11	0.01	6828	<2	<2	5	(5	<3	5860
iaua Detection	0.1	0.01	3	1	3	0.01	0.1	1	1	i	0.01	0.01	0.01	1	1	0.01	1	0.01	2	2	2	1	5	3	1
inum Detection	50.0	10.00	2000	1000	1000	10.00	1000.0	20000	1000	20000	10.00	10.00	10.00	20000	1000	10.00	20000	10.00	20000	2000	1000	10000	100	1000	20000
Less than Minimum	is = Insuff	icient S	ample ns	= No sa	ople >	= Great	er than I	Maxieue	ANOMALO	JS RESUL	TS = Fur	ther Ana	lyses by	Alternat	e Metho	is Sugge	sted								



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ASSAY ANALYTICAL REPORT

CLIENT:	ASHWORTH EXPLORATION LTD.	DATE:	OCT. 25 1989
ADDRESS:	718 - 744 W. Hastings St.		
:	Vancouver, BC	REPORT#:	890765 AA
:	V6C 1A5	JOB#:	890765

PROJECT#: 287 SAMPLES ARRIVED: OCT. 18 1989 REPORT COMPLETED: OCT. 25 1989 ANALYSED FOR: Au INVOICE#: 890765 NA TOTAL SAMPLES: 2 REJECTS/PULPS: 90 DAYS/1 YR SAMPLE TYPE: 2 ROCK

SAMPLES FROM: MR. F. YACOUB COPY SENT TO: ASHWORTH EXPLORATION LTD.

PREPARED FOR: MR. F. YACOUB



ANALYSED BY: Raymond Chan

SIGNED:

Registered Provincial Assayer

GENERAL REMARK: None

IGC VANGEOCHEM LAB LIMITED

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MAIN OFFICE 1988 TRIUMPH ST. VANCOUVER, B.C. V5L 1K5 • (604) 251-5656 • FAX (604) 254-5717

BRANCH OFFICES PASADENA, NFLD BATHURST, N.B. MISSISSAUGA, ONT RENO, NEVADA, U.S.A.

REPORT NUMBER: 890765 AA	JOB NUMBER: 890765	ASHWORTH EXPLORATION LTD.	PAGE 1 OF 1
SAMPLE #	Au oz/st		

MV 89 R14	1.420
MV 89 R20	.882

DETECTION LIMIT 1 Troy oz/short ton = 34.28 ppm .005 1 ppm = 0.00017

ppm = parts per million

< = less than</pre>

signed: hazan ha

VANGEOCHEM LAB LIMITED

MAIN OFFICE 1630 PANDORA STREET VANCOUVER, B.C. V5L 1L6 TEL (604) 25 1-5656 FAX (604) 254-5717 BRANCH OFFICES BATHURST, N.B. RENO, NEVADA, U.S.A.

GEOCHEMICAL ANALYTICAL REPORT

CLIENT: HI-TEC RESOURCE MANAGEMENT LTD.DATE: JUNE 28 1991ADDRESS: 1500 - 409 Granville St...: Vancouver, BC..: V7Y 1G5..: DOB#: 910079

PROJECT#: MIDDLE VIEN SAMPLES ARRIVED: JUNE 27 1991 REPORT COMPLETED: JUNE 28 1991 ANALYSED FOR: AU (FA/AAS) ICP INVOICE#: 910079 NA TOTAL SAMPLES: 38 SAMPLE TYPE: 38 ROCK REJECTS: SAVED

SAMPLES FROM: CANADIAN IMPERIAL MINE INC. COPY SENT TO: HI-TEC RESOURCE MANAGEMENT LTD.

PREPARED FOR: CANADIAN IMPERIAL MINE LTD.

ANALYSED BY: Raymond Chan SIGNED:

GENERAL REMARK: None

1630 Pandora Street, Vancouver, B.C. V5L 1L6 Ph: (604)251-5656 Fax: (604)254-5717

ICAP GEOCHEMICAL ANALYSIS

A .5 gram sample is digested with 5 ml of 3:1:2 HCL to HNO₃ to H₂O at 95 °C for 90 minutes and is diluted to 10 ml with water. This leach is partial for Al, Ba, Ca, Cr, Fe, K, Mg, Mn, Na, P, Sn, Sr and W.

ANALYST -

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REPORT #: 910079 PA	HI	-TEC RES	DURCE HGH	IT LTD.			PROJEC	T: MIDDL	E VIEN			DATE	IN: JUKE	27 1991	DATE	OUT: JU	JNE 28 1	991 A	TENTION:	CANADIA	N IMPERI	NL MINE	INC.		PAGE 1	OF 1
Sample Name	Ag	Al	As	+Au	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Kg I	Mn	No	Na I	Ni ppe	P I	Pb ppe	Sb pp∎	Sn ppe	Sr ppe	U ppe	W ppe	Zn ppe
NV91 FR4 NV91 FR5	pp= 2.2 (0.1	2.79 2.47	pps (3 (3	ррb 20 20	рр• 76 13	pp● {3 {3	I 1.40 0.36	pp∎ 3.5 <0.1	рре 42 23	pp e 33 39	pp∎ 3290 614	5.17 5.06	<0.01 <0.01	2.27 2.52	pp∎ 869 760	pp∎ <1 <1	<0.01 <0.01	86 <1	0.07 0.07	16 (2	<2 <2	<2 <2	118 23	<5 <5	<3 <3	57 76
NV91 FR6	(0.1	3.46	<3	<5	<1	(3	0.17	2.4	31	32	169	6.10	(0.01	3.85	921	(1	(0.01	(1	0.07	<2	<2 (2	<2 <2	1	<5 <5	(3 (3	151 120
NV91 FR7 NV91 FR8	<0.1 <0.1	3.13 2.11	(3 (3	<5 510	6 <1	(3 (3	0.36 0.13	<0.1 <0.1	33 17	9 61	71 58	6.32 4.58	<0.01 <0.01	3.14 2.17	761 653	(1 (1	<0.01 <0.01	6 (1	0.09 0.04	<2 <2	<2 <2	<2	1	<5	(3	118
NV91 FR9	(0.1	3.08	(3	10	2	<3	0.22	(0.1	31	39	129	6.11	(0.01	3.76	1654	(1	(0.01	23	0.04	(2	<2	<2	2	(5	(3 (3	105 65
MV91 FR10 MV91 FR11	<0.1 <0.1	2.32 1.73	(3 (3	(5 (5	9	(3 (3	0.11 0.28	<0.1 <0.1	25 29	67 76	129 40	3.68 2.97	<0.01 <0.01	2.93 2.35	911 975		<0.01 <0.01	17 21	0.03 0.02	<2 (2	<2 <2	<2 <2	12	<5 <5	(3	30
HV91 FR12	(0.1	0.47	(3	(5	8	(3	0.08	(0.1	13	109	28	1.49	(0.01	0.42	468	4	0.02	(1	0.01	(2	2	<2	2	(5	(3	19
NV91 FR13	<0.1	0.83	(3	<5	59	(3	0.20	(0.1	13	32	47	1.68	<0.01	0.19	407	<1	0.08	8	0.05	9	<2	<2	6	<5	<3	39
NV91 FR14	0.2	1.92	(3 (3	520 540	15 3	(3 (3	0.12	<0.1 <0.1	18 18	64 50	67 73	3.67 3.43	<0.01 <0.01	1.89 1.90	719 860	(1 (1	(0.01 (0.01	10 <1	0.04	<2 <2	<2 <2	<2 <2	1	<5 <5	(3 (3	100 86
HV91 FR15 HV91 FR16	<0.1 <0.1	1.80 2.71	(3	(5	5	(3	0.08	(0.1	33	67	45	3.84	(0.01	3.68	1399	<1	<0.01	30	0.03	2	<2	(2	7	(5	(3	56
WV91 FR17	(0.1	1,14	(3	(5	7	(3	0,42	(0.1	16	62	779	1.72	(0.01	1.00	507	(1	0.07	11	0.03	<2	<2	<2	16	<5	(3	28
WV91 FR18	<0.1	1.73	<3	<5	16	<3	0.14	<0.1	47	32	422	4.39	<0.01	1.59	331	<1	0.03	(1	0.06	<2	<2	<2	- 5	(5	(3	29
NV91 FR19	<0.1	3.05	(3	60	26	(3	1.00	(0.1	40	93	67	5.08	<0.01	2.74	914	(1	(0.01	38	0.07	<2	(2	(2	24	<5 /5	(3 (3	42 305
NV91 FR20	<0.1	1.87	(3	40	9	(3	0.21	0.3	13 25	79 95	37 411	3.78 7.12	<0.01 <0.01	2.12	692 220	(1 (1	<0.01 <0.01	15 <1	0.03 0.03	17 21	<2 <2	<2 <2	3 (1	(5 (5	(3	303 97
HV91 FR21 HV91 FR22	0.7 1.4	0.79 2.35	(3 (3	130 90	<1 <1	(3 (3	0.10 0.12	<0.1 1.2	25 19	59	1952	9.10	(0.01	2.04	453		(0.01	<1	0.04	<2	(2	(2	ä	(5	(3	69
NV91 FR23	(0.1	3.37	(3	(5	(1	(3	0.17	(0.1	25	15	292	6.93	<0.01	3.71	826	(1	<0.01	4	0.08	<2	<2	<2	(1	(5	(3	216
NV91 FR24	0.2	2.74	<3	<5	61	٢3	0.36	<0.1	25	24	56	4.99	(0.01	2.81	1170	<1	(0.01	104	0.07	4	<2	<2	5	(5	(3	189
NV91 PR1	0.2	1.10	(3	60	19	(3	0.12	(0.1	8	135 35	11 108	2.28 3.94	<0.01 <0.01	1.16 2.21	471 641	<1 <1	(0.01 (0.01	8	0.02 0.07	20 <2	<2 <2	<2 <2	2	(5 (5	(3 (3	44 74
NV91 PR2 NV91 PR3	0.2 <0.1	2.06 2.39	(3 (3	<5 <5	12	(3 (3	0.21 0.70	<0.1 <0.1	22 25	101	244	2.44	(0.01	2.38	452		0.03	67	0.02	(2	(2	(2	15	(5	(3	44
NV91 PR4	<0.1	1.89	(3	(5	(1	<3	0.77	(0.1	31	63	106	2.12	(0.01	1.89	447	(1	0.01	27	0.02	15	<2	<2	32	<5	<3	35
NV91 PR5	<0.1	1.70	(3	(5	(1	(3	0.60	(0.1	37	19	188	2.49	(0.01	1.64	616	(1	0.02	4	0.03	<2 <2	(2 (2	<2 <2	23 36	(5 (5	(3 (3	46 70
NV91 PR6 NV91 PR7	0.1 <0.1	3.20 3.34	<3 <3	(5 730	<1 56	(3 (3	1.12	<0.1 <0.1	49 31	31 34	212 132	5.32 4.74	<0.01 <0.01	1.91 4.25	687 1103	(1 (1	0.18 <0.01	11 6	0.02 0.03	17	(2	(2	10	(5	<3	114
NV91 PR8	0.1	2.97	(3	×30 ×5	143	(3	0.15	<0.1	26	32	282	4.28	(0.01	4.16	990	à	(0.01	6	0.05	91	(2	(2	4	(5	<3	165
NV91 PR9	<0.1	4.14	<3	<5	48	<3	0.12	(0.1	30	28	141	5.35	(0.01	5.92	1298	(1	(0.01	17	0.05	<2	(2	<2	<1	<5	<3	171
NV91 PR10	(0.1	3.64	<3	<5	3	(3	0.13	(0.1	25	26	88	5.43	<0.01	4.72	1413	<1	<0.01	6	0.07	<2	(2	<2	<1	(5	<3	249
NV91 PR11 NV91 PR12	(0.1	3.72 3.75	(3	(5 (5	7	(3 (3	0.30	(0.1 (0.1	22	15 24	101 110	5.16 5.84	<0.01 <0.01	4.50 4.48	1109 1052	(1 (1	<0.01 <0.01	<1 15	0.07 0.10	<2 <2	<2 <2	<2 <2	4	<5 <5	<3 <3	213 298
NV91 PR13	<0.1 <0.1	3.87	(3 (3	(5	6 7	(3	0.44 0.90	(0.1	35 35	39	122	6.05	(0.01	4.61	1355	(i	(0.01	25	0.11	<2	(2	<2	19	(5	(3	361
NV91 PR14	<0.1	3.69	(3	(5	156	(3	1.95	(0.1	41	201	93	5.06	<0.01	5.50	1337	(1	<0.01	174	0.15	<2	<2	<2	63	<5	<3	147
NV91 PR15	<0.1	3.76	(3	<5	41	<3	0.82	(0.1	35	69	110	6.02	<0.01	4.84	1462	(1	(0.01	42	0.07	<2	(2	<2	20	(5	(3	326
NV91 PR16	<0.1	3.66	(3	<5	18	(3	0.54	(0.1	35	50	144	5.56	(0.01	5.01	1376	(1	(0.01	38 27	0.06 0.05	<2 16	<2 <2	<2 <2	13 3	<5 <5	· (3 (3	169 67
NV91 PR17	<0.1	1.98	(3	<5	12	<3	0.18	(0.1	13	113	56	3.98	<0.0!	1.99	673	(1	(0.01									
Ninioum Detection Navious Detection	0.1	0.01	3 2000	5	1	3	0.01	0.1	20000	1000	1	0.01	0.01	0.01	1 20000	1 1000	0.01 10.00	1 20000	0.01 10.00	2 20000	2 2000	2 1000	1 10000	5 100	3 1000	1 20000
Haxious Detection < - Less Than Minious	50.0 >-(10.00 Greater	2000 Than Maxi	10000 sus	1000 is - Insi	1000 ufficien			20000 - No Saej	1000 ple	20000 +Au Anal	10.00 ysis Do	10.00 ne By Fin	10.00 e Assay	Concentr				10.00	20000	2000	1444	10000			

VGC VANGEOCHEM LAB LIMITED

MAIN OFFICE 1630 PANDORA STREET VANCOUVER, B.C. V5L 1L6 TEL (604) 251-5656 FAX (604) 254-5717

HI-TEC RESOURCE MANAGEMENT LTD.

BRANCH OFFICES BATHURST, N.B. RENO, NEVADA, U.S.A.

PAGE 1 OF 1

].	REPORT N	UNBER: 910079 GA	JOB NUNBER: 910079
•	SAMPL	'E #	Au
1			ppb
	MV91		20
i	MV91		20
	MV91		nd
1	MV91		nd
	MV91	FR8	510
1	MV91	FR9	10
1	MV91	FR10	nd
	MV91	FR11	nd
•	MV91	FR12	nd
]	MV91	FR13	nđ
	MV91		520
7	MV91.		540
-	MV91		nd
	MV91		nd
1	MV91	FR18	nd
.1	MV91	FR19	60
	MV91		40
	MV91	FR21	130
. 1	MV91		90
	MV91		nd
	MV91	FR24	nd
	MV91		60
	MV91		nđ
J	MV91		nd
	MV91		nd
1	MV91	PR5	nđ
- 1	MV91		nd
	MV91		730
	MV91	PR8	nd
	MV91	PR9	nd
20	MV91	PR10	nd
	MV91	PR11	nđ
- <u>-</u>	MV91	PR12	nd
	MV91	PR13	nd
	MV91	PR14	nd
	MV91	PR15	nd
- 7	MV91		nd
]	MV91	PR17	nd

DETECTI	ON	LIMIT
nd =	none	detected

APPENDIX C

INTERPRETATION OF THE GEOPHYSICAL SURVEY ON THE APEX GROUP

FIGURE G-1, G-2, G-3

1. INTRODUCTION

A geophysical program consisting of electromagnetic (VLF-EM) and magnetic surveys was carried out on a single grid located in the Victoria Mining District near Port Alberni, B.C. The survey was carried out in July 1989.

2. OBJECTIVES

- to establish a correlation between magnetic minerals and mineralized trends,
- to test the effectiveness of VLF-EM in following possible mineralized trends and to establish new unrecognized conductive trends,
- to establish geophysical areas of interest for future exploration.
- 3. SURVEY SPECIFICATIONS

Survey Parameters

- survey line separation 50 m
- survey station spacing 12.5 m
- VLF-EM survey total 3.0 km
- magnetic survey total 3.0 km

Equipment Parameters

```
- VLF-EM and Magnetic Surveys
```

- Scintrex Omni Plus combined VLF-EM and magnetometer
- Dip Angle (in-phase) and Quadratur (out-of-phase) measured in percent at each static.
- VLF-EM Field Strength measured at each station
- transmitting stations used NLK (24.8 kHz) Seattle, Wash.
 NAA (21.4 kHz) Cutler, Ma.
- earth's total magnetic field measured in gammas (nT)
- magnetic variations controlled by automatic magnetic base station recording every 30 seconds
- instrument accuracy +/- 0.1 gamma
- station repeatability better than +/- 3 gammas in low gradients.

Equipment Specifications - see Appendix I

4. DATA

Calculations

Total Field Magnetic Survey

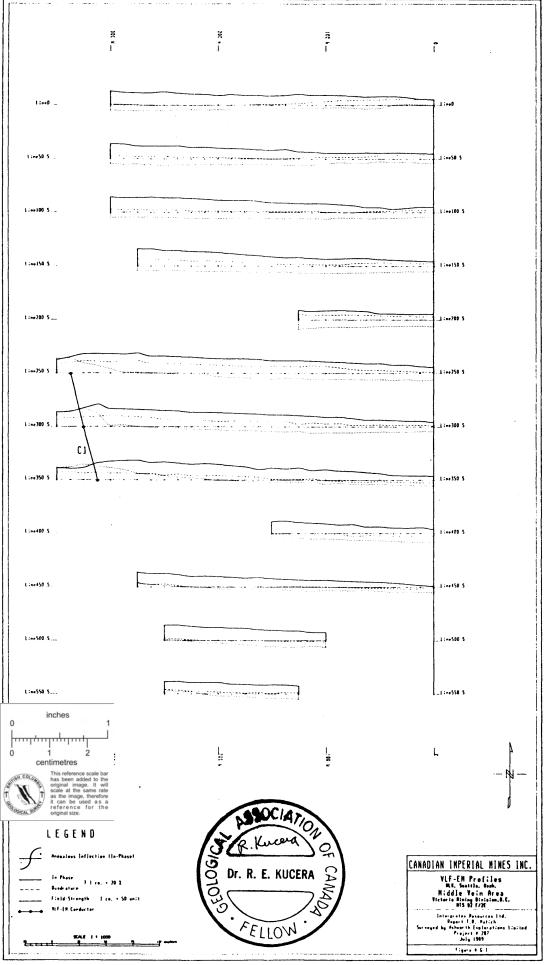
Total field magnetic readings were individually corrected for variations in the earth's magnetic field using magnetic base station values. The formula used for magnetic corrections was; CTFR = TFR + (DBL - BSR)

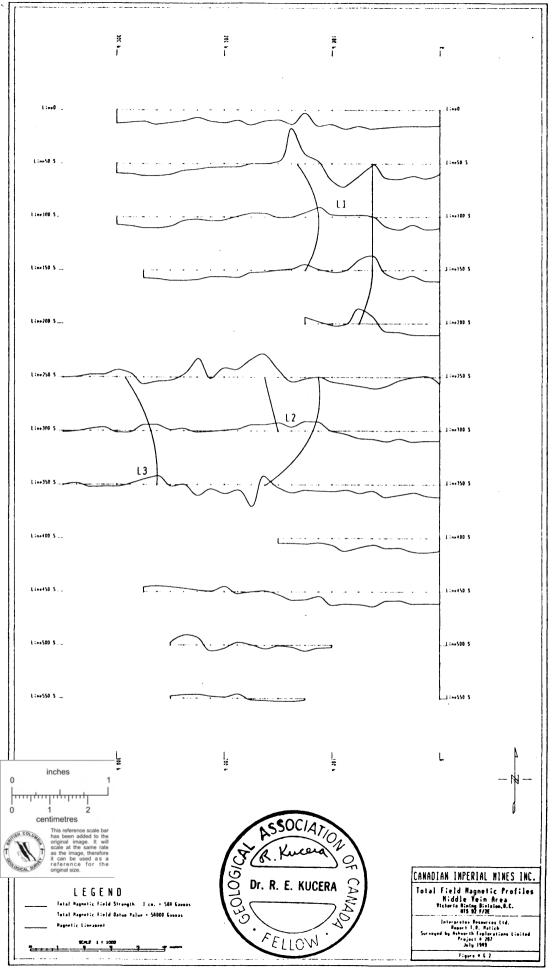
> where: CTFR = Corrected Total Field Reading TFR = Total Field Reading DBL = Datum Base Level = 56800 gammas BSR = Base Station Reading

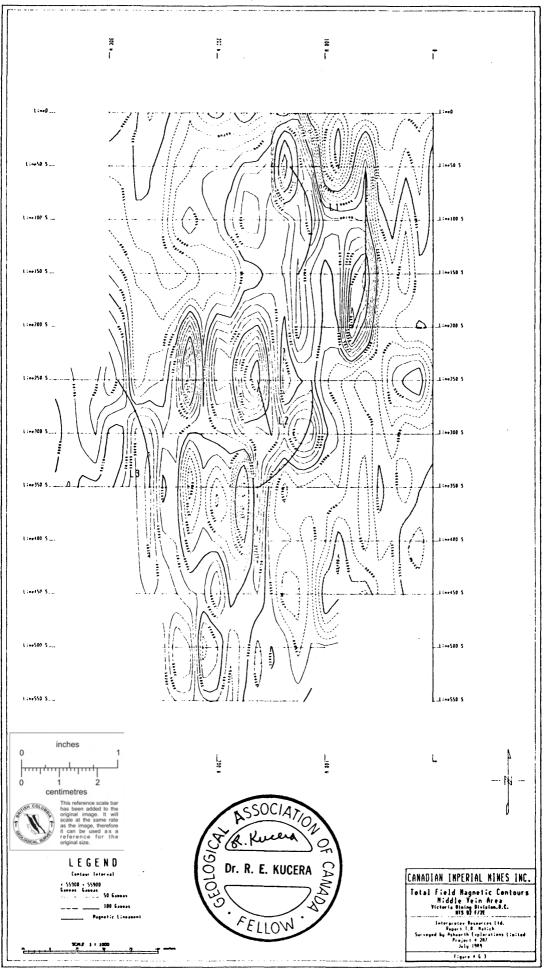
....2

AUTHOR'S NOTE

Data interpreted in this report were accumulated without supervision by Interpretex Resources Ltd. and were supplied by the Client to the writer(s). These data and the locations on the ground from which these data were accumulated are, except when specified otherwise by the writer(s), assumed to be reliable and correct and were interpreted using this assumption.







Respectfully Submitted

INTERPRETEX RESOURCES LTD.

Vancouver, British Columbia



E.R. ROCKEL

Consulting Geophysicist

T.R. MATICH

Geophysicist

PERMIT TO PRACTICE
INTERPRETEX RESOURCES DID.
Signature
Date Aus- 8, 19,29
Date <u>Aus- 8, 1929</u> PERMIT NUMBER: P 3100
The Association of Professional Engineers,
Geologists and Geophysicists of Alberta

APPENDIX D

GEOPHYSICAL FIELD DATA WORKSHEETS

(1989, 1991)

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-50	-200	-50	55662.6	12.6	7.0	202.0	2.4		• •
-37.5			55638.1	12.8	7.6	323.8		9.0	8.8
-25			555511.6		7.1	324.2	0.0	8.4	8.9
-12.5			55497.3	11.7	6.9	324.3	-0.3	5.3	9.0
0		-1C· J	55502.4	11.8	5.9	325.3	-0.4	5.6	9.1
line ·		v	00002.4	12.3	6.4	323.3	1.0	5.9	9.1
-275			55679.4	33.5	12.6	332.2	4.4	7.1	6.9
	-150	-262.5		33.8	13.3	333.1	7.0	6.4	7.1
-250		-250		30.7	12.5	334.0	3.2	7.9	7.1
-237.5		-237.5		30.5	10.9	332.9	5.2	4.8	7.4
-225		-225		28.9	9.4	330.4	1.7	6.2	7.3
-212.5		-212.5		28.1	10.3	328.4	1.3	7.1	7.5
-200	-150		55738.1	26.7	9.0	329.1	1.0	6.4	7.6
-187.5			55702.0	24.8	8.4	329.8	0.6	6.7	7.6
-175	-150	-175	55942.0	22.6	6.7	325.2	0.2	5.7	7.6
-162.5		-162.5	55968.5	20.9	5.1	325.7	0.3	4.7	7.7
-150	-150	-150	56051.3	19.1	4.8	325.7	0.3	6.8	7.8
-137.5	-150	-137.5	56108.7	17.3	3.3	328.0	0.6	6.3	7.7
-125	-150	-125	56317.7	17.7	3.9	322.0	0.8	5.9	7.9
-112.5	-150		56090.7	16.2	3.1	321.8	0.0	5.3	7.8
-100	-150		55960.1	14.9	2.8	322.1	-1.9	3.6	7.8
-87.5			56032.9	15.1	2.6	322.0	-1.3	2.8	7.8
-75			56530.4	16.4	5.5	323.4	0.8	6.4	7.7
-62.5		-62.5		16.1	5.6	323.4	1.9	7.5	
-50		-50		13.9	6.8	324.7			7.8
-37.5		-37.5		13.2	5.9	325.7		7.0	8.0
-25			55776.8		6.0		2.0	7.1	8.1
-12.5			55526.9			329.1	1.7	7.2	8.1
0			55511.4	•	4.8	327.7		6.3	8.3
line -		v	77711.4	10.6	6.2	331.2	0.1	6.4	8.5
-300		200	55774 7	~ ~					
-287.5			55671.6 55632.3	29.9	5.7	329.9	-4.0	4.4	
-275				28.2	4.7	330.4	-3.1	4.1	6.9
-262.5			55528.0	28.6	4.9	330.4	-1.1	5.4	7.1
-250-			55521.1	29.7	4.5	332.3	-3.5	7.1	7.8
			55603.2	28.3	4.5	330.5	-1.9	4.7	7.2
-237.5			55872.6	28.2	4.3	327.5	-1.8	6.1	7.4
-225	-100		55935.4	27.3	2.8	326.6	-1.6	4.8	7.4
-212.5	-100	-212.5		25.8	2.3	324.7	-1.5	4.5	7.5
-200	-100	-200		23.7	2.5	324.6	-2.8	4.1	7.5
-187.5	-100	-187.5		23.2	2.0	324.1	-3.0	4.6	7.5
-175	-100	-175		23.3	2.2	325.2	-1.9	5.7	7.6
-162.5	-100	-162.5		22.0	2.4	325.0	-1.3	5.7	7.6
-150	-100	-150	56022.2	19.4	1.7	325.3	-1.5	5.7	7.7
-137.5	-100	-137.5	56033.1	19.1	1.6	324.7	-2.0	6.1	7.8
-125	-100	-125	56252.5	17.8	1.6	324.8	-1.4	6.3	7.8
-112.5	-100	-112.5	56493.3	18.2	2.8	325.5	-1.7	6.2	7.8
-100	-100	-100	56155.1	17.8	1.0	323.8	-0.7	5.4	8.0
-87.5	-100	-87.5	56120.8	15.9	0.1	328.2	3	4.0	
-75	-100	-75		14.6	0.3	329.0	-2.1	3.7	8.1
-62.5	-100	-62.5	56072.2	10.7	2.0	324.6	-4.7	5.4	8.1 8.1
-50	-100	-50		10.4	2.3	325.9	-4.2		8.1
-37.5	-100	-37.5		7.9	2.7	328.1	-4.8	4.4	8.0
-25	-100	-25		9.4	4.1	329.0		5.0	8.2
-12.5			55447.0	11.7	4.3		-2.8	5.2	8.2
0			55519.5	11.5	4. 3 5.3	331.1	-0.8	5.1	8.3
	-50	v		قر و ۵ ۵	J . J	333.3	-1.0	5.8	8.5

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-300	-50		55575.1	29.3	5.5	330.1	0.6	1.6	7.3
-287.5	-50		55570.8	28.6	5.0	327.0	2.6	1.4	7.3
-275	-50		55482.9	24.9	3.5	328.7	2.0	3.1	7.1
-262.5	-50		55485.9	25 . 3	3.7	327.0	0.9	3.6	7.2
-250	-50	-250	55541.5	25.2	4.5	322.2	1.0	3.3	7.3
-237.5	-50	-237.5	55730.5	25.5	3.1	325.9	0.2	3.1	7.3
-225	-50	-225	55789.7	23.0	3.3	325.9	-0.4	3.9	7.4
-212.5	-50	-212.5	55880.5	23.1	3.0	327.5	1.0	3.6	7.6
-200	-50		55893.4	21.4	2.4	325.7	0.0	4.3	7.4
-187.5	-50	-187.5	55893.2	20.7	1.8	326.5	0.3	3.4	7.5
-175	-50		56048.1	20.1	1.4	327.8	0.0	3.1	7.6
-162.5	-50		56053.1	18.3	0.8	327.9	0.3		
-150	-50		56150.8	18.1	0.5			3.0	7.7
-137.5	-50		57689.2	19.2		327.5	0.0	2.3	7.8
-125	-50		56494.6		0.8	324.7	0.5	4.1	7.8
-112.5	-50		56156.1	14.9	1.9	322.4	0.6	4.2	7.8
-100	-50			14.7	2.8	326, 4	1.0	4.7	7.9
-87.5	-50		55240.4	12.5	3.3	330.8	0.0	5.7	8.0
-75			54984.9	12.2	3.0	337.0	0.5	5.6	8.3
-62.5	-50		55467.7	12.5	3.5	335.9	1.1	4.5	8.2
	-50		55987.0	13.1	4.1	335.6	2.4	5.2	8.2
-50	-50		55368.6	12.4	6.4	341.6	3.6	6.9	8.5
-37.5	-50		55321.2	13.3	7.0	338.8	4.7	7.2	8.4
-25	-50		55464.4	12.6	7.3	338.8	3.8	7.3	8.6
-12.5	-50	-12.5	55347.6	11.8	6.3	335.7	4.0	6.0	8.5
0	-50	0	55566.3	11.5	9.6	332.9	4.6	7.7	8.5
line O									
-300	0	-300	55405.8	27.3	2.1	329.9	-4.8	2.6	7.3
-287.5	0	-287.5	55473.5		1.0	327.5	-5.1	2.3	7.3
-275	0		55518.0	23.8	0.1	325.6	-3.3	2.3	7.4
-262.5	0		55380.1	24.3	-0.7	328.8	-4.2	1.9	7.4
-250	0		55459.7	25.9	-0.1	328.0	-4.7	1.5	
-237.5	0		55544.7	23.7	-0.2	332.6	-5.6		7.5
-225	0		55687.8	22.3	-0.3	333.2		1.6	7.6
-212.5	Ŏ		55523.3	21.4			-4.6	2.6	7.6
-200	ŏ		55449.3	19.0	-0.3	330.9	-3.9	3.5	7.8
-187.5	ŏ		55559.9		0.0	332.1	-4.5	3.3	7.9
-175	0			20.9	-0.1	331.8	-3.3	3.9	7.9
		-175		19.5	0.4	335.7	-1.5	4.4	8.0
-162.5	0			18.9		337.6	-1.7	4.5	8.0
-150	_		55587.8			338.2	-1.1	5.3	8.1
-137.5	0		55383.3	19.5	2.5	337.9	-0.1	5.3	8.2
-125	0		55907.9	21.7	3.6	340.5	1.3	5.9	8.3
-112.5	0		55298.2	20.1	6.0	340.7	1.6	8.0	8.3
-100	0		55371.0	19.9	7.0	341.8	2.0	9.0	8.6
-87.5	0		55158.0	19.5	8.9	342.5	1.9	9.7	8.5
-75	0		55278.7	18.5	9.5	341.5	3.4	10.5	8.6
-62.5	0		55169.4	16.9	10.3	337.0	1.6	10.0	8.7
-50	0		55222.0	17.4	10.0	338.7	3.2	10.1	8.7
-37.5	0	-37.5	55270.6	17.7	11.4	355.3	3.1	10.5	10.7
-25	0	-25	55283.8	15.7	10.5	358.4	3.6	9.1	10.3
-12.5	0		55277.8	12.6	11.2	355.9	2.1	8.1	10.3
0	0		55295.7	12.5	9.9	355.3	2.4	6.2	
line -5	50	-					E. 7	D.C	10.4
-250	-550	-250	56148.1	24.3	8.1	370.3	-7.2	5 1	• -
-237.5	-550			25.0			-7.2	-5.2	8.3
-225	-550			22.9		363.4	-7.0	-4.2	8.2
-212.5	-550			23.0	-	362.5	-9.2	-5.5	8.2
	500		30137.1	C3.V	4.7	350.7	-7.0	-4.6	8.4

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-200	-550		56103.2	22.8	3.2	342.3	-6.8	-5 .5	8.3	
-187.5	-550		56241.3	20.0	2.7	343.7	-9.9	-3.2	8.7	
-175	-550		55976.0	19.6	1.4	339.2	-11.7	-4.6	8.4	
-162.5	-550		55949.1	18.1	2.5	336.9	-11.2	-4.1	8.4	
-150	-550		55912.7	18.8	0.8	332.4	-10.1	-4.1	8.5	
-137.5	-550		55907.0	18.4	2.8	332.6	-10.1	-5.0	8.5	
-125	-550	-125	55972.6	16.1	2.0	328.2	-10.3	-2.6	8.5	
	500									
-250	-500	-250	56142.1	30.3	4.6	357.9	-9.4	-3.9	8.3	
-237.5	-500	-237.5	56494.0	30.4	3.0	354.4	-8.4	-2.6	8.4	
-225	-500	-225	56404.0	28.4	1.5	349.1	-9.9	-4.8	8.3	
-212.5	-500	-212.5	55767.9	26.2	0.2	341.3	-10.9	-3.3	8.4	
-200	-500	-200	55882.9	26.1	0.4	342.2	-10.4	-3.7	8.4	
-187.5	-500	-187.5	56161.8	25.0	-0.3	338.1	-11.9	-4.5	8.4	
-175	-500		56068.6	24.8	0.7	334.0	-11.4	-5.2	5. 4	
-162.5	-500		55875.4	21.8	0.3	331.2	-13.5	-3.7	8.3	
-150	-500		56003.9	21.3	-0.7	326.9	-12.9	-3.5	8.3	
-137.5	-500		55953.8	19.7	-1.6	323.5	-12.1	-4.5		
-125	-500		55769.3	19.4	-1.8	323.5	-12.7		8.4	
-112.5	-500		55908.0	16.9	-1.8			-3.0	8.4	
-100	-500		55935.6	16.6		327.3	-13.6	-3.3	8.5	
	50	100	22322.0	10.0	-2.3	322.5	-14.4	-4.5	მ. 6	
-275	-450	-275	56261.5	28.5		260.0		. .	_	
-262.5	-450		56314.2		8.1	368.9	-1.8	-3.1	8.4	
-250	-450		56274.0	26.4	4.5	366.0	-3.8	-2.8	8.4	
-237.5	-450			26.5	5.6	360.3	-2.4	-2.9	8.5	
-225			56204.4	24.2	2.6	355.3	-3.7	-4.1	8.4	
-212.5	-450		56119.5	21.1	-0.4	355.1	-7.8	-4.1	8.5	
	-450		56076.3	21.7	-0.6	352.2	-7.4	-4.5	8.4	
-200	-450		56294.5	20.6	-0.1	344.3	-5.5	-5.7	8.5	
-187.5	-450		55950.3	19.8	0.3	342.9	-6.9	-5.8	8.4	
-175	-450		56052.2	18.1	-0.4	342.8	-9.1	-5.4	8.5	
-162.5	-450		56096.3	19.0	0.3	339.7	-7.2	-5.5	8.5	
-150	-450		55912.2	17.2	0.2	339.4	-8.8	-4.6	Š. 4	
-137.5	-450		55647.8	15.8	0.6	340.2	-3.0	-3.9	8.6	
-125	-450		55677.7	14.6	0.7	337.1	-8.6	-3.5	8.5	
-112.5	-450	-112.5	55836.3	14.2	0.9	335.3	-9.5	-3.8	8.6	
-100	-450	-100	55413.2	14.4	0.3	337.7	-8.1	-4.3	5.7	
-87.5	-450	-87.5	55472.7	12.9	-0.8	336.4	-9.4	-4.0	8.8	
-75	-450	-75	55447.1	12.2	-1.1	336.9	-9.2	-4.6	8.9	
-62.5	-450	-62.5	55361.0	11.2	-2.1	338.8	-10.9	-5.2	8.8	
-50	-450	-50	55626.2	10.6	-1.8	334.1	-10.9	-5.4	8.9	
-37.5	-450		55638.0	9.4	-5.5	331.3	-10.6	-6.6	8.9	
-25	-450	-25	55475.3	7.1	-3.6	332.0	-11.6	-7.3	9.0	
-12.5	-450		55486.4	4.6	-3.0	330.4	-14.8		8.9	
0	-450		55476.4	3.5	-2.8	329.0	-15.5	-6.9		
line -4	00					JLJ.V	-13.3	-0.3	8.9	
-150	-400	-150	55813.0	23.1	-1.4	334.7	_0.2	2 2	0.0	
-137.5	-400		55815.1	24.6	-0.8	338.0	-8.2	-3.2	8.6	
-125	-400		55784.6	21.7	-2.4		-5.5	-1.8	8.5	
-112.5	-400		55832.8	21.1	-2.4	333.0	-7.9	-3.1	8.6	
-100	-400		55724.8	19.5		328.2	-7.7	-1.6	8.6	
-87.5	-400		55439.0	17.2	-2.3	329.2	-7.3	-2.1	9.0	
-75	-400		55601.5	17.2	-1.7	326.4	-10.6	-2.1	8.7	
-62.5	-400		55741.7	13.7	-4.8	323.0	-8.8	-3.0	8.8	
-50	-400		55578.0		-3.7	321.6	-11.0	-3.3	8.9	
-37.5	-400		55600.5	13.8	-4.1	319.7	-12.5		8.9	
5	707	J. 16	0.0000.0	12.2	-4.4	317.6	-11.5	-4.6	8.9	

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-25	-400	-25	55412.5	11.4	-4.6	314.5	-12.7	-4.2	8.9
-12.5	-400	-12.5	55375.9	12.3	-3.9	313.1	-12.3	-4.0	8.9
θ	-400	0	55444.6	9.1	-4.4	311.3	-17.2	-5.9	8.8

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DATA LISTING

Line & Station + = Northings and Eastings - = Southings and Westings

Area : Port Alberni Grid : Middle Vein Date : June, 1991

Data Type(s)

Data Details

#1. Total Field Magnetic Values
#2. VLF-EM In-Phase Values
#3. VLF-EM Quadrature (out of Phase)
#4. VLF-EM Field Strength
#5. VLF-EM In-phase Values
#6. VLF-EM Quadrature (out of Phase)
#7. VLF-EM Field Strength

Corrected Total field Westerly using Annapolis station Westerly using Annapolis station Annapolis Total Field Strength Westerly using Hawaiian station Westerly using Hawaiian station Hawaii Total Field Strength

The instrument used was the EDA VLF-EM/Magnetic System in gathering all of the above data types.

line -50	0	50	56181.4	5.2	145	7 1 7
-10.2 1.3	0 10.65	-50	20181.4	5.3	14.5	/•1/
-37.5	0	-37.5	56235.3	4.9	14.3	7.26
-8.900001	1.3 11	L . 45	5.000 0	5.0	10.0	9.55
-25 -6 . 5 .9	U 11 QQ	-25	56213.1	. 5.8	13.6	7.55
-12.5	0	-12.5	56173.5	5.8	13.1	7.44
-6.4 .3 0	11.96					
0 * *	0 *	0	56000.91	*	*	*
line	-50					
-150	-50	-150	56034.3	-14.1	.7	6.97
-150 -16.9 8.6	11.29					
_127 5	50		56010 0	_16.2	20	6.8
-137.5 -21.3 7.2 -125 -27.1 6.2	10 . 72	-125	56026	-21.8	3.2	6.67
-27.1 6.2	-30	-125	00000	-21.0	5.2	0.07
-112.5	-50	-112.5	56081	-15.5	3.3	6.82
-112.5 -29 5.1 -100 -27.9 4.1 -87.5	10.99					
-100	-50	-100	56210.6	-13.6	5.2	6 . 82
-27.9 4.1	_50	-87.5	56556.8	-13.7	5.5	6.94
-30.4 2.7	11.46	07.5				0.91
-87.5 -30.4 2.7 -75	-50	-75	55742.4	-11.7	5.9	7.17
-25.9 1.2	11.51	60 F			<i>c</i>	
-62.5	-50 11 . 6		56052.2	-10	6	7.1
-27.1 0 -50	-50	-50	56076.4	-7.8	6.4	7.19
-19.4 .1 -37.5	13.33					`
-37.5	-50	-37.5	56157.7	-11.9	5.3	7.11
-31.3 -1.6	11.81	_25	56276.7	-75	4.3	7.21
-33.2 -2.3	-30	-23	30270.7	-7•J	4.5	/•21
-25 -33.2 $-2.3-12.5-36.7$ -2.50	-50	-12.5	56390 -	-8.400001	4	7.04
-36.7 -2.5	12.52					
0	-50	0	56192.8	-8.400001	4.3	7.26
-34.8 -3.5 12.5	12 . 14 -50	12.5	55964.8	-9.2	2.9	7.39
-40.2 -6.5	12.94		555040	<i></i>	249	
25	-50		55968.3	-7.9	2.8	7.22
-38.4 -4.8	14.05			~ ~ ~	6.0	7.26
37 . 5 -26 . 9 -3.8	-50 1 4. 61		22/20•/	-2.2	6.3	7.36
line	-100					
-125	-100	-125	56379.4	-12.2	-4.8	6.59
-8.7 4.5	13.23					6.00
-112.5 7.2 5.5	-100 12 . 81	-112.5	56025.1	-11.3	-5.5	6.88
-100	-100	-100	56252	-8.8	-3.4	6.67
2.6 1.9	11.63					
-87.5	-100	-87.5	56385.9	-7	-2.3	6.66

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	11.57					
		-75	56323.6	-7.6	-1.7	6.74
7 -1 -62.5	11.14 -100	-62.5	56016	-3.1	5	6 . 73
			50010	341	•5	0.75
-50	11.18 -100 10.33 -100	-50	56058.5	-3	-1.1	6.29
-9.7 -9	10.33	2 7 5	F(110.0	F 1	17	710
5745	100	57.5	56118.2	-5.1	-1.7	7.12
-4.2 -8.5 -25	-100	-25	56173.7	-3.7	-1.8	6.82
-2.8 -9.3	10.95					
-12.5	-100	-12.5	56218.4	-6.9	-2.5	7.06
-9.1 -9.8	11.6		0 56210.9	-65	_1	4 6.88
-9.1 -9.8 0 -8.400001 -	11.5 11	.43	J0210.0	-0•J	_T•	4 0.00
-8.400001 - 12.5 -9.900001	-100	12.5	56227	-2.9	-1.7	6.87
-9.900001	-9.1 11	.53				
2.5	-100	25	56116.7	-4.3	-1.3	7. 02
-10.4 -8.8 37.5	-100	37.5	55939	-5.3	-2	7.14
-15.9 -9.3	11.33	5745	33333	3.5	-	
50	-100	50	55826.8	2	2	7. 03
-16.8 -10.3	10.76	() F	55040	4.0	1 1	7.05
62 . 5 -16.7 -9 . 900001	-100	62.5	55843	-4.2	-1.1	7.05
-10.7 -9.900001	-100	75	55837.7	4	3	6.91
-22.5 -12.8						
87.5	-100	87.5	55878.7	-2.1	.7	7.21
-20.6 -11.9				2	2.1	7.00
100 -29 . 2 -11.1			55855.4	-2	3.1	7.28
line						,
-112.5	-150	-112.5	56051.2	-17.4	-5.5	6.93
-13.3 10.1	10.96					
-100	-150	-100	56068.4	-20.9	-5.7	6.81
-21.2 8.3 -87.5	_150	-87 5	56065 6	-17.9	-5.4	6.96
-27.7 5.5	11.61	07.5	30003.0	1/05	3+7	0.90
75	-150	-75	56098.4	-14.5	-4.4	7.1
	12.52	60 F	56116	161	4.2	6.02
-62.5 -20.2 -1.4	-150 12 . 53	-62.5	56116	-10-1	-4.3	6.93
-50	-150	-50	56138.2	-17.4	-4.4	6.94
	11.36					
-37.5			56161.6	-16.5	-3.2	6.97
	11.29		56025	10.0	2.0	7.06
-25 -34.4 -7.6			56235	-10.2	-3.9	7.06
-12.5			56185.5	-19.9	-3.5	6.08
	10.74					
0	-150	0	56190.7	-19.4	-4.3	6.93
-39.3 -13.7	11.4 150	175	55989.8	-20.4	-5.9	7.18
-45.3 -12.6	12.89	⊥∠•J	JJJ07•0	-2 U•4	-J•J	1•10
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			56094.7	-23	-5.5	7.12
-50.2 -13.6 37.5	-150	37.5	56137.8	-21.7	-6.4	6.98
-48.3 -15 50	11.92 -150	50	56105.8	-21.9	-6.5	7.13
-43.5 -13.2	11.65		55983.1			7.06
-39.2 -12.9	11.95					
-42.9 -12.2			55890.5	-19.8	-7.1	7.23
87 . 5 -38 -11.7		87.5	55711.2	-16.2	-6.5	7.29
100	-150		55817.2	-15.5	-3.1	6.84
-52.9 -15.7 112.5			55898.3	-12.6	-3.7	6.87
-51.8 -16.5 line	11.53					
-200	-200	-200	56345.5	-17.7	7	6.52
21.7 13.1 -187.5		-187.5	56028.3	-16.4	-8.1	6.5
27 12.6 -175	11.9					6 57
27.6 18.3	11.31					
-162.5 29.2 20.7	-200 11	-162.5	56784.1	-11.2	-8.8	6.49
-150 24.1 20.8	-200	-150	56618.1	-13.3	-7.7	6.45
-137.5	-200	-137.5	56058.1	-13.8	-8.3	6.58
27.3 20.6 -125		-125	56026.8	-12.7	-7.1	6.58
24.4 18.5 -112.5	11.57					*
10 13.8	11.1					
-100 17 . 3 13 . 3			56107.3	-14.8	-7.6	6.77
-87.5	-200	-87.5	56140.4	-17.4	-6.7	6.8
4.6 10.3 -75	-200	-75	56135.6	-15.1	-6.5	6.82
	11 . 18 -200	-62.5	56156.5	-15.7	-7.1	6.84
8 4.5	12.75		56193.6			
	-200 12 . 4		0193-0	-12.3	-8•1	0./1
-37 . 5 -4 . 5 -5 . 8	-200 12.3	-37.5	56230.7	-12.4	-8.5	6.66
-25	-200	-25	56352.4	-14.5	-9	6.91
	-200	-12.5	56242.4	-15.4 -9	9.400001	7.07
-16.7 -13	3 12.44 -200	, (56246.5	-16.1	-8.8	7.01
-22.1 -13.3	12.72					
-15.4 -14.7	12.52		56173.8		-9.5	
25	-200	25	56076.3	-15.6	-8.8	7.01

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-18.8	-15	12.46					
			~~ ~	55982.9	-19.2	-9.5	7.09
-30.1	-15.8	12.64		55982 . 9 55999 . 2			
	50	-200	50	55999 . 2	-15	-9.3	7.01
-29.9	-15.2	12.66	625	FEOCA O	124 0	400001	7.1
-221	-15	-200	02.0	55964.9	-13.4 -8.	400001	/•1
22.1	75	-200	75	55604.9	-17. 5	-8.6	7.37
-28.9	-14	12.66					
	87.5	-200	87.5	55650 .7	-15.4	-8.5	7.13
-23.2	-13.4	12.71					
27.0	100	-200	100	55780.4	-15.8	-9.5	7.07
-27.8	-12.5	12.73	1105	55834	-17.2	-8.3	7.28
-34.2	-14.7	-200	112.0	55654	-17.2	-0.3	7.20
54.2	125	-200	125	55896	-13.4	-7.2	7.12
	-18.5						
			137.5	55926	-14.2	-7.6	7.21
-41	-17.7	12.63					
44.2	150	-200	150	55947.1	-14.1	-6.8	7.34
	-17 . 8			56022.1	-13.2	-6.4	7.47
	-18.5			J0022•1	-13+2	-0.4	/ • • • /
				56053.6	-14.6	-6.9	7.37
-51.1	-22.9	13.56					
				56182.3	-9.3	-6.6	7.6
-46.4	-22	12.99)	500000	10.4	6.0	7.00
_52	200 -22 . 2	-200	200	56026.6	-13.4	-6.8	7.62
	-22.2 line						
			-200	56641	-14.2	-3	9.42
	17.7						
				56341	-14.1	-2.5	9.55
	18						
	-175 15			56184.4	-13	-3.3	9.84
				56098.9	-13.8	-3.2	9.78
3.5		14.64	10210		1040	012	5.10
	-150	-250	-150	5635 7.7	-14	-2.8	9.44
	19.2					_	
	137.5		-137.5	56107.2	-12	-3	10.18
10.2	15 . 5 -125	15.66 -250	-125	55965.8	-15.4	-3.7	9 .7 1
•8	17.5	-230 13 . 85	-125	JJ90J•0	-13•4	-3.7	3.71
	112.5		-112.5	55921.3	-15.3	-3.5 9	.599999
-1.9	18.6	13.57					
-	-100		-100	55968.8	-13.4	-3.3	9.48
4.6	18.8	13.54					
-5.3	-87.5			56052.9	-15.6	-3.8	9.52
-0.0	16 . 1 -75	13.62 -250		56100.9	-15.6	-4	9.59
-8.8		13.96		2010003	10.0	7	2027
	-62.5			56180.1	-14.1	-4.5 9.8	349999
-12	5,3	14.13					

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				-15.2		
-19.8 2.2 -37.5 -25.9 -3.3	-250	-37.5	56266.7	-15.6	-5.4	9.96
-25	-250	-25	56268.6	-15.9	-6.2	9.88
-27.2 -6.1 -12.5 -37.9 -12.7	-250	-12.5	56255.6	-18.7	-7.1	9.889999
0	-250	0	56148.6	-18.6	-6.1	9.82
-35.8 -11.9 12.5	-250	12.5		-17.4		
-33.5 -11.5 25	13 . 4 -250	25	55913	-16.2	-5.2	10.13
-36.2 -11.7 37.5	14 . 59 -250	37.5		-16.2		
-37.2 -11.5	14.91		-	-15.9		10.15
-36.1 -12.4 62.5			55691.5	-15.7	-5.4	10.3
-34.5 -14.4	16.12			-15.6		
-33.8 -10.4	14.29					
87.5 -37.6 -12.2	13.16					9.66
100 -42.3 -13.5	13.32					9.79
112.5 -43.5 -14.6	-250	112.5	55626	-19.2	-5.7	9.349999
125	-250	125	55839.8	-17.2	-5.1	9.91
- 41. 8 -12 137 . 5	-250	137.5	56165.6	-16.2	-5.7	9.849999
-47.5 -13.8 150	-250	150	55762.4	-15.7	-5.7	9 . 76
-51.4 -15.1 162.5	-250	162.5	55945.6	-22.3 -8.	400001	7.46
-59 . 3 -17 . 1 175	14.07					
-58.1 -18.3	13.65					
187.5 -60.6 -22.4	13.54			-20.9		
-61.1 -20.4	13.88	200	56129.6	-18.7	-6.8	7.54
line	-300		55992	-9.2	6	9 . 7
18.1 13	14.98					
-162.5 16.5 17.7	13.81					.599999
-150 15.6 19.1			55916.4	-10.7	-1.4	9.09
-137.5 13.2 19.4	-300	-137.5	55894.2	-10.9	-1.2	9.4
-125	-300	-125	55899	-10.4	-1.6	9.11
14.9 18.3 -112.5	-300	-112.5	55878	-10.1	9	9.77

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	18.4						
			-100	55903.1	-10.8	-1.1	9.719999
10.3	16 . 3		97 5	55029 4	-11.6	-2.5	9 79
7	12.9		-07.5	55950.4	-11.0	-2.5	3.13
•			-7 5	56027.6	-12.9	-4.1	10.4
-3	7.4	16.25					
	-62.5	-300	-62.5	56013.9	-12.4	-3.6	9.88
-2.4	5.4	13.9	50	55022 4	-11.8	4 1	0.0
-5.7	-50 2 . 6	-300	-50	55922.4	-11.0	-4.1	3.3
	-37.5		-37.5	56485.6	-13	-4.2	10
-8	.2	14.97					
	-25	-300	-25	55942. 3	-11.8	-5	9.83
-12.7	-5.6	12.85					
20.2				56051.5	-13.8	-6.3	10.01
-20.3	-10.1	_300	0	56252.2	-14.1	-55	10.3
-22.7	· -11.1	-300	U	JU2J2•2	14•1	-J•J	10.5
2241	12.5	-300	12.5	55620.2	-14.5	, –5	10.6
-19	-11.1	15.62					
	25	-300	25	55733.2	-15.5	-5.6	10.32
-22.1	-11.7	16.28				<i>,</i>	10.00
24.0	37 . 5 3 –10 . 7	-300	37.5	56186.7	-14.6	-6	10.22
-24.0	50	-300	50	55733 0	-13.6	-55	a azagag
-25.2	2 -12.3	12,94	50	55755+5	-13.0	J•J	J•J2JJJ
	62.5	-300	62.5	55883.3	-13.2	-5.8	9.82
-24	-13.6	12.83					
	75	-300	7 5	55712.4	-14.4	-4.9	10.32
-26.3	3 -10.7	13.89	07.5	56050.0		5.0	10.20
20.4	87.5	-300	87.5	56258.8	-14.1 -14.7 -14	-5.2	10.36
-28.4	100	-300	100	57612.2	-147		10.25
-24.2	2 -12.6	-300	5 I UU	37013•3	-14•/	-4.7	10.23
	112.5	-300	112.5	55426-1	-14	-4.7	10.27
-23.8	-12.6	14.62					
		-300		55668.4	-13.8	-5.4	10.39
-25.8	B -12.9						
		-350					.6 9.58
		260	16	1 EE0127	. 0 5		
8.900	-150	-350 2.8 18	-150	56043.7	-9.5		
8.900	0001 1	2.8 18	•98				
8.900 7.7	-150 0001 13 -137.5 12.4	2.8 18	•98) 56043.7 55999.8 -9.9		.5	9.71
7.7	0001 13 -137.5 12.4 -125	2.8 18 -350 19.3 -350	•98 -137•5				
	0001 1: -137.5 12.4 -125 11.8	2.8 18 -350 19.3 -350 19.16	.98 -137.5 -125	55999 . 8 -9.9	900001 -10 . 1	.5 .8	9.71 9.58
7.7 6.7	0001 1: -137.5 12.4 -125 11.8 -112.5	2.8 18 -350 19.3 -350 19.16 -350	.98 -137.5 -125	55999 . 8 -9.9	900001	.5	9.71
7.7	0001 1: -137.5 12.4 -125 11.8 -112.5 11.9	2.8 18 -350 19.3 -350 19.16 -350 19.45	.98 -137.5 -125 -112.5	55999.8 -9.9 56075.3 55882.1	900001 -10.1 -10.7	.5 .8 .1	9.71 9.58 9.76
7.7 6.7 5.3	0001 1: -137.5 12.4 -125 11.8 -112.5 11.9 -100	2.8 18 -350 19.3 -350 19.16 -350 19.45 -350	.98 -137.5 -125 -112.5	55999 . 8 -9.9	900001 -10 . 1	.5 .8	9.71 9.58
7.7 6.7	0001 1: -137.5 12.4 -125 11.8 -112.5 11.9	2.8 18 -350 19.3 -350 19.16 -350 19.45	.98 -137.5 -125 -112.5	55999.8 -9.9 56075.3 55882.1 55873.9	900001 -10.1 -10.7 -10.2	.5 .8 .1	9.71 9.58 9.76
7.7 6.7 5.3	0001 1: -137.5 12.4 -125 11.8 -112.5 11.9 -100 11 -87.5 9.400001	2.8 18 -350 19.3 -350 19.16 -350 19.45 -350 19.78 -350 20.11	.98 -137.5 -125 -112.5 -100 -87.5	55999.8 -9.9 56075.3 55882.1 55873.9 55881.4	900001 -10.1 -10.7 -10.2 -11.2	.5 .8 .1 .6 5	9.71 9.58 9.76 9.8 9.83
7.7 6.7 5.3 5.2	0001 1: -137.5 12.4 -125 11.8 -112.5 11.9 -100 11 -87.5 9.400001 -75	2.8 18 -350 19.3 -350 19.16 -350 19.45 -350 19.78 -350	.98 -137.5 -125 -112.5 -100 -87.5	55999.8 -9.9 56075.3 55882.1 55873.9	900001 -10.1 -10.7 -10.2 -11.2	.5 .8 .1 .6 5	9.71 9.58 9.76 9.8 9.83

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Contraction of

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			-62.5	56539.4	-11.6	-2.3	9 . 76
		-350	-50	56350.8	-12.8	-3.4	9.77
	1.4 -37.5		-37.5	56134.4	-13.3	-3.6	9.86
-10.6	- . 3 -25		25	56129	-14.8	-4.8	9.87
-14.2	-2.5			30129	-14.0	-4.0	3.07
-15 0	-12. 5 -5			56301.7	-14.1	-4.9	9 . 92
		-350	0	55813.1	-14.1	-4.5	9.969999
-13•3	12.5	-350		56016.5	-14.7	-3.7	9.79
-19.2	-4 . 8	18 . 15 -350	25	56100	-13.5	-4.3	9 .7 3
-20.3	-4.4	17.6				-4.	J•15
-21.8	37 . 5 -5 . 5	-350	37.5	56982	-13.7	-4.2	9.59
-21.3	50	-350 17.33	50	56537.3	-14.6	-4.3	9.92
-21.5	62.5	-350		55891	-13.7	-4	9.82
-20.5	-6.2	1 7. 12 -350		55604	_15	-4	10.01
-22.7	-6.2	17				-	
-24 9	87 . 5 -6 . 2			55400.4	-13.9	-4.1	10.03
	100	-350		55725.6	-14.6	-4.1	10.14
	-7 . 2						
	line -150		-150	55843.3	-8.6	.7	9.54
	13.8		1275	55831.9	-9.7	.5	9,37
5.6	13.5	19.53				ຸ	3.37
	-125 12 . 5		-125	55864.1	-9.5	2	9.42
			-112.5	55989.8	-9.7	3	9.36
		19.51			11 1	-	0.50
	-100 12 . 2		-100	55996.5		•	9.52
	-87.5		-87.5	56291.5	-11.6	-1.4	9.52
6		19 . 71 -400	-75	56274.2	-12.2	-1.5	9.45
7	10.1	20.02					
-2.8		-400 20 . 11	-62.5	56063.8	-11.7	-1.9 9.5	599999
	-50	-400		55998.4	-12.1	-3.4	9.65
-7.5				55953.4	-12.8	-3.5	10.19
-10.9	1.6	26.23					
-145	-25 -1.1			55949-2	-14	-3.5	10.64
	-12.5	-400	-12.5	56025.3	-13	-3.9	10.76
-15.1	-1.8 0	29 . 42 -400	n	56031	-13.7	-4.3	10.97
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166 20	20.40					
-16.6 -2.6		105	5(107	14.0	4 5	11.01
			56107	-14.9	-4.5	11.01
-17.7 -2.8 25	29.01	25	5(240.0	145	A 7	11 11
		25	56249.9	-14.5	-4.7	11.11
-19.5 -3.5		275	56181	-15.5	-4.3	11.13
37 . 5 -21 . 8 -3.6			50101	-13.5	-4.3	11.13
-21.0 -3.0	-400	50	561721	-15.6	-3.8	11.13
-22.2 -4.3			50172.1	-13.0	-3.0	11.13
62.5			56388.7	-15.9	-4	11.11
-23 -4.5		0200	30300	1000	-	
line						
-175		-175	55814.7	-8.3	3.4	9.15
8.5 13.4						
-162.5	-450 -	162.5	55791.9	-8.1	3.2	9.22
7.9 13.4	23.11					
		-150	55792.8	-8.1	4.2 9.0	99999
6.9 13.7						
-137.5		137.5	55798.3	-9	2.9	9.21
5.7 12.7					_	
-125	-450	-125	55899	-9.1	.9	9.19
4.8 11.2	23.8					
-112.5	-450 -	-112.5	55863.3	-9.8	1.7 9.30	9999
3.2 10.7	23.85	100	56202	-9.7	.7	0.2
-100 2 . 4 9 . 8	-450	-100	20303	-9.7	•/	9.3
		-97.5	56684 5	-10.3	1 9.46	0000
.3 8.400001		-07.5	20004.2	-10•3	-1 9.40	2222
-75	-450	-75	56199.1	-11	- 8	9.46
-1.5 7 -62.5	24.75	75	5019941	11	•0	2.40
-62.5	-450	-62.5	56197.1	-11.7	-1.7	9.66
-50	-450	-50	55939.3	-11.7	-1.9	9.71
-6.5 2.7	25.44			-11.7		
-37.5	-450	-37.5	55989	-12.4	-1.8	9.71
-8.2 1.2	25.36					
-25	-450	-25	55970	-12.6	-2	9 . 76
-11.2 -1	25.63					⁻
-12.5	-450	-12.5	55892.7	-13.6	-2.1	9.88
	26.43	0		10.0	2.0	10.04
0	-450 26 . 78	U	22882•1	-12.8	-3.8	10.04
			56104.4	-14.7	-3	10.2
-17.1 -3.7	-450	12.0	30104.4	-14./	-3	10.2
-⊥/•⊥ -3•/ 25	27 . 65 -450	25	56250.6	-14.2	-3.2	10.37
-18.5 -3.5	-30 27 72	23	30230.0	17.2	J+2	10.57
37.5	-450	37.5	56628.5	-15.3	-3.7	10.32
-19.4 -4.5	27.83	57+5	0002000	TOOL	5.7	2 V • J 2
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62.5	-450	62.5				10.54
62.5	-450 5 28.5 -450	62 . 5 75		-15 . 6 -16.4		

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-162.5	-500	-162.5	55777.5	-9.6	1.5	8,96
5.9 12.3	22.51		κ.			
-150	-500	-150	55761.1	-9.3	.9	9.05
		107 5	55344.0	10.0	0	0.00
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-125	-500	-125	55750.4	-11.2	-5 1	8.889999
$ \begin{array}{ccc} -125 \\ 1.1 & 11.3 \\ -112.5 \\ \end{array} $	22.26	125	337304	11.2	•5	
-112.5	-500	-112.5	56294.6	-10.9	-1.8	8.97
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-14.6 -1.4	21.99)				`
12.5	-500	12.5	55930.5	-19.4	-6.3	7.84
-16.7 -1.6	21.7	/ 		-19.1	2.2	0 670000
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87.5			55746.9	-22.3	-9.8	7.8
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		-550	-50	561 70. 8	-13.2	-1.3	7.82
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-10./	0	24.40	0	55752 1	-15.6	60	7.77
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-16.4	-5						
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-18.2	-6.1	24.62					
				55803.5	-19.6	-8.1	7.96
-21	-7.7	24.66					
	62.5	-550	62.5	55952.3	-20.6	-9.1	8.24
-25.4	-10	24.31					
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APPENDIX E

GEOPHYSICAL EQUIPMENT SPECIFICATIONS

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Specifications*
Frequency Tuning Range 15 to 30 kHz, with bandwidth of 150 Hz; tuning range accommodates new Puerto Rico station at 28.5 kHz
Transmitting Stations Measured Up to 3 stations can be automatically measured at any given grid location within frequency tuning range
Recorded VLF Magnetic Parameters
Standard Memory Capacity 800 combined VLF magnetic and VLF electric measurements as well as gradiometer and magnetometer readings
Display
RS232C Serial I/O Interface
Test ModeA. Diagnostic Testing (data and programmable memory) B. Self Test (hardware)
Sensor Head Contains 3 orthogonally mounted coils with automatic tilt compensation
Operating Environmental Range
Power Supply
Weights and Dimensions 2.8 kg, 128 x 150 x 250 mm Instrument Console 2.8 kg, 128 x 150 x 250 mm Sensor Head 2.1 kg, 130 dia. x 130 mm VLF Electronics Module 1.1 kg, 40 x 150 x 250 mm Lead Acid Battery Cartridge 1.8 kg, 235 x 105 x 90 mm Lead Acid Battery Belt 1.8 kg, 540 x 100 x 40 mm Disposable Battery Belt 1.2 kg, 540 x 100 x 40 mm
*Preliminary

EDA Instruments Inc., 4 Thorncliffe Park Drive, Toronto, Ontario Canada M4H 1H1 Telex: 06 23222 EDA TOR, Cables: Instruments Toro (416) 425-7800

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In USA, EDA Instruments Inc., 5151 Ward Road, Wheat Ridge, Colorado U.S.A. 80033 (303) 422-9112

Printed In Canada

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Specifications

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specifications	
Dynamic Range	18,000 to 110,000 gammas. Roll-over display feature suppresses first significant digit upon exceeding 100,000 gammas.
Tuning Method	Tuning value is calculated accurately utilizing a specially developed tuning algorithm
Automatic Fine Tuning	 ± 15% relative to ambient field strength of last stored value
Display Resolution	
Processing Sensitivity	
Statistical Error Resolution	
Absolute Accuracy	 ± 1 gamma at 50,000 gammas at 23°C ± 2 gamma over total temperature range
Standard Memory Capacity	
Total Field or Gradient Tie-Line Points	1,200 data blocks or sets of readings
Base Station	5,000 data blocks or sets of readings
Display	Custom-designed, ruggedized liquid crystal display with an
	operating temperature range from –40°C to +55°C. The
	display contains six numeric digits, decimal point, battery status monitor, signal decay rate and signal amplitude
	monitor and function descriptors.
RS 232 Serial I/O Interface	2400 baud, 8 data bits, 2 stop bits, no parity
Gradient Tolerance	
Test Mode	A. Diagnostic testing (data and programmable memory)
Sancor	B. Self Test (hardware)
	Optimized miniature design. Magnetic cleanliness is consistent with the specified absolute accuracy.
Gradient Sensors	0.5 meter sensor separation (standard), normalized to
	gammas/meter. Optional 1.0 meter sensor separation available. Horizontal sensors optional.
	Remains flexible in temperature range specified, includes strain-relief connector
Cycling Time (Base Station Mode)	Programmable from 5 seconds up to 60 minutes in 1 second increments
	-40°C to +55°C; 0-100% relative humidity; weatherproof
	Non-magnetic rechargeable sealed lead-acid battery cartridge or belt; rechargeable NiCad or Disposable battery cartridge or belt; or 12V DC power source option for base station operation.
Battery Cartridge/Belt Llfe	2,000 to 5,000 readings, for sealed lead acid power supply, depending upon ambient temperature and rate of readings
Weights and Dimensions	-
Instrument Console Only	2.8 kg, 238 x 150 x 250mm
NiCad or Alkaline Battery Cartridge	
NiCad or Alkaline Battery Belt	
Lead-Acid Battery Cartridge	
Lead-Acid Battery Belt	
Sensor Gradlent Sensor	. I.2 Ky, Somm diameter x 200mm
(0.5 m separation - standard)	2.1 kg, 56mm dlameter x 790mm
Gradlent Sensor	
(1.0 m separation - optional)	
Standard System Complement	Instrument console; sensor; 3-meter cable, aluminum sectional sensor staff, power supply, harness assembly, operations manual
Base Station Option	Standard system plus 30 meter cable
Gradlometer Option	Standard system plus 0.5 meter sensor

E D A Instruments Inc. 4 Thorncliffe Park Drive Toronto, Ontario Canada M4H 1H1 Telex: 06 23222 EDA TOR Cable: Instruments Toronto (416) 425 7800

In U.S.A. E D A Instruments inc. 5151 Ward Road Wheat Ridge, Colorado U.S.A. 80033 (303) 422 9112 Estimated mode

Phenocrysts

Plagioclase	21
Quartz	15
Chlorite)	4
Epidote)	7
Groundmass	
Plagioclase	50
Quartz	6
Chlorite	4
Rutile	trace

This is a leucocratic rock made up of phenocrysts of quartz and plagioclase in an even, microgranular groundmass composed predominantly of plagioclase.

The phenocrysts range in size from 0.2 - 4.0mm. The plagioclase is subhedral-euhedral in form, and commonly occurs as clumps. It is generally fresh, except for minor alteration to flecks of epidote.

The quartz ranges from anhedral to subhedral in form, and sometimes shows embayed outlines and groundmass inclusions. The quartz phenocrysts tend to be larger than the plagioclase. Minor mafic phenocrysts are now totally altered, and are represented by irregular clumps of felted chlorite and cryptocrystalline to granular epidote.

The phenocrysts are set, with random orientation, in an equigranular groundmass of grain size 20 - 100 microns, composed essentially of an interlocking mosaic aggregate of fresh, anhedral plagioclase. Indeterminate (but apparently minor) proportions of quartz occur sporadically intergrown, and there are scattered intergranular pockets of chlorite, and flecks of cryptocrystalline rutile.

This rock is a typical quartz feldspar porphyry, of dacitic composition. It has the texture of a hypabyssal intrusive. It is notably fresh (except for alteration of the minor mafics).

CERTIFICATES

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

DATED: November 4 , 1991

ISSUER Tom K.T. Cheng President

ON BEHALF OF THE BOARD OF DIRECTORS Michael I-Kuo Terng Lian Thye Fond



AGENT

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 Prospectus as required by the Securities Act and its regulations.

DATED: November 4, 1991

BRINK HUDSON & LEFEVER LTD. Per: Brian D. Graves, President.

John L. Mathers, Vice-President.