002647 (82 FoW292) 82 F/3W Pend D'oreille Project

THIS PROSPECTUS CONSTITUTES A PUBLIC OFFERING OF THESE SECURITIES ONLY IN THOSE JURISDIC-TIONS 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 827/13E: 82/4E Snow Creek Project REPRESENTATION TO THE CONTRARY IS AN OFFENCE. PROSPECTUS

NEW ISSUE

JOPEC RESOURCES LTD. (the "Issuer")

(NEW)

MAR 2 4 1992

MINISTRY OF ENERGY, MINES & PETROLEUM RESOURCES.

(Incorporated in British Columbia)

900,000 SHARES

Geological Survey Branch MEMPR

REC'D APR 1 6 1992	90	00,000 SHARES	MEMPR	
NELSON, B.C.	Offering Price (1)	Commission	Net Proceeds to the Issuer(2)	
Per Share Total	\$0.50 \$450,000	\$0.04 \$36,000	\$0.46 \$414,000	

(1) The offering price was established pursuant to negotiations between the Issuer and the Agent.

(2) Before deduction of the balance of costs of this Offering estimated at \$25,000.

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

THERE IS PRESENTLY NO MARKET THROUGH WHICH THESE SECURITIES MAY BE SOLD AND A PURCHASE OF THE SECURITIES OFFERED BY THIS PROSPECTUS MUST BE CONSIDERED SPECULATIVE. REFERENCE IS MADE TO THE SECTIONS CAPTIONED "RISK FACTORS" AND "DILUTION".

CERTAIN DIRECTORS OF THE ISSUER MAY HAVE INTERESTS, DIRECT OR INDIRECT, IN OTHER NATURAL RESOURCE COMPANIES AND ACCORDINGLY HAVE POTENTIAL CONFLICTS OF INTERESTS. REFERENCE IS MADE TO THE SECTIONS CAPTIONED "RISK FACTORS" AND "DIRECTORS AND OFFICERS".

FOR COMPARISON OF THE SHARES BEING OFFERED FOR CASH AND THOSE ISSUED TO PROMOTERS, DIREC-TORS AND OTHER INSIDERS. REFERENCE IS MADE TO THE SECTION CAPTIONED "PRINCIPAL SHAREHOLD-ERS".

THE AGENT HAS AGREED TO PURCHASE FROM THE OFFERING (THE "GUARANTEE") ANY OF THE SHARES UN-SUBSCRIBED FOR AT THE CONCLUSION OF THE OFFERING AND, IN CONSIDERATION FOR THE GUARANTEE HAS BEEN GRANTED NON-TRANSFERABLE SHARE PURCHASE WARRANTS (THE "AGENT'S WARRANTS") - SEE "PLAN OF DISTRIBUTION - AGENT'S GUARANTEE AND ADDITIONAL OFFERING".

THE AGENT'S WARRANTS WILL BE DISTRIBUTED TO THE AGENT 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.

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 AUGUST 4, 1992, INCLUDING PRESCRIBED DISTRIBUTION AND FINAN-CIAL 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 30TH DAY OF JANUARY, 1992.

YORKTON SECURITIES INC. 10th Floor, 1055 Dunsmuir Street Vancouver, B.C., V7X 1L4

EFFECTIVE DATE: February 4, 1992

# PROSPECTUS SUMMARY

# The Offering

Issuer:

JOPEC RESOURCES LTD. is in the business of acquiring and exploring natural resource properties. Reference is made to the section captioned "Business and Property of the

Issuer".

Securities Offered: 900,000 Shares

Gross Proceeds:

\$450,000

Net Proceeds:

\$414,000

Price:

\$0.50 per Share

Commission:

\$0.04 per Share

Guarantee:

The Agent has agreed to purchase from the Offering (the "Guarantee") any of the Shares unsubscribed for at the conclusion of the Offering and, in consideration therefor, has been granted non-transferable warrants entitling it to purchase up to 225,000 common shares of the Issuer at a price of \$0.50 per share for a period of one year. Reference is made to the section captioned "Plan of Distribu-

tion".

Use of Proceeds:

The net proceeds from this Offering will be used to conduct the balance of Phase I of the exploration program recommended on each of the Pend D'Oreille and Snow Creek The balance will be added to the working Projects.

capital of the Issuer.

# Risk Factors

Investment in the Shares must be considered speculative due to the nature of the Issuer's business and the present stage of its development. There is presently no market through which the Shares may be sold and there can be no assurance that one will develop. The Issuer has no history of earnings nor dividend record. The mineral properties in which the Issuer has an interest are in the exploration stage only and are without a known body of commercial No survey has been made of the mineral properties in which the Issuer has an interest and, therefore, the precise boundaries thereof may be in doubt. Certain of the directors of the Issuer are directors of other companies and hence, conflicts of interest may arise. The purchase of Shares under this Offering will result in an immediate dilution to the purchaser. 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, Jopec Resources Ltd., was incorporated on September 4, 1990 as a limited company pursuant to the laws of British Columbia by the registration of its Memorandum and Articles with the British Columbia Registrar of Companies.

The head office of the Issuer is located at 295 Columbia Avenue, Castlegar, B.C., V1N 1G3. The registered and records office of the Issuer is located at Suite 100, 200 Granville Street, Vancouver, British Columbia, V6C 1S4.

#### PLAN OF DISTRIBUTION

### Offering

The Issuer by its Agent hereby offers (the "Offering") through the facilities of the Vancouver Stock Exchange (the "Exchange") 900,000 common shares of the Issuer (the "Shares") at a price of \$0.50 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 and 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 resident in British Columbia may purchase some of the Shares from the Offering.

# Appointment of Agent

By Agreement dated September 3, 1991 (the "Agency Agreement") the Issuer appointed Yorkton Securities Inc. its agent (the "Agent") to offer the Shares through the facilities of the Exchange.

The Agent will receive a commission of \$0.04 per Share sold pursuant to the Offering.

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 day the shares of the Issuer are listed, posted and called for trading on the Exchange 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 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 final receipt for the Prospectus of the Issuer in connection with the Offering.

Except as set out herein, 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.

## Agent's Guarantee

The Agent has agreed to purchase from the Offering, at the Offering Price, any Shares unsubscribed for on the day the shares of the Issuer are posted and called for trading on the Exchange (the "Guarantee"). In consideration therefor, the Agent has been granted non-transferable share purchase warrants (the "Agent's Warrants") entitling it to purchase up to 225,000 common shares of the Issuer at a price of \$0.50 per share at any time up to the close of business one year from the day the Issuer's shares are listed for trading on the Exchange.

The Agent's Warrants will contain provisions for the appropriate adjustment in the class, number and price of shares issuable upon the exercise thereof upon the occurrence of certain events, including any subdivision, consolidation or reclassification of the shares of the Issuer, the payment of stock dividends or the amalgamation of the Issuer.

# Additional Offering

The Agent's Warrants will be distributed to the Agent under this Prospectus. Any Shares acquired by the Agent under the Guarantee will also be distributed under this Prospectus through the facilities of the Exchange at the market price at the time of sale.

# Conditional Listing on the Exchange

The Exchange has conditionally listed the Shares being offered pursuant to this Prospectus. Listing is subject to the Issuer fulfilling all the listing requirements of the Exchange on or before August 4, 1992, including prescribed distribution and financial requirements.

#### USE OF PROCEEDS

The net proceeds to be derived by the Issuer from the Offering will be \$414,000 which, together with the Issuer's working capital of \$152 as at January 30, 1992 will be allocated, in order of priority, as follows:

1. To pay the balance of the estimated costs of this Offering

\$ 25,000

2. To pay the balance of the estimated costs of Phase I of the work program on the Pend D'Oreille Project as disclosed in the section captioned "Business and Property of the Issuer"

\$110,932

3. To pay the balance of the estimated costs of Phase I of the work program on the Snow Creek Project as disclosed in the section captioned "Business and Property of the Issuer"

\$134,083

4. To provide a reserve for payment of the first year cash portion of the option exercise price under the Swift Creek and Lukey Agreements as disclosed in the section captioned "Business and Property of the Issuer - A. Pend D'Oreille Project"

\$ 30,000

5. To provide for working capital

\$114,137

TOTAL:

\$414,152

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. However, the Issuer reserves the right, subject to the consent of the Exchange should the shares of the Issuer become listed on the Exchange, to redirect any portion of the funds, pursuant to the written recommendations of a qualified engineer or geologist and, in such event, notice thereof will be given to all shareholders of the Issuer. In the event the Issuer's properties are abandoned or if arrangements are made for the performance of all or any portion of the recommended work programs by other parties, the Issuer may direct the funds so allocated to the acquisition or exploration of other natural resource properties acquired by the Issuer after the date of this Prospectus, based upon recommendations of a qualified engineer or geologist.

No part of the proceeds of this Offering 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 listed on the Exchange. Should the Issuer propose to use the proceeds to acquire other than trustee-type securities after the distribution of the Shares offered by this Prospectus, 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.

#### DILUTION

Based upon the balance sheet of the Issuer as at September 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	\$0.50
Net tangible book value per share outstanding at January 30, 1992	\$0.09
Increase of net tangible book value per share attributable to the Offering	\$0.43(1)
Net tangible book value per share outstanding after the Offering	\$0.21(2)
Dilution to each share offered	\$0.29
Percentage of dilution in relation to the Offering price	58%

- (1) After deduction of the Agent's commission and the balance of the estimated costs of this Offering.
- (2) Does not give effect to the common shares of the Issuer reserved for issuance pursuant to the Agent's Warrants and incentive stock options granted by the Issuer or 150,000 of the 200,000 shares pursuant to the Swift Creek and Lukey Option Agreements (reference is made to the section captioned "Business and Property of the Issuer" for particulars of the Option Agreements).

#### 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 through which the Shares of the Issuer can be sold 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.
- 3. There is no known body of commercial ore present on the properties in which the Issuer has an interest.
- 4. If the Issuer's exploration programs are successful in establishing ore of commercial tonnage and grade, additional funds will be required for the development of the ore body and to place it in commercial production. One source of future funds presently available to the Issuer is through the sale of equity capital. Another alternative for the financing of further exploration would be the offering by the Issuer of an interest in the properties in which the Issuer has an interest to be earned by another party or parties carrying out further exploration or development thereof. There can be no assurance however, that such a sale or offering will succeed.
- 5. The marketability of the minerals acquired by the Issuer may be affected by numerous factors beyond the control of the Issuer. The 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 protection) cannot be accurately determined.

- 6. Mining operations generally involve a high degree of risk. Hazards such as unusual or unexpected formations and other conditions are involved. The Issuer may become subject to liability for pollution, cave-ins or hazards against which it cannot insure or against which it may elect not to insure. The payment of such liabilities may have a material, adverse effect on the Issuer's financial position.
- Directors of the Issuer may serve as directors of, or have significant shareholdings in, other companies. 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. The laws of the Province of British Columbia provide that the directors of the Issuer must act honestly, in good faith and in the best interests of the Company in resolving any conflicts which may arise, and all directors of the Issuer are aware of these fiduciary responsibilities. In determining whether or not the Issuer will participate in a particular venture, the directors will primarily consider the degree of risk to which the Issuer may be exposed, its financial position at the time and, depending on the magnitude of the venture and the absence of any disinterested directors, whether or not to submit any ventures in question to the shareholders of the Issuer for their approval.
- 8. The Issuer has no history of earnings and has not paid, nor does it intend to pay in the foreseeable future, dividends on its common shares.
- 9. After the issuance of the securities offered by this Prospectus and prior to the exercise of the Agent's Warrants and incentive stock options, the Issuer's common shares will have a net tangible book value of \$0.21 per share. Accordingly, purchasers of the securities offered by this Prospectus will experience an immediate and substantial dilution of \$0.29 per share or 58% in the net tangible book value of their investment.
- 10. The 900,000 Shares offered by this Prospectus represent 33.99% of the common shares of the Issuer that will be outstanding after the completion of this Offering as compared to the 42.58% of such shares that will have been issued for cash prior to the date of this Prospectus and held by promoters, directors, officers and substantial security holders of the Issuer.
- 11. While the Issuer has obtained the usual industry standard title report with respect to properties in which it has an interest, this should not be construed as a guarantee of title. The properties in which the Issuer has an interest may be subject to prior unregistered agreements or transfers or native land claims, and title may be affected by undetected defects.
- 12. The properties in which the Issuer has an interest have not been surveyed and the precise location and extent thereof may be in doubt.

#### 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

Perfecto Jacinto Santos Castlegar, B.C. President and Director, Member of the Audit Committee

Kenneth John Surina Meadow Creek, B.C. Director, Member of the Audit Committee

Jack Clyde Overdorff
Spokane, Washington
Vice-President and Director

Quintin Bernard Lehnertz
Spokane, Washington
Director,
Member of the Audit Committee

Genevieve Baban Welychko
Castlegar, B.C.
Secretary and Director

# Principal Occupations

President and General Manager, Anginel Resources Ltd., Geological Consultants, from March 1982

Self-employed Businessman; Owner, Hamill Creek Holdings Ltd. (Sawmill) and Tri-County Holdings Ltd. (Mining Exploration)

Owner-Manager of General Spray Service, Weed and Pest Control

Owner/Manager of Longhorn Barbecue Inc., Restaurant and Caterers

Office Secretary, Anginel Resources Ltd. and Assistant Manager, Ely's Boutique and Gift Shop since 1990; formerly a student

No director, officer or promoter of the Issuer has, within the last ten years, been the subject of any penalties or sanctions by a court or securities regulatory authority relating to trading in securities, the promotion, formation or management of a publicly traded company or involving theft or fraud.

Certain of the directors serve as directors of other 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 the time.

#### **PROMOTERS**

Perfecto J. Santos, the President and a director of the Issuer and Jack Overdorff, the Vice-President and a director of the Issuer, are the promoters of the Issuer as that term is defined by the British Columbia <u>Securities Act</u> (the "Act").

Messrs. Santos and Overdorff have entered into transactions with the Issuer as disclosed in the sections captioned "Business and Property of the Issuer", "Escrowed Shares" and "Executive Compensation".

# BUSINESS AND PROPERTY OF THE ISSUER

The Issuer is engaged in the acquisition and exploration of natural resource properties. The Issuer owns or holds options to acquire interests in the mining properties described hereunder and intends to seek and acquire additional properties worthy of exploration and development.

# A. Pend D'Oreille Project, Nelson Mining Division, B.C.

# Swift Creek Claims

Pursuant to an option agreement (the "Swift Creek Agreement") dated May 10, 1991 with Swift Creek Mining, an unregistered partnership, and its partners Lino Muto, Doug Lukey, a shareholder of the Issuer, and Tom Konkin of Salmo, B.C. (the "Partnership"), the Issuer acquired, at a cost of \$4,000, an option to acquire a 100% undivided interest in 4 mineral claims located in the Nelson Mining Division, British Columbia (the "Swift Creek Claims"), subject to a 2% net smelter return royalty to a maximum of \$1,000,000 in favour of the Partnership. The option is exercisable by the issuance of 100,000 shares of the Issuer and the payment of \$250,000 in the aggregate to the Partnership as follows:

- (a) 25,000 shares upon the issuance of a receipt for the Issuer's final prospectus (the "Approval Date");
- (b) a further 25,000 shares on completion of the first phase of an exploration program and provided that the Issuer receives the recommendations of a qualified engineer or geologist recommending further work on the Swift Creek Claims, acceptable to the Exchange;
- (c) a further 25,000 shares on completion of the second phase of an exploration program and provided that the Issuer receives the recommendations of a qualified engineer or geologist recommending further work on the Swift Creek Claims, acceptable to the Exchange;
- (d) the final 25,000 shares on completion of the third phase of an exploration program and provided that the Issuer receives the recommendations of a qualified engineer or geologist recommending further work on the Swift Creek Claims, acceptable to the Exchange;

(e) the annual payment of the greater of Twenty Thousand Dollars (\$20,000) or Five Percent (5%) of net profits from production from the Swift Creek Claims, on or before each anniversary of the Approval Date during the option period, until the aggregate amount of Two Hundred and Fifty Thousand Dollars (\$250,000) has been paid in full.

The Swift Creek Agreement further provides that the option will terminate unless, within seven years of the date thereof, the Issuer has received a feasibility report from a qualified independent mining engineer indicating that the Swift Creek Claims can be placed into commercial production and, within two years thereafter, has delivered to the Partnership a financing plan to bring the Swift Creek Claims into production. In addition, the Swift Creek Agreement provides for a right of first refusal in favour of the Issuer in respect of any disposition by the Partnership of its interest in the net smelter return royalty and for an area of mutual interest clause which incorporates into the Swift Creek Agreement any mineral claim located by or on behalf of, or acquired by, either the Issuer or the Partnership which is wholly situate within one kilometer of the external perimeter of any of the Swift Creek Claims.

## Title to Swift Creek Claims

The Swift Creek Claims consist of three two-post mineral claims and one modified grid mineral claim situated in the Nelson Mining Division, Province of British Columbia, identified as follows:

<u>Name</u>	Record No.	No. of Units	Expiry Date
Mel	1663	1	May 23, 19 <b>9</b> 2
Luke	1664	1	May 23, 1992
Konki	1665	1	May 23, 1992
Big John	509	1	August 18, 1993

Pursuant to the terms of the Swift Creek Agreement, the Swift Creek Claims are recorded in the name of the Issuer pending exercise of the option.

#### Lukey Claims

Pursuant to an Option Agreement (the "Lukey Agreement") dated May 3, 1991 with Maxine F. Lukey of Salmo, B.C. ("Lukey"), a shareholder of the Issuer, the Issuer acquired, at a cost of \$1,000, an option to acquire a 100% undivided interest in 4 mineral claims located in the Nelson Mining Division, British Columbia (the "Lukey Claims"), subject to a 2% net smelter return royalty to a maximum of \$250,000 in favour of Lukey. The option is exercisable by the issuance of 100,000 shares of the Issuer and the payment of \$100,000 in the aggregate to Lukey as follows:

(a) 25,000 shares upon the issuance of a receipt for the Issuer's final prospectus (the "Approval Date");

- (b) a further 25,000 shares on completion of the first phase of an exploration program and provided that the Issuer receives the recommendations of a qualified engineer or geologist recommending further work on the Lukey Claims, acceptable to the Exchange;
- (c) a further 25,000 shares on completion of the second phase of an exploration program and provided that the Issuer receives the recommendations of a qualified engineer or geologist recommending further work on the Lukey Claims, acceptable to the Exchange;
- (d) the final 25,000 shares on completion of the third phase of an exploration program and provided that the Issuer receives the recommendations of a qualified engineer or geologist recommending further work on the Lukey Claims, acceptable to the Exchange;
- (e) the annual payment of the greater of Ten Thousand Dollars (\$10,000) or Five Percent (5%) of net profits from production from the Lukey Claims, on or before each anniversary of the Approval Date during the option period, until the aggregate amount of One Hundred Thousand Dollars (\$100,000) has been paid in full.

The Lukey Agreement further provides that the option will terminate unless, within seven years of the date thereof, the Issuer has received a feasibility report from a qualified independent mining engineer indicating that the Lukey Claims can be placed into commercial production and, within two years thereafter, has delivered to Lukey a financing plan to bring the Lukey Claims into production. In addition, the Lukey Agreement provides for a right of first refusal in favour of the Issuer in respect of any disposition by Lukey of her interest in the net smelter return royalty and for an area of mutual interest clause which incorporates into the Lukey Agreement any mineral claim located by or on behalf of, or acquired by, either the Issuer or Lukey which is wholly situate within one kilometer of the external perimeter of any of the Lukey Claims.

# Title to Lukey Claims

The Lukey Claims consist of four two-post mineral claims situated in the Nelson Mining Division, Province of British Columbia, identified as follows:

<u>Name</u>	Record No.	No. of Units	Expiry Date
B.J. #1	6342	1	June 22, 1992
B.J. #2	6343	1	June 22, 1992
B.J. #3	6344	1	June 22, 1992
B.J. #4	6345	1	June 22, 1992

Pursuant to the terms of the Lukey Agreement, the Lukey Claims are registered in the name of the Issuer pending exercise of the option.

# Staked Claims

The Issuer also acquired, by staking, at a cost to it of \$3,060, 3 modified grid mineral claims located in the Nelson Mining Division (the "Staked Claims").

#### Title to Staked Claims

The Staked Claims consist of three modified grid mineral claims situated in the Nelson Mining Division, Province of British Columbia, identified as follows:

<u>Name</u>	Record No.	No. of Units	Expiry Date
Mac-1	6705	12	March 30, 1992
Mac-2	6706	20	March 29, 1992
Mac-3	6707	15	March 28, 1992

The Staked Claims are held, of record, by the Issuer.

The Swift Creek Claims, Lukey Claims and Staked Claims are collectively referred to herein as the Pend D'Oreille Project.

The Pend D'Oreille Project is the subject of a Report dated October, 1991 by Pamicon Developments Ltd. (the "Pend D'Oreille Project Report"), which Report is included in this Prospectus. The following discussion has been derived from the Pend D'Oreille Project Report.

#### Location and Access

The Pend D'Oreille Project is located in the Salmo River Valley within the Nelson and Bonnington ranges of the Selkirk Mountains in an area known as the Kootenay Arc, between 565 metres and 1,400 metres elevation, 17 kilometres south-southwest of Salmo and 6 kilometres northwest of Highway 3A at Nelway, British Columbia. The Project is situated on the north side of Salmo River immediately east of the Pend D'Oreille River with southerly flowing drainages including McCormick Creek, Wallack Creek and Pete Creek passing through the property. The Pend D'Oreille Project consists of seven two-post claims and four modified grid claims totalling 55 units.

The Pend D'Oreille Project is accessible along good gravel roads from Nelway, British Columbia to just north of the confluence of the Salmo and Pend D'Oreille Rivers where a less travelled ranch road runs easterly along the north side of the Salmo River to the Project boundary at McCormick Creek. Logging roads requiring four wheel drive equipped vehicles provide access to key portions of the Project.

Relief on the Pend D'Oreille Project is moderate to locally steep and the climate in the area is characterized by short cold winters and warm summers with precipitation moderate year round.

# History

The Pend D'Oreille Project is located in the historic Salmo lead-zinc belt in the trans border Kootenay Arc district. The property, first staked as the Red Rock Claim in 1928, has seen intermittent and limited production from underground workings during the period 1932 to 1979. In 1929 or 1930, the Red Rock Mine was discovered with four adits and several trenches completed prior to 1937, during which time 95 tons of ore were shipped. In the period 1947 to

1949, an additional 413 tons were mined and finally in 1974 and 1977, 70 tons were shipped by Federated Mining Corporation. Production totals over the Red Rock Mine life were 525 tonnes containing 85,059 kg of lead, 84,987 kg of zinc and 154,738 gm of silver.

The most recent and comprehensive exploration program on the Pend D'Oreille Project was completed in 1981 by Greenwich Resources Ltd. and included linecutting, geological mapping, soil geochemistry (1800 samples), stream sediment geochemistry (163 silts), prospecting and VLF-EM/magnetometer surveys (40 line kilometres). Reported follow-up work in 1982 included 282.5 metres of diamond drilling in three holes although the location of drill collars and results of this work are unknown. Subsequent work by the Issuer consisted of exploration field work comprised of some re-habilitation of underground workings, line cutting, access road repairs and collection of eight assay samples from exposed underground and surface mineralized features. The cost to the Issuer of such work, including staking and consulting costs and report preparation, was \$46,719 to September 30, 1991, the date of the latest balance sheet contained in this Prospectus, and an additional \$1,914 was incurred by the Issuer during the period October 1, 1991 to the date of this Prospectus on preparatory work.

# Geology and Mineralization

The Pend D'Oreille Project is located in the Kootenay Arc, a geological subprovince of the Omineca Crystalline tectonic belt. This regionally important feature comprises moderate to strongly deformed Mesozoic to Precambrian sedimentary, volcanic and metamorphic rocks. The property geology, based on prior studies and exploration, indicates that outcrop is sparse and the folded and faulted sequence of Cambrian clastic and chemical sediments have been intruded to the north by Nelson granitic rocks. The Pend D'Oreille Project Report notes that structural geology on the property is complex and interpretation is hampered by the poor exposure on the rock units but given the shape and morphology of the nearby Reeves-MacDonald ore bodies, a general understanding of the role of the folding and faulting may be theoretically applied to the Red Rock occurrence.

The Pend D'Oreille Project Report reports that replacement style sphalerite, galena, pyrite and minor arsenopyrite mineralization is hosted by Reeves limestone along a fault contact with Reno Formation quartzite on the Big John claim in the central part of the project - the occurrence commonly known as the Red Rock Mine. One of the four original adits on the Red Rock Claim, the No. 3 adit, has been recently rehabilitated and provides the best exposure of the galena, sphalerite and pyrite mineralization and host rock lithologies. Mineralization is also presently exposed on surface at two trench locations. No estimates of remaining mineral reserves however are available.

The British Columbia Minfile reports a total of 85,059 kg of lead, 84,987 kg of zinc and 154,738 gm of silver were shipped from 525 tonnes of ore produced from the Red Rock Mine in seven reporting years. Minfile records also indicate copper production of 16 kg from 20 tonnes of material during one shipment year and gold production in four years of 155 gm from 429 tonnes shipped. No past production figures for cadmium are available for the Red Rock Mine even though it is a common by-product of many other Kootenay Arc lead-zinc deposits.

Two one metre chip samples and one grab sample were taken by Pamicon Developments Ltd. underground and surface exposure of mineralization was examined at the main zone glory hole and at a second parallel showing to the north by collecting a 0.45 metre chip sample across the partially exposed mineralization at both locations, all of which samples assayed as follows:

	Sample No.	Pb (%)	Cu <u>(%)</u>	Zn (%)	Cd (%)	Ag oz/T	Au oz/T
Unde	rground						
	Samples etre)						
	461601 461603	4.52 6.11	0.14 0.09	6.56 17.10	0.042 0.106	2.82 2.72	0.022
Grab	Sample						
	461602	18.70	0.02	15.40	0.088	6.01	0.008
Surf	ace						
Main	Showing						
	461605 (0.45m)	0.34	0.08	22.10	0.162	0.59	0.002
North Showing							
	461604 (0.45m)	5.31	0.10	9.45	0.076	3.02	0.002

The results of the sampling program carried out by the Issuer were consistent with the results noted above.

The Pend D'Oreille Project Report also notes that several anomalous lead and zinc soil values were returned from the grid soil geochemical survey completed by Greenwich Resources Ltd. in 1981, which also analyzed copper, nickel and cobalt values, with strongly anomalous values to 9900 ppm lead and 3420 ppm zinc outlining the old Red Rock mine workings.

# Conclusions and Recommendations

The Pend D'Oreille Project Report concludes that the Pend D'Oreille Project is well situated in the Salmo lead-zinc camp of the Kootenay Arc and is underlain by favourable Lower Cambrian stratigraphy. Preliminary evaluation of geological data from the Pend D'Oreille Project indicates galena, sphalerite and pyrite replacement style mineralization is hosted by the Reeves Member limestone on the Big John claim. Lead-zinc ore bodies hosted by similar

stratigraphy have been exploited at nearby mines. An exploration model applicable for the Project would focus on locating a mineral deposit similar in size and tenor to the areas' past producers of approximately 5 to 7 million tons of 5% combined Pb-Zn.

Because fault displacement of ore bodies in the district is common, a systematic exploration program on the Pend D'Oreille Project may yield new discoveries and locate extensions of known mineralization. Anomalous soil values returned from the grid soil geochemical survey completed by Greenwich Resources Ltd. in 1981 require fill-in sampling. The previously completed VLF-EM/magnetometer surveys were deficient because of the wide line spacing, lack of a base station recorder or correction of diurnal fluctuation of magnetometer surveys and probable structural complexities and future geophysical work should include greater detailed surveys with less line bias in the Red Rock Mine area.

According to the Pend D'Oreille Project Report, retention of the entire claim group is strongly advised and a two phase program of exploration is recommended. Phase I, consisting of grid preparation, surveying, geological, geophysical and geochemical surveys, underground mapping and channel sampling is recommended at an estimated cost of \$135,000, of which \$24,068 has been incurred, to define the mineral reserves in the area of underground workings on the Big John mineral claim and to develop other base and precious metal targets elsewhere on the Project. An initial start point for this work would be the lead and zinc soil anomalies as defined to date. Phase II, including mechanized trenching and surface and underground diamond drilling work over geological targets in the Red Rock Mine area and fill-in geochemical soil surveys elsewhere on the Pend D'Oreille Project is recommended, should favorable results from Phase I be returned.

Reference should be made to the complete text of the Pend D'Oreille Project Report.

THERE IS NO KNOWN BODY OF COMMERCIAL ORE NOR ANY UNDERGROUND OR SURFACE PLANT AND EQUIPMENT ON THE PEND D'OREILLE PROJECT AND THE PROPOSED PROGRAM IS AN EXPLORATORY SEARCH FOR ORE.

#### B. Snow Creek Project, Slocan Mining Division, B.C.

Pursuant to an option agreement dated April 29, 1991, as amended May 15, 1991 and December 20, 1991 (the "Santos Agreement"), with Perfecto J. Santos of Castlegar, B.C. ("Santos"), the President and a director and shareholder of the Issuer, the Issuer was granted an option to earn a 100% undivided interest in nine mineral claims located in the Slocan Mining Division, British Columbia (the "Snow Creek Project"). In consideration of the grant of the option, the Issuer reimbursed Santos for his out-of-pocket costs in the amount of \$67,808 in acquiring and exploring the claims that comprise the Snow Creek Project. The Snow Creek Project claims were acquired by Santos within the preceding two years by staking.

The Santos Agreement provides that the Issuer may exercise the option by placing the Snow Creek Project claims into commercial production.

The Santos Agreement further provides for the Issuer to maintain the Snow Creek Project claims in good standing, free and clear of liens and other charges arising from the Issuer's activities thereon, and to prepare and make available to Santos annual progress reports on the results of work carried out on the claims until the option is exercised or terminated. In addition, the Santos Agreement provides for the assignability of the Issuer's interest in the claims or Agreement upon receipt by Santos of an assignee's agreement to be bound by the Santos Agreement, for the Issuer's right at its election to abandon any of the Snow Creek Project claims upon notice to Santos, who has the right to have such abandoned claims transferred to him, and for an area of mutual interest clause which incorporates into the Santos Agreement any mineral claim located by or on behalf of, or acquired by, either the Issuer or Santos which is wholly situate within one kilometer of the external perimeter of any of the Snow Creek Project claims.

# Title to Snow Creek Project Claims

The Snow Creek Project claims consist of nine modified grid mineral claims situated in the Slocan Mining Division, Province of British Columbia, identified as follows:

Name	Record No.	No. of Units	Expiry Date
J.O. #1	6402	16	June 18, 1994
SC #1	6403	12	June 20, 1993
SC #2	6404	12	June 20, 1993
SC #3	6405	20	June 20, 1993
SC #4	6406	16	June 20, 1993
ICE #1	6412	10	June 28, 1993
ICE #2	6413	12	June 28, 1993
ICE #3	6414	15	June 28, 1993
ICE #4	6415	18	June 28, 1993

Pursuant to the terms of the Santos Agreement, the Snow Creek Project claims are recorded in the name of the Issuer pending exercise or termination of the option.

The Snow Creek Project is the subject of a Report dated October, 1991 by Pamicon Developments Ltd. (the "Snow Creek Project Report"), which Report is included in this Prospectus. The following discussion has been derived from the Snow Creek Project Report.

# Location and Access

The Snow Creek Project is located between Arrow and Slocan Lakes, south and east of the Tillicum and Grey Wolf Mountains approximately 30 kilometres south of the town of Nakusp in south central British Columbia at an elevation be-

tween 1,067 metres and 1,981 metres above sea level. The topography of the claims is moderate to steep. The Snow Creek Project consists of nine modified grid mineral claims totalling 131 units including the contiguous ICE #1-4 and SC #1-4 claims and the separate J.O. #1 claim to the north.

The J.O. #1 claim lies northeast of Hailstorm Peak and is adjacent to the Tillicum gold property to the west and the Strebe gold property to the south. Access to the J.O. #1 claim is by way of the Shannon Creek road which joins Highway 6 at Hills, B.C., 24 kilometres from the claim.

The SC and ICE claims are located on the south side of Grey Wolf Mountain and adjoin the Tillicum Mountain and Strebe gold properties to the north. Access to these contiguous claims is by way of the recently constructed Snow Creek logging road which joins Highway 6 at Burton 20 kilometres away.

#### History

High grade silver mineralization was discovered on Hailstorm Ridge in the late 1890's with a small shipment of unspecified ore shipped in 1899. Other than limited underground exploration by Cominco in 1929/30, there was little further work carried out in the general area until the 1980's. Two silver rich skarn deposits are presently defined: the Silver Queen with a drill indicated reserve of 3 million tons of 3.0 oz/ton Ag and the Hailstorm with an undetermined reserve figure.

In 1980, prospectors located the first indication of gold mineralization at Tillicum Mountain which led to the definition of the Heino-Money and East Ridge zones on Tillicum Mountain between 1981 and 1989. Published reserves in all categories for the Tillicum Mountain deposits are 1,443,500 tons grading 0.27 oz/ton Au. The Strebe gold property, discovered in 1985 following a geochemical survey in 1983, is situated between the J.O. #1 and SC claims, and has an estimated total reserve, all categories, of 300,000 tons grading 0.25 oz/ton Au.

The J.O. #1 claim was previously staked as the Pal claim where no ground work was recorded. A regional airborne geophysical survey (magnetometer and VLF-EM) conducted over the Tillicum Mountain property in 1982 however extended on to the presently defined J.O. #1 claim. The SC claims were originally staked as the Olga, Ruza, Au 3, Trib and Tower claims. Aerial geophysical surveys were conducted over the Olga, Ruza and Au 3 claims and a minimum geological mapping and grid establishment program was undertaken on a portion of these three claims. A small geochemical survey was also carried out on the Trib claim which comprises a portion of the present SC #3 and ICE #4 claims. The area comprising the present ICE claims was originally staked as the Olga 1, King Midas and KM claims. An aerial geophysical survey was conducted on the Olga 1 claim while a geochemical survey was done on part of the KM claims. A large portion of the area covered by the geochemical survey is presently staked as the ICE #1 and #2 claims.

Prior to acquiring the Snow Creek Project claims, Santos undertook a research program correlating previously completed Tillicum Mountain area exploration data and developed an exploration model linking certain geophysical anomalies

with favorable geology. Aerial reconnaissance over the previously identified geophysical (magnetic) anomalies and correlation of them to distinctive colour gossans on the ground led to the staking of the Snow Creek Project claims to cover these favourable features.

In September, 1990, Santos completed field work on the J.O. #1 claim consisting of rock geochemical chip sampling and geological mapping in the west central portion of the claim. A total of 22 rock samples were collected over widths ranging from 5 to 40 feet and fire assayed for Au-Ag using geochemical techniques and geochemically analyzed for 30 additional elements by ICP. In September and October, 1990, Santos carried out an exploration program on the ICE and SC claims consisting of geologic mapping, rock geochemical sampling, silt sampling and prospecting. A total of 13 rock geochemical chip and float grab samples and 7 silt geochemical samples were collected, assayed for Au, Ag, Pb and Zn and later run through a 30 element ICP. The rock chip samples were collected over widths ranging from 5 to 50 feet. The cost of the work carried out in 1990, including staking costs, was \$67,808 for which Santos was reimbursed by the Issuer pursuant to the Santos Agreement.

Subsequent to the September/October 1990 field work and program on the Snow Creek Project claims, the Issuer carried out additional work consisting of cyanidation tests on 12 of the geochemically anomalous gold samples collected from the J.O. #1, SC and ICE claims, aerial reconnaissance of the Project in an effort to locate gossanous cliff face outcrops, prospecting and some grid preparation at a cost of \$28,584 including assessment and consulting fees and report preparation to September 30, 1991, the date of the latest balance sheet contained in this Prospectus, and an additional \$4,808 was incurred by the Issuer during the period October 1, 1991 to the date of this Prospectus on preparatory work. In addition, Pamicon Developments Ltd. collected 5 rock chip (grab) samples from the ICE #2 claim which were fire assayed for Au and run through a 32 element ICP.

# Geology and Mineralization

The area of the Snow Creek Project is underlain by a succession of metamorphosed sedimentary and lesser volcanic rocks of the Lower Jurassic Elise and Hall Formations of the Rossland (Milford) Group intruded to the north by Valhalla plutonics and to the south by Nelson intrusives. Feldspar porphyry intrusions related to the area's precious metal skarn alteration form bands of sill-like bodies that vary from 1 to over 200 metres in width. In general these swarms tend to strike east-west to northeast and are steeply dipping.

According to excerpts from reports by P.J. Santos on behalf of the Issuer included in the Snow Creek Project Report, the Snow Creek Project is entirely underlain by rock units belonging to the Milford (including the Silver King Porphyry) and Slocan Groups and dykes associated with later plutonic activity. The Milford and Slocan Groups form a series of anticlines and synclines with the axes trending to the northwest north of Grey Wolf Mountain. The axes trend east-west south of Grey Wolf Mountain. Geologic mapping has identified gossanous outcrops of calc-silicate rocks intruded by quartz diorite porphyry on the Snow Creek Project.

No significant, in situ, precious or base metal mineralization has been found to date on Snow Creek Project. The airborne VLF-EM/magnetometer survey completed in 1982 however identified a total of six weak magnetic highs

occuring on the Project. Three weak or possible VLF-EM conductors were also located on the Snow Creek Project and are, in part, coincident with weak magnetic highs. For comparison, a similar weak magnetic high anomaly is located over the Heino-Money Pit gold deposit on the adjacent Tillicum Mountain Property and no VLF-EM responses are directly associated with that gold mineralization. Subsequent work by Santos and the Issuer correlated the previously identified magnetic highs with colour gossans and stratigraphic horizons which contain abundant pyrrhotite, pyrite and weak geochemical gold values.

The rock geochemical chip and float grab sampling carried out on the Snow Creek Project by Santos and Pamicon Developments Ltd. yielded low to moderately anomalous gold values ranging from less than 5 ppb Au to 350 ppb Au on the J.O. #1 claim and 100 ppb Au on the ICE and SC claims. Maximum values returned were 350 ppb Au (across 10 feet), 1.4 ppm Ag (across 10 feet), 3160 ppm Zn (grab sample), 248 ppm Pb (grab sample), and 975 ppm Cu (across 10 feet).

On the J.O. #1 claim, 16 of the samples returned values of less than 10 ppb Au, 3 were weakly anomalous at 30 ppb Au and 3 samples returned weakly to moderately anomalous values of 80 (across 5 feet), 90 (across 5 feet) and 350 (across 10 feet) ppb Au. On the ICE and SC claims, 11 of the samples returned gold values of less than 15 ppb Au, 4 had weakly anomalous results of 30 ppb Au and 3 were weakly to moderately anomalous with values of 60 (across 10 feet), 60 (across 50 feet) and 100 (grab sample) ppb Au. One float sample of calc-silicate rock containing visible gold was collected from an avalanche debris fan on the ICE #2 claim but the gulley in which the avalanche occurs originates upslope to the north on an adjourning claim group and the source of the sample is unknown. A portion of this float sample returned a gold value of 30 ppb Au.

The geochemical surveys carried out on the KM mineral claims that are closely correlated with the ICE #1 and #2 claims returned eight single station values from the soil portion of the survey of greater than 25 ppb Au, with a maximum value returned of 90 ppb Au, and arsenic values ranging from below detection limits to 63 ppm As. The stream silt portion of the survey, while not including gold analyses, returned values of 70 ppm Cu, 74 ppm Pb, 321 ppm Zn The geochemical surveys carried out on the Trib mineral and 2.0 ppm Ag. claim, which pre-dates a portion of the SC #3 claim, returned one single station soil anomaly of 45 ppb Au and one anomalous silt value of 100 ppb Two silt samples from the geochemical survey carried out by Santos returned values of 60 ppb Au and 100 ppb Au from 2 south flowing drainages on the ICE #2 claim which pass through the Snow Creek Project and adjoining ground to the north. No other elements reported anomalous results. comparison, follow-up work on four gold values of 30, 40, 120 and 170 ppb Au from a reconnaissance, contour soil survey led to the subsequent discovery of the Strebe gold deposit.

#### Conclusions and Recommendations

The Snow Creek Project Report concludes that the Snow Creek Project claims are in an early stage of exploration and development but that the Project is well located in an emerging gold camp and is underlain by geology similar to that hosting other known mineral occurrences and deposits in the area. The report identifies two types of potential targets that exist in the area - small

tonnage skarn deposits containing either high grade gold or silver values and larger lower grade gold deposits associated with one or more of the sedimentary or meta-sedimentary sequences of the Milford/Rossland Groups. Work to date on the Snow Creek Project has indicated geophysical features from airborne reconnaissance which require further evaluation. Several chip samples have yielded weak to moderate geochemically anomalous gold values over widths ranging from 5 to 50 feet and, while these results are not of ore grade, they make these units worthy of further investigation. Retention of the entire Snow Creek Project claims is advised.

According to the Snow Creek Project Report, a two phase exploration program is recommended for the Snow Creek Project. Phase I, consisting of reconnaissance style mapping, prospecting and silt sampling over the entire Project including examination of airborne magnetometer highs and VLF conductors together with soil sampling along contour lines in areas where previous work has yielded some gold values which appear to be anomalous such as the ICE claims to the north of Snow Creek, the northwest portion of the SC claims and the southern portion of the J.O. #1 claim, to be followed by the establishment of grids in areas requiring further work which would be used to control detailed geological mapping, prospecting, sampling and ground magnetometer and VLF electromagnetic surveys is recommended at an estimated cost of \$140,250 of which \$6,167 has been incurred. Subject to the results of the Phase I program, a second phase program may be warranted which would most likely consist of expansion of the detailed grid work along with trenching and/or drilling.

Reference should be made to the complete text of the Snow Creek Project Report.

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

#### **ACQUISITIONS**

The only material acquisitions made by the Issuer during the past two years were pursuant to the option agreements dated April 29, 1991, as amended May 15, 1991 and December 20, 1991, May 10, 1991 and May 3, 1991 with Perfecto J. Santos, Swift Creek Mining and Maxine Lukey respectively (the "Option Agreements"). The Option Agreements provide for the acquisition by the Issuer of an interest in the Snow Creek and Pend D'Oreille Projects.

Reference is made to the section captioned "Business and Property of the Issuer" for particulars of the Option Agreements.

#### PRELIMINARY EXPENSES - INCORPORATION WITHIN ONE YEAR

From incorporation to September 30, 1991, being the date of the latest balance sheet contained in this Prospectus, the Issuer incurred \$93,475 in respect of administrative expenses and incorporation costs and \$150,611 in respect of the Snow Creek and Pend D'Oreille Projects.

Since September 30, 1991, the Issuer has incurred an additional \$38,748 in respect of administrative expenses and \$6,722 in respect of the Snow Creek and Pend D'Oreille Projects and the Issuer's working capital has been reduced from

\$38,818 as at September 30, 1991 to \$152 as at January 30, 1992. It is estimated that \$25,000 will be expended for administrative purposes relating to the Offering pursuant to this Prospectus and \$245,015 will be expended on exploration and development of the Snow Creek and Pend D'Oreille Projects from the proceeds of the Offering.

#### SHARE AND LOAN CAPITAL STRUCTURE

The authorized capital of the Issuer consists of 100,000,000 common shares without par value of which 1,697,427 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:

Designation of Security	Amount Authorized	Amount out- standing as at September 30, 1991	Amount out- standing at January 30, 1992	Amount to be outstanding if all Shares are Sold
Common Shares	100,000,000	1,697,427	1,697,427	2,647,427(1)

(1) Does not give effect to 225,000 common shares of the Issuer reserved for issuance pursuant to Agent's Warrants, 150,000 of the 200,000 shares pursuant to the Swift Creek and Lukey Agreements and 160,000 shares pursuant to incentive stock options granted by the Issuer.

#### PRIOR SALES

# Shares Issued for Cash

Since incorporation to the date of this Prospectus, the Issuer has sold 1,697,427 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	\$ 7,500.00
Common Shares	805,256(2)	\$0.25	Nil	\$201,314.00
Common Shares	142,171(3)	\$0.50	Nil	\$ 71,085.50
			TOTAL:	\$279,899.50

- (1) These shares were sold to insiders and are held in escrow see the section captioned "Escrowed Shares" for further details.
- (2) These shares are held in pool see the section captioned "Pooled Shares" for further details. 365,968 of these shares were sold to insiders.
- (3) 11,491 of these shares were sold to insiders. See also the sections captioned "Options to Purchase Shares" and "Plan of Distribution Agent's Guarantee" for details of stock options and warrants granted by the Issuer.

## POOLED SHARES

The 805,256 common shares of the Issuer sold for \$0.25 per share are held by Montreal Trust Company of Canada pursuant to the terms of a voluntary Pooling Agreement which provides for the release thereof as follows:

- (a) 25% of the shares on the Approval Date;
- (b) 25% of the shares three months following the Approval Date:
- (c) 25% of the shares six months following the Approval Date; and
- (d) 25% of the shares nine months following the Approval Date.

The first day the shares of the Issuer commence trading on the Exchange is herein referred to as the "Approval Date".

#### **ESCROWED SHARES**

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

Designation of Class	Number of Shares Held in Escrow	Percentage of Class
Common Shares	750,000	44.18%

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:

Principals	Number of Principals' Shares Issued
P.J. Santos Jack Overdorff	375,000 <u>375,000</u>
TOTAL:	750,000

These Shares are held in escrow by Montreal Trust Company of Canada pursuant to a Principals' Shares Escrow Agreement dated July 1, 1991.

The Principals' Shares were issued to the Principals as an incentive to them to give diligent support to the affairs of the Issuer in the prospect that there will be resultant accretion in the value of the Principals' Shares and to give the Principals some measure of control over the Issuer in order that the development of the Issuer may proceed in an orderly fashion.

The Principals' Shares are subject to the order of the Superintendent or the Exchange, should the shares of the Issuer become listed on the Exchange. The Principals' Shares Escrow Agreement provides that, if the Issuer becomes successful due in part to the efforts of the escrow shareholders, the escrow shareholders shall be entitled to a release of the Principals' Shares from time to time in accordance with the general policies of the Superintendent or the Exchange, as the case may be. Any Principals' Shares not released from escrow before the expiration of ten years from the date a receipt is issued for this Prospectus shall be cancelled.

Until the Principals' Shares are released from escrow, the Principals' Shares shall not be sold, assigned, hypothecated, alienated, released from or transferred within escrow or in any other manner dealt with without the written consent of the Superintendent or the Exchange, as the case may be.

#### PRINCIPAL HOLDERS OF SECURITIES

As at the date of this Prospectus, the number and percentage of common shares of the Issuer owned of record or beneficially, directly or indirectly, by each person or company who owns of record or is known by the Issuer to own beneficially, directly or indirectly, more than 10% of the said shares are as follows:

Name and Address	Designation of Class	Type of Ownership	Number of Shares Owned	Percentage of Class
P.J. Santos 626 - 9th Avenue Castlegar, B.C. V1N 1M4	Common	Of record and bene- ficially	375,000 ) (escrowed)) 150,000 ) (pooled) )	30.93%
Jack Overdorff E. 11115 Broadway Spokane, Washingt 99206		Of record and bene-ficially	375,000 ) (escrowed)) 150,004 ) (pooled) )	30.93%

The total number and percentage of common shares of the Issuer beneficially owned, directly or indirectly, by all the directors and Senior Officers of the Issuer as a group and by all Underwriters as a group are as follows:

Group	Designa- tion of Class	Number of Shares Owned	Percentage of Class Prior to Offering	Percentage of Class After Completion of Offering
Directors and Senior Officers	Common Shares	1,127,459	66.42% <sup>(1)</sup>	42.58% <sup>(1)</sup>
Underwriters	Common Shares	NIL(2)	0%	0%

- (1) Without giving effect to the 225,000 common shares of the Issuer which may be issued pursuant to the Agent's Warrants, 150,000 of the 200,000 shares pursuant to the Swift Creek and Lukey Agreements and the 160,000 shares pursuant to incentive stock options granted by the Issuer.
- (2) This does not include 225,000 shares which may be issued pursuant to the Agent's Warrants.

The 900,000 shares offered by this Prospectus represent 33.99% of the total common shares which will be issued if all Shares are sold pursuant to this Offering.

# INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

Pursuant to the Principals' Shares Escrow Agreement, certain directors of the Issuer purchased shares of the Issuer at \$0.01 per share as described in the section captioned "Escrowed Shares".

Pursuant to the Santos Option Agreement described in the section captioned "Business and Property of the Issuer", P.J. Santos, the President and a director and shareholder of the Issuer, was reimbursed \$67,808 for out-of-pocket costs.

Pursuant to the Administrative Services Contract described in the section captioned "Executive Compensation", Anginel Resources Ltd. is paid a fee for services rendered. P.J. Santos, the President and a director and shareholder of the Issuer, is a director, President, manager and majority shareholder of Anginel Resources Ltd.

#### **EXECUTIVE COMPENSATION**

The Issuer has 2 executive officers: P.J. Santos, the President and a director and shareholder of the Issuer and Jack Overdorff, Vice-President and a director and shareholder of the Issuer.

Since incorporation, Messrs. Santos and Overdorff have received no cash compensation from the Issuer in their capacities as executive officers. There are no arrangements, and the Issuer has no plans to initiate any arrangements, pursuant to which executive officers of the Issuer are or will be compensated for their services as executive officers. Messrs. Santos and Overdorff have

each been granted an incentive stock option to purchase 40,000 shares of the Issuer at a price of \$0.50 per share exercisable at any time within five years from the date a receipt is issued for this Prospectus.

There are no arrangements and the Issuer has no plans to initiate any arrangements pursuant to which directors of the Issuer are or will be compensated for their services as directors.

Pursuant to an Administrative Services Contract dated March 1, 1991 between the Issuer and Anginel Resources Ltd. ("Anginel"), the Issuer has agreed to reimburse Anginel any out-of-pocket costs incurred by Anginel on the Issuer's behalf and to pay Anginel a fee, to a maximum of \$2,500.00 per month, for the provision of administrative and bookkeeping services and office facilities to the Issuer. During the financial period ended September 30, 1991, nothing was paid to Anginel under the Administrative Services Contract, but the Issuer incurred fees with Genevieve Welychko of \$8,397 for secretarial services and Anginel was paid general exploration fees of \$3,059 by the Issuer. During the period since October 1, 1991, the Issuer incurred fees with Genevieve Welychko of \$2,768 for secretarial services and with Anginel of \$2,845 for exploration services. P.J. Santos, the President and a director and shareholder of the Issuer, is a director and a 60% shareholder of Anginel and Genevieve Welychko, the Secretary and a director and shareholder of the Issuer, is an employee of Anginel.

## OPTIONS TO PURCHASE SHARES

The Issuer has granted the following incentive stock options:

<u>Optionees</u>	Number of Common Shares under Option	Exercise Price and Term
2 Executive Officers	80,000	) \$0.50 per share exercisable
2 Directors who are not Executive Officers	80,000	<ul><li>) within a five year period</li><li>) from the date a receipt is</li><li>) issued for this Prospectus</li></ul>

# AUDITORS, TRANSFER AGENT AND REGISTRAR

The Auditors of the Issuer are Deloitte & Touche, Chartered Accountants, Bentall Four, #2000, 1055 Dunsmuir Street, Vancouver, British Columbia, V7X 1P4.

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

#### MATERIAL CONTRACTS

Except for material contracts made in the ordinary course of the Issuer's business, the only material contracts entered into by the Issuer within the two years preceding the date of this Prospectus are as follows:

- 1. The Agency Agreement disclosed in the section captioned "Plan of Distribution".
- 2. The Swift Creek Agreement disclosed in the section captioned "Business and Property of the Issuer".
- 3. The Lukey Agreement disclosed in the section captioned "Business and Property of the Issuer".
- 4. The Santos Agreement disclosed in the section captioned "Business and Property of the Issuer".
- 5. The Principals' Shares Escrow Agreement disclosed in the section captioned "Escrowed Shares".
- 6. The Pooling Agreement disclosed in the section captioned "Pooled Shares".
- 7. The Administrative Services Contract disclosed in the section captioned "Executive Compensation".
- All material contracts herein described may be inspected at Suite 100, 200 Granville Street, Vancouver, British Columbia during normal business hours while primary distribution of the shares offered hereunder is in progress and for a period of thirty days thereafter.

#### OTHER MATERIAL FACTS

There are no other material facts relating to the shares offered by this Prospectus which are not disclosed under the foregoing captions.

# STATUTORY RIGHTS OF RESCISSION AND WITHDRAWAL

The <u>Securities Act</u> provides a purchaser with a right to withdraw from an agreement to purchase securities within two business days after receipt or deemed receipt of a Prospectus and further provides a purchaser with remedies for rescission or damages where the Prospectus and any amendment contains a material misrepresentation or is not delivered to the purchaser prior to delivery of the written confirmation of sale or prior to midnight on the second business day after entering into the agreement, but such remedies must be exercised by the purchaser within the time limit prescribed. For further information concerning these rights and the time limits within which they must be exercised the purchaser should refer to Sections 66, 114, 118 and 124 of the Securities Act or consult a lawyer.

REPORT AND FINANCIAL STATEMENTS

**SEPTEMBER 30, 1991** 



Suite 2000 1055 Dunsmuir Street P.O. Box 49279 Four Bentall Centre Vancouver, British Columbia V7X 1P4 Telephone: (604) 669-4466 Telecopier: (604) 685-0395

## **AUDITORS' REPORT**

To the Directors of Jopec Resources Ltd.

We have audited the balance sheet of Jopec Resources Ltd. as at September 30, 1991 and the statements of loss and deficit and changes in financial position from the date of incorporation, September 4, 1990, to September 30, 1991. 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 September 30, 1991 and the results of its operations and the changes in its financial position for the period then ended in accordance with generally accepted accounting principles.

Vancouver, British Columbia January 10, 1992

**Chartered Accountants** 

Selculte Fante.

# (Incorporated under the Company Act of British Columbia)

# BALANCE SHEET AS AT SEPTEMBER 30, 1991

# **ASSETS**

Current	
Cash and term deposits	\$ 52,045 12,500
Deposits Due from director	12,500 3,949
	<u> </u>
	68,494
Resource properties (Note 4)(Schedule)	<u>150,611</u>
	\$ <u>219,105</u>
<u>LIABILITIES</u>	
Current	
Bank indebtedness	\$ 13,163
Accounts payable	15,244
Due to director	
	29,676
Accounts payable due after one year	
	_31,709
CHARCHOLDERS FOLITY	
SHAREHOLDERS' EQUITY	
Share capital (Notes 4, 5 and 7)	279,900
Deficit	(92,504)
	<u>187,396</u>
	\$ <u>219,105</u>
Amount by the School of Division	<del></del>
Approved by the Board of Directors	

....Director

# STATEMENT OF LOSS AND DEFICIT PERIOD FROM DATE OF INCORPORATION, SEPTEMBER 4, 1990, TO SEPTEMBER 30, 1991

Revenue Interest	\$ <u>971</u>
Expenses	
Filing fees	6,924
General exploration	3,059
Legal and audit	53,524
Motor vehicle	1,480
Office	4,190
Promotion and shareholder information	2,788
Repairs	916
Secretarial services	8,397
Telephone	3,175
Travel	9,022
	93,475
Net loss and deficit at end of period	\$(92,504)

# STATEMENT OF CHANGES IN FINANCIAL POSITION PERIOD FROM DATE OF INCORPORATION, SEPTEMBER 4, 1990, TO SEPTEMBER 30, 1991

Operating activities  Net loss for the period  Changes in non-cash working capital items	\$ (92,504) (4,385)
	(96,889)
Financing activities Issue and allotment of capital stock	279,900
Investing activities Resource property expenditures, (net of accounts payable)	(144,129)
Increase in cash and cash equivalents at end of period	\$ <u>38,882</u>
Represented by: Cash and term deposits	\$ 52,045
Bank indebtedness	(13,163)
	\$ <u>38,882</u>

# NOTES TO FINANCIAL STATEMENTS SEPTEMBER 30, 1991

#### 1. Incorporation of company

The Company was incorporated September 4, 1990 under the Company Act of British Columbia and commenced operations during October 1990.

#### 2. Nature of operations

The Company is in the process of exploring and developing resource properties and has not yet determined if these properties contain ore reserves that are economically recoverable. The recoverability of the amounts shown for resource properties and related deferred costs is 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.

#### 3. Significant accounting policies

#### Resource properties

Acquisition costs of interests in resource properties together with direct exploration and development expenditures thereon are deferred in the accounts. When production commences, these costs will be amortized over the estimated useful life of the property. Costs relating to properties abandoned or claims allowed to lapse are written off at the time such decision is made.

#### 4. Resource properties

#### **Snow Creek Project**

The Company entered into an option dated April 29, 1991, as amended December 20, 1991, to acquire from the president of the Company a 100% interest in nine mineral claims located in the Slocan Mining Division, British Columbia. In consideration of the option the Company reimbursed to the vendor his out-of-pocket costs of staking and exploration expenses, totalling \$67,808. The Company can acquire the claims by placing the claims into commercial production.

### Pend D'Oreille Project

During May 1991 the Company entered into certain option agreements to acquire a 100% interest in specific claims located in the Nelson Mining Division, British Columbia subject to certain royalties. The terms of the option agreements provide for the Company to acquire the claims in consideration of the following:

#### i) Swift Creek Agreement

Payment of \$4,000 cash on the signing of the agreement, issuance of 100,000 shares (25,000 shares to be issued when a receipt is issued for the Company's final prospectus, with the remainder being issued in three equal instalments at various exploration stages) and the payment of \$250,000 cash, payable annually in the amount of \$20,000 or 5% of net profits from production if greater.

#### 4. Resource properties (continued)

## i) Swift Creek Agreement (continued)

The Company's interest is subject to a net smelter return royalty of 2%, to a maximum of \$1,000,000.

# ii) Lukey Agreement

Payment of \$1,000 cash on the signing of the agreement, issuance of 100,000 shares (25,000 shares to be issued when a receipt is issued for the Company's final prospectus, with the remainder being issued in three equal instalments at various exploration stages) and the payment of \$100,000 cash, payable annually in the amount of \$10,000 or 5% of net profits from production if greater.

The Company's interest is subject to a net smelter return royalty of 2%, to a maximum of \$250,000.

The Company also has a 100% interest in three staked claims, located adjacent to the Swift Creek and Lukey claims, acquired at a cost of \$3,060.

# 5. Share capital

#### **Authorized**

100,000,000 common shares without par value

#### Issued and allotted

	Number	<u>Price</u>	<u>Amount</u>
Escrow shares	750,000	\$.01	\$ 7,500
Subscriptions for cash	805,256	.25	201,314
Subscriptions for cash	142,171	.50	71,086
Balance at September 30, 1991	1,697,427		\$ <u>279,900</u>

#### **Options**

The Company has granted stock options to directors and officers to acquire 160,000 shares at an exercise price of \$0.50 each. The options expire five years after the anniversary of the Company being listed on a stock exchange.

#### 6. Related party transactions

- a) During the period, the Company incurred general exploration fees of \$3,059 with a company related by way of common directors and shareholders.
- b) During the period, the Company incurred secretarial service fees of \$8,397 with a shareholder of the Company. As at September 30, 1991, accounts payable include \$2,807 owing to this shareholder.
- c) The Company has entered into an administrative services contract with a company related by way of common directors and shareholders whereby the Company shall pay for actual costs incurred, to a maximum of \$2,500 per month.



Jopec Resources Ltd. Notes to Financial Statements September 30, 1991

# 7. Subsequent event

Subsequent to September 30, 1991 the Company intends to obtain a listing on the Vancouver Stock Exchange and issue 900,000 shares by way of a public offering at \$0.50 per share. The Company's net proceeds after agent's commission, will total \$414,000. The agent will also receive non-transferrable warrants entitling the holder to purchase 225,000 shares at a price of \$0.50 per share, exercisable within one year of the Company obtaining its listing.

# SCHEDULE OF RESOURCE PROPERTY EXPENDITURES PERIOD FROM DATE OF INCORPORATION, SEPTEMBER 4, 1990, TO SEPTEMBER 30, 1991

	Snow Creek Project	Pend D'Oreille Project	Total
Assaying	\$ 3,948	\$ 975	\$ 4,923
Assessments and filing fees	1,500	240	1,740
Engineering reports	5,265	2,686	7,951
Exploration, field work and staking	4,868	12,868	17,736
Helicopter services	1,715	-	1,715
Legal	1,250	1,250	2,500
Linecutting	3,027	22,810	25,837
Option payments	•	5,000	5,000
Property consulting	4,008	4,222	8,230
Prospecting	3,280	•	3,280
Reimbursed exploration expenses	67,808	-	67,808
Truck operating	973	2,918	3,891
	\$ <u>97,642</u>	\$ <u>52,969</u>	\$ <u>150,611</u>

QUALIFYING REPORT
ON THE
PEND D'OREILLE PROJECT
FOR
JOPEC RESOURCES LTD.

Located in the Salmo River Area
Nelson Mining Division
NTS 82F/3W
49°03' North Latitude
117°21' West Longitude

- prepared by MICHAEL A. STAMMERS, Geologist, FGAC
CHARLES K. IKONA, P.Eng.

October, 1991

# QUALIFYING REPORT on the PEND D'OREILLE PROJECT

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#### 1.0 SUMMARY AND CONCLUSIONS

This report presents a summary of exploration and mine production completed to date on the Pend D'Oreille lead-zinc-silver project, Nelson Mining Division, British Columbia. The property comprises the Mel, Luke, Konki, and B.J. #1 to #4 two-post claims and the Big John and Mac 1-3 modified grid claims (totalling 55 units) owned by or under option to Jopec Resources Ltd.

The claims are situated on the north side of the Salmo River between the Pend D'Oreille River and Pete Creek, approximately 17 kilometres south-southwest of Salmo. Access to the property is by gravel road from the Nelway-Waneta secondary road originating from Highway 3A at the Canada-United States border crossing.

The property, first staked as the Red Rock claim in 1928 has seen intermittent and limited production from underground workings during the period 1932 to 1979. The British Columbia Minfile reports a total of 85,059 kg of lead, 84,987 kg of zinc and 154,738 gm of silver were shipped from 525 tonnes of ore in seven reporting years. One of the four original adits, the No. 3 adit has been recently rehabilitated and provides the best exposure of the galena, sphalerite and pyrite mineralization and host rock lithologies. No estimates of remaining mineral reserves are available.

The most recent and comprehensive exploration program was conducted by Greenwich Resources Inc. in 1981 (EMPR Assessment Report 10,225) and included soil and stream geochemical surveys, magnetometer and VLF-EM geophysical work and geological mapping in an area covering the present claim group. Several geochemical and geophysical anomalies were outlined and a short, three hole (282.5 m) diamond drill program reportedly followed. The location of drill collars or results of this program are not known.

The Pend D'Oreille project is located in an area known as the Kootenay Arc which is host to a number of former producing lead-zinc-silver mines and include, locally, the Reeves MacDonald, Annex and Redbird properties. The claims are underlain by a folded and faulted sequence of Cambrian sedimentary

rocks in contact with Cretaceous intrusive rocks. In addition to the above listed mines, the Salmo area includes two other significant lead-zinc past producers: the Jersey and H.B. mines. These replacement deposits typically host between five and seven million tonnes grading 5% combined lead-zinc. Base metal mineralization appears confined to replacement zones in the Reeves limestone member of the Laib Formation.

Exploration work on the Pend D'Oreille project should continue on two fronts: definition of mineral reserves in the area of underground workings on the Big John mineral claim and secondly on the development of other base and precious metal targets elsewhere on the property. An initial start point for this work would be the lead and zinc soil anomalies as defined to date.

Retention of the entire claim group is advised and a two phase exploration program is recommended. Phase I, \$135,000 includes provision for grid preparation, surveying, geological, geophysical and geochemical surveys, underground mapping and channel sampling. A Phase II exploration program would include mechanized trenching and underground and surface diamond drilling work over geological targets in the Red Rock mine area and fill-in geochemical soil surveys elsewhere on the property should favourable results from Phase I be returned.

### 2.0 INTRODUCTION

This report was prepared at the request of Jopec Resources Ltd. who along with various individuals and private partnerships hold a shared interest, subject to separate agreements in the Pend D'Oreille project, south-central British Columbia. The property comprises the Big John, Mel, Luke, Konki, B.J. #1 to #4, and Mac 1-3 mineral claims totalling 55 units within the Nelson Mining Division.

The information contained in this report is taken from field data of Greenwich Resources Ltd. presented in Assessment Report 10,225 and from a Summary Report

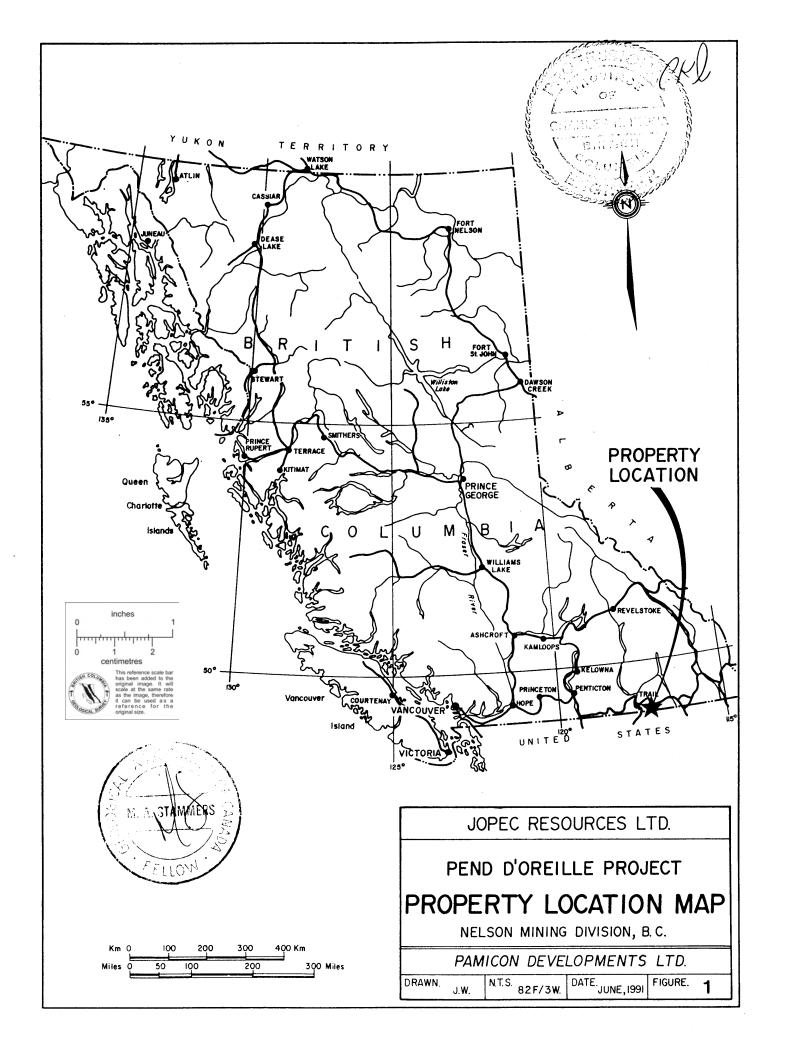
by P.J. Santos dated May 10, 1991. Most of the historical work including production totals, regional, property and mine geology are taken from one of two volumes: the 1970 Washington Department of Natural Resources Bulletin No. 61 entitled "Lead-Zinc Deposits in the Kootenay Arc, Northeastern Washington and Adjacent British Columbia"; and the 1959 B.C. Department of Mines Bulletin No. 41 by Fyles and Hewlett entitled "Stratigraphy and Structure of the Salmo Lead-Zinc Area".

M.A. Stammers, co-author of this report completed a personal examination of the property on May 29, 1991. C.K. Ikona, co-author is also familiar with Kootenay Arc lead-zinc-silver deposits having spent several years exploring for and exploiting ore in the district.

#### 3.0 LOCATION AND ACCESS (Figure 1)

The Pend D'Oreille project is located 17 kilometres south-southwest of Salmo and 6 kilometres northwest of Highway 3A at Nelway, British Columbia. The claims are situated on the north side of Salmo River immediately east of the Pend D'Oreille River. Southerly flowing drainages including McCormick Creek, Wallack Creek and Pete Creek pass through the property. Coordinates of the claims are are 49°03' north latitude and 117°21' west longitude, and the map reference is NTS 82F/3W.

Access to the claims is by truck or car along good gravel roads from Nelway, B.C. to just north of the confluence of the Salmo and Pend D'Oreille Rivers where a less travelled ranch road runs easterly along the north side of the Salmo River to the property boundary at McCormick Creek. Logging roads requiring 4-wheel drive equipped vehicles provide access to key portions of the claim group including the main showing area and underground workings.



#### 4.0 PHYSIOGRAPHY AND CLIMATE

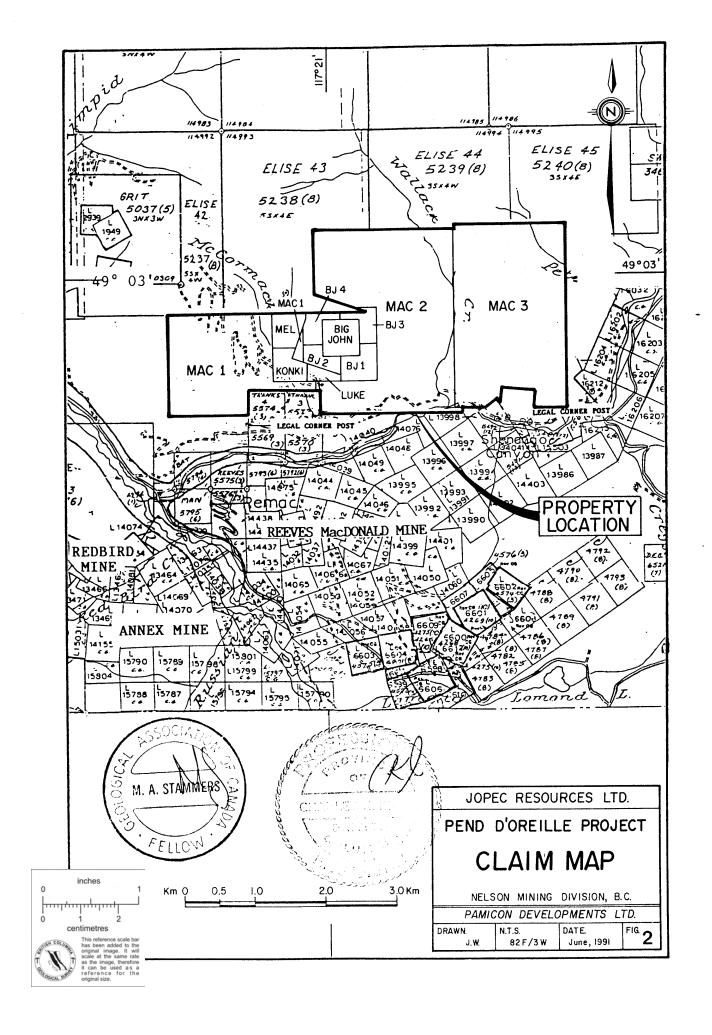
The Pend D'Oreille property is located in the Salmo River valley within the Nelson and Bonnington ranges of the Selkirk Mountains. Elevations on the claims range from 565 metres at valley bottom to 1400 metres on a small knoll in the extreme northwestern corner of the Mac 1 claim. Relief on the property is moderate to locally steep and vegetation cover consists of spruce, balsam, fir, pine and trembling aspen. Underbrush in previously logged areas and in the lower elevations of the property is reported to be thick. Some selective logging is presently being carried out south of the No. 3 adit. Climate in the area is characterized by short cold winters and warm summers with precipitation moderate year round. The best period for exploration is from late April to early November.

#### 5.0 CLAIM DATA (Figure 2)

The property consists of seven two-post claims and four modified grid claims located in the Nelson Mining Division. Considerable overlap of the owned, optioned and neighbouring claims occurs and the total land area of the property is less than 55 full size units or 1375 hectares. As measured from government claim maps the property has an approximate area of 1050 hectares. Given the complex claims history in the area, serious consideration should be made to survey pertinent legal corner posts and relevant two post claim markers.

The writer personally examined and photographed the Mac 1 and 2 legal corner post and as well verified government records for the property. It appears that sufficient effort has been made by the locators to conform to the requirements of the Mineral Titles Act.

Bills of Sale Absolute have been recorded with the Government Agent in Nelson, B.C. as of May 23, 1991 transferring ownership of the following claims to Jopec Resources.



Claim Name	Record No.	No. of Units	Expiry Date
Big John	509	1	August 18, 1993
Mel (2-post)	1663	1	May 23, 1992
Luke (2-post)	1664	1	May 23, 1992
Konki (2-post)	1665	1	May 23, 1992
B.J. #1 (2-post)	6342	1	June 22, 1992
B.J. #2 (2-post)	6343	1	June 22, 1992
B.J. #3 (2-post)	6344	1	June 22, 1992
B.J. #4 (2-post)	6345	1	June 22, 1992

In addition the following claims are shown in government records to be owned by Jopec Resources Ltd.

Mac 1	6705	12	March 30, 1992
Mac 2	6706	20	March 29, 1992
Mac 3	6707	15	March 28, 1992

## 6.0 HISTORY

The Pend D'Oreille project, comprising the old Red Rock mine is located in the historic Salmo lead-zinc belt in the trans border Kootenay Arc district. Placer miners discovered gold on the Salmo River in 1865 and worked that river and the Pend D'Oreille River until the 1890s when lode gold was discovered at Sheep Creek. Gold mining at Sheep Creek was conducted during the periods 1899-1916 and 1928-1951. Lead-zinc was first discovered at the Jersey (Emerald Mine)in 1906, at the H.B. in 1907 and in 1910 at the Reeves

MacDonald. Both the Jersey and H.B. were in production intermittently from their discovery until the 1970s. Minfile records indicate each mine milled about 7 to 8 million tons of 4% zinc and 1% lead. The Reeves-MacDonald (Remac) mine located across the Salmo River from the Pend D'Oreille project was the subject of development work from 1925 until production began in 1949. During the course of mining prior to its closure in 1971, the Remac produced approximately 6.5 million tons grading 1.4% Pb and 3.5% Zn.

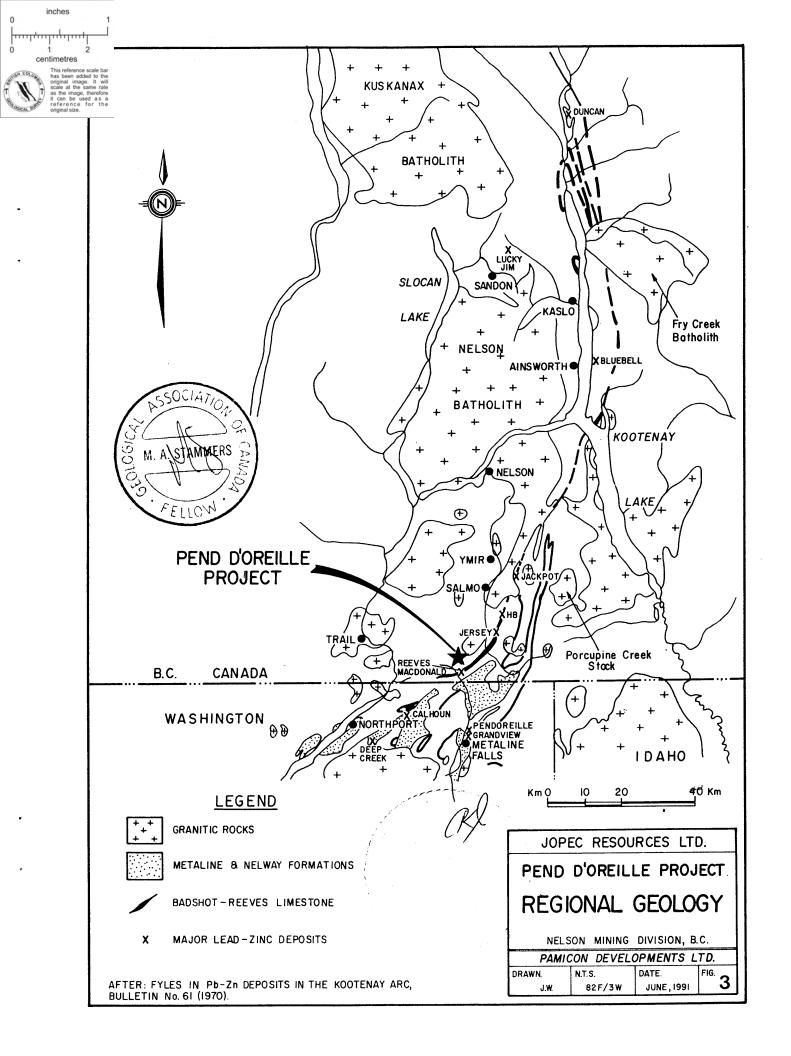
By comparison the Red Rock mine on the Pend D'Oreille property was discovered later, in 1929 or 1930 with four adits and several trenches completed prior to to 1937, during which time 95 tons of ore was shipped. In the period 1947 to 1949 an additional 413 tons were mined. Finally, in 1974 and 1977, 70 tons were shipped by Federated Mining Corporation. Production totals over the mine life have been 525 tonnes containing 85,059 kg of lead, 84,987 kg of zinc and 154,738 gm pf silver.

The most recent and comprehensive exploration program was completed in 1981 by Greenwich Resources Ltd. and included linecutting, geological mapping, soil geochemistry (1800 samples), stream sediment geochemistry (163 silts), prospecting, and VLF-EM/magnetometer surveys (40 line kilometres). Reported follow-up work in 1982 included 282.5 metres of diamond drilling in 3 holes. The location of drill collars and results of this work is unknown.

Work by Jopec Resources on the property included exploration field work comprised of some rehabilitation of underground workings, linecutting, access road repairs and collection of eight assay samples from exposed underground and surface mineralized features.

## 7.0 REGIONAL GEOLOGY (Figure 3)

The Pend D'Oreille project is located in the Kootenay Arc, a geological subprovince of the Omineca Crystalline tectonic belt. This regionally important feature extends southerly for at least 400 kilometres from Revelstoke into the



State of Washington and comprises moderate to strongly deformed, Mesozoic to Precambrian sedimentary, volcanic, and metamorphic rocks. It is bordered by the Purcell anticlinorium to the east and the Shuswap Metamorphic Complex to the west. Cretaceous intrusions, including granitic rocks of the Nelson Batholith cross-cut much of the earlier strata. The Kootenay Arc on both sides of the International Boundary is host to many former lead-zinc-silver producers and unexploited mineral deposits.

In the Salmo area, work by Fyles and Hewlett (1959) defines five principal formations of Cambro-Ordovician age with attendant sub-members. They include the Quartzite Range Formation, the Reno Formation, the Laib Formation, the Nelway Formation and the Active Formation. The Lower Cambrian Reno and Quartzite Range formations consist of white and micaceous quartzite. The overlying Laib Formation comprises four members including the lowermost Truman limestone and phyllite; the lead-zinc hosting Reeves limestone; the Emerald black calcareous phyllite; and the Upper Laib phyllite and quartzite. The overlying Nelway Formation is grey dolomite and limestone and the Ordovician aged Active Formation comprises black argillite, slate and limestone.

Limestone and dolomite of the Reeves Member is the host rock for Canadian lead-zinc replacement or Mississippi Valley type deposits while the Nelway (Metaline in Washington) Formation hosts the equivalent American deposits.

Structural geology in the area is complex with Fyles (1970) describing a minimum of two phases of deformation with Phase I folds being isoclinal and severely attenuated and Phase II folds range in shape from tight to broadly open. In general axial planes dip steeply to the east and fold axes plunge gently south. Strike and thrust faults are associated with the folding while transverse faults offset earlier features.

#### **8.0 PROPERTY GEOLOGY** (Figure 4)

The property geology is based on work by Fyles and Hewlett (1959) and Greenwich Resources Ltd. (1982). Outcrop is sparse and the folded and faulted sequence of Cambrian clastic and chemical sediments have been intruded to the north by Nelson granitic rocks. A simplified geological map of the claims area is shown on Figure 4. A brief description of lithologies follows.

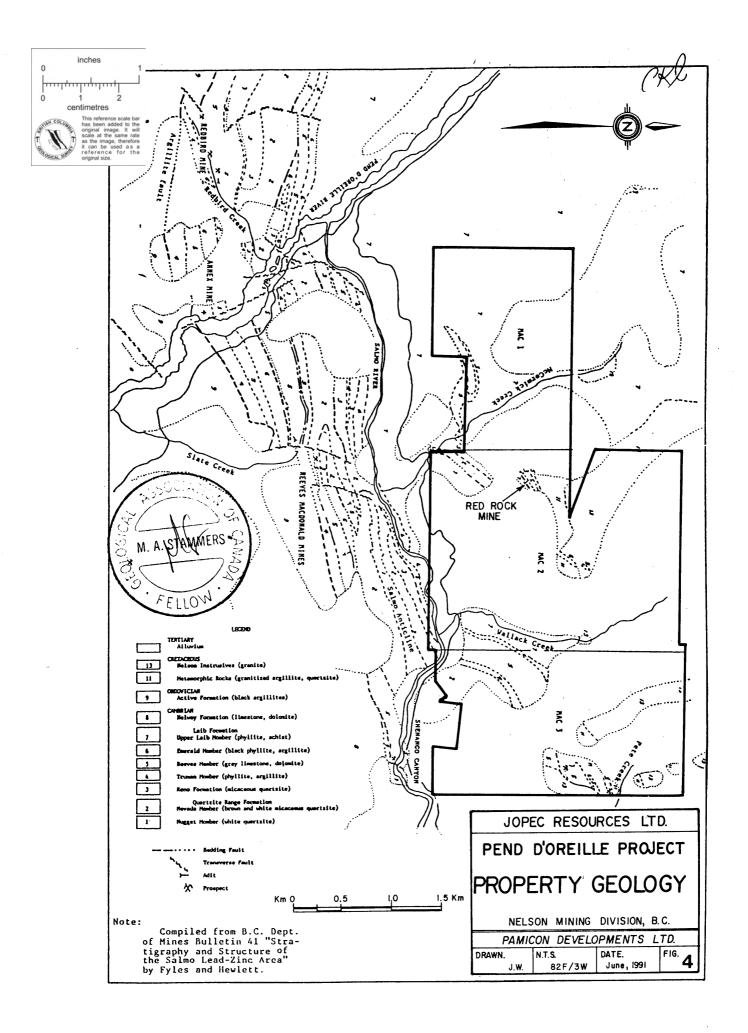
The Quartzite Range Formation comprises two members, the Nugget, a white quartzite and the Navada a brown to white micaceous quartzite. These two units are best exposed around McCormick Creek above the main access road and in fault contact with Upper Laib black phyllite in the No. 3 adit.

The Reno Formation conformably overlies the Quartzite Range Formation and is the best exposed rock unit on the property. It is composed of blocky, grey argillaceous quartzite interbedded with a black phyllite. In the No. 3 adit, Reno quartzite is in fault contact at both footwall and hangingwall locations with the Reeves limestone member hosting the Red Rock galena and sphalerite mineralization.

The Laib Formation has been divided into four members and mapped on the property accordingly. The entire section is exposed on the east wall of Wallack Creek canyon near Salmo River.

The Truman member is best exposed west of McCormick Creek and comprises a thin sequence of green and brown schist, phyllite and argillite interbanded with white limestone.

The Reeves limestone member, which historically has been the most important host lithology for mineral deposits in the Salmo district is a grey and white to black and white banded, fine to medium grained rock that weathers bluish grey. On the property the limestone is exposed at the surface and underground showings, on the west side of McCormick Creek, on the east wall of Wallack Creek canyon, west of Pete Creek, and at several widely scattered localities.



In areas adjacent to sulphide mineralization, the unit is partially dolomitized, poorly banded, massive and weathers a distinct buff orange-brown colour.

The Emerald member is poorly exposed on the property and consists of recessive weathering, black crenulated argillite and phyllite. This unit has been mapped in the Wallack Creek canyon and immediately north of the Red Rock surface showings.

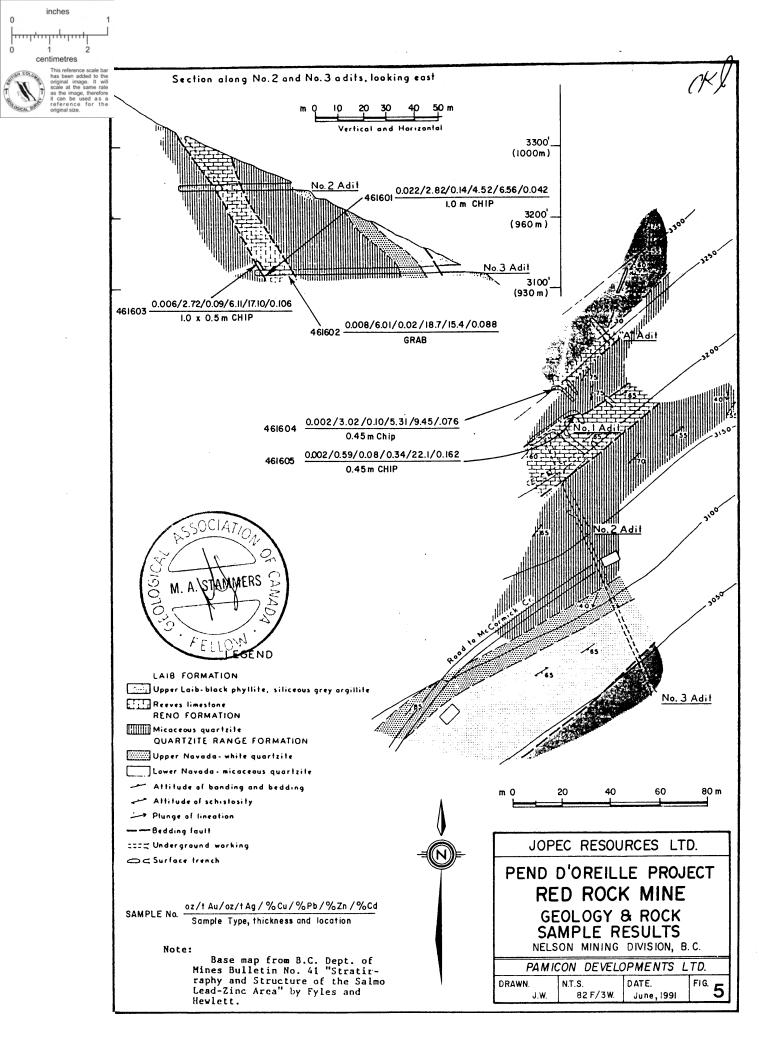
The Upper Laib member is well exposed on the property between Wallack and McCormick Creeks and includes a thick sequence of green, grey and brown phyllite and schist with minor interbeds of brown quartzite and lenses of blue-grey limestone.

Other lithologies mapped on the property include argilliceous limestone of the Nelway Formation; contact metamorphosed sediments adjacent to the Nelson intrusives; and granodiorite to granite intrusive rocks of the Nelson Batholith in the north claims area.

Structural geology on the property is complex and interpretation is hampered by the poor exposure of rock units. Given the shape and morphology of the nearby Reeves-MacDonald ore bodies a general understanding of the role of folding and faulting may be theoretically applied to the Red Rock occurrence. Particular attention should be paid to cross faults offsetting mineralization and to the plunge of fold axes or rake of mineralized bodies and their host lithologies.

#### **9.0 MINERALIZATION** (Figure 5)

Replacement style sphalerite, galena, pyrite, and minor arsenopyrite mineralization is hosted by Reeves limestone along a fault contact with Reno Formation quartzite on the Big John claim in the central part of the property. The occurrence, commonly known as the Red Rock mine was discovered in 1928,



developed and partially exploited in the 1930s, mined again in 1947-49 and finally high graded for its silver content in 1974 and 1979.

Production totals over the mine life have been 525 tonnes containing 85,059 kg of lead, 84,987 kg of Zn and 154,738 gm of Ag. Examining the less abundant or by-product metals present, Minfile records indicate copper production of 16 kg from 20 tonnes of material during the 1974 shipment year and gold production in the years 1936 and 1947 to 1949 of 155 gm from 429 tonnes shipped. No past production figures for cadmium are available for the Red Rock mine even though it is a common by-product of many other Kootenay Arc lead-zinc deposits. For example the H.B. and Reeves MacDonald mines respectively produced 4.45 and 2.68 million pounds of cadmium from 7.34 and 6.45 million tons of ore. Chip sampling both underground and on surface by the author yielded the following range in metal values: 0.34 to 6.11% Pb, 6.56 to 22.10% Zn, 0.59 to 3.02 oz/ton Ag, 0.002 to 0.022 oz/ton Au, 0.08 to 0.14% Cu and 0.042 to 0.162% Cd.

Mineralization is presently exposed in a raise off of the No. 3 adit and on surface at two trench locations (Figure 5). The No. 1 and 2 adits are not accessible. The host limestone unit strikes between 020° and 060° and dips southerly about 65°. It is postulated by Fyles and Hewlett that the mineralized body has a pronounced southwesterly rake.

Two one metre chip samples and one grab sample were taken underground by the writer. Sample 461601 assayed 4.52% Pb, 6.56% Zn, 0.042% Cd, 2.82 oz/ton Ag and 0.022 oz/ton Au at the base of the raise and five metres up the raise on the southwest wall, the second chip sample, 461603 ran 6.11% Pb, 17.10% Zn, 0.106% Cd, 2.72 oz/ton Ag and 0.006 oz/ton Au. A grab sample (461602) of massive sulphides from the underground muckpile assayed 18.70% Pb, 15.40% Zn, 0.088% Cd, 6.01 oz/ton Ag, and 0.008 oz/ton Au.

Surface exposure of mineralization was examined at the main zone glory hole and at a second parallel showing to the north. At both locations the writer collected a 0.45 m chip sample across the partially exposed mineralization. At the main showing, sample 461605 assayed 22.1% Zn, 0.34% Pb, 0.162% Cd, 0.59

oz/ton Ag, and 0.002 oz/ton Au. The north showing was highly oxidized and ran (sample 461604) 5.31% Pb, 9.45% Zn, 0.076% Cd, 3.02 oz/ton Ag, and 0.002 oz/ton Au. Neither mineralized zone is presently exposed along strike.

All five samples were delivered by Mr. Stammers to Chemex Labs Ltd., North Vancouver, and analytical reports including procedures are located in the appendices of this volume. The results of the sampling program carried out by Jopec Resources were consistent with the results from the samples taken by Stammers and reported on herein.

The description of the Red Rock mine from earlier work infers a limited strike length of 20.0 metres on surface and equivalent distance underground (Fyles and Hewlett). The same report states that the No. 3 adit failed to encounter mineralization at the quartzite-limestone contact. Extension of the adit after the report was written encountered significant mineralization which was partially exploited in 1974 and 1979. Fault displacement of orebodies in the district is common as evidently seen at the nearby Reeves MacDonald mine. A systematic exploration program on the Pend D'Oreille property may yield new discoveries and locate extensions of known mineralization.

#### 10.0 OTHER WORK

#### 10.1 SOIL GEOCHEMISTRY

A grid soil geochemical survey was completed by Greenwich Resources Ltd. in 1981. Over 1800 soil samples were collected and analysed for lead, zinc, copper, nickel and cobalt. Samples were collected every 25 m on lines 100 m apart in the old mine area and 200 to 400 m apart elsewhere on the property. An area 5.3 by 2.3 kilometres was surveyed.

The old Red Rock mine workings were outlined by strongly anomalous values to 9900 ppm lead and 3420 ppm zinc. Elevated Cu-Ni-Co results are partially coincident with the Pb-Zn anomalies but at this juncture bear little import-

ance to the search for a lead-zinc deposit. The highest values are probably due to contamination from the mine dumps and speculation as to strike length of the soil feature would be unjustified due to this contamination. A second zinc anomaly, downslope and to the east near Grouse Creek returned values of up to 3360 ppm Zn and may be, in part explained as a hydromorphically transported feature originating from the main mineral occurrence.

Several other anomalous lead and zinc soil values were returned from the wider, 200 to 400 metre spaced lines and require fill-in sampling in order to determine the continuity, length, width and tenor of the anomalies. The broad geochemical soil features are centred on the Greenwich grid at 1500W and the zero baseline; at 200W, 200S; and at 3000E, 500S. The other elements analysed by Greenwich Resources including Cu, Ni and Co are briefly examined in this discussion.

The 1500W feature extends from 1150W, 225N to 1750W, 00BL and includes a western, two station (25 m apart) Pb-Zn anomaly with values of 580 and 620 ppm Zn and 125 and 133 ppm Pb. A second portion of this geochemical feature is located 175 to 400 metres to the east and includes four station zinc values of 395, 460, 530 and 540 ppm Zn and nine station lead values of 204, 143, 65, 142, 122, 64, 63, 204, and 129 ppm Pb. Above background copper, nickel and cobalt values ar associated with portions of this geochemical area and include values of 126, 158, 172 and 191 ppm Cu; 93 and 98 ppm Ni; and 22 ppm Co.

The 200W feature occurs on two lines (200 m apart) with three station lead values of 124, 580, and 166 ppm Pb possibly linked with a single station value of 283 ppm Pb 200 m to the west. Corresponding zinc values are weaker and include two station results of 311 and 397 ppm Zn linked to the west with a single station value of 380 ppm Zn. Nickel and cobalt values are moderately elevated in this anomalous feature and results include 52, 59 and 103 ppm Ni and 24 and 29 ppm Co. Copper values are low.

The 3000E geochemical feature extends across 3 lines (400 m) and comprises single or two station anomalous zinc values with lower lead values. Four zinc

results include 760, 310, 400 and 410 ppm Zn while weaker lead values include 66, 52, 53, and 59 ppm Pb. Low to moderate copper, nickel and cobalt values are coincident with the Zn-Pb feature and results include 51, 54, 83 and 119 ppm Cu; 48 and 119 ppm Ni; and 16 and 21 ppm Co.

#### 10.2 GEOPHYSICS

Approximately 40.0 kilometres of VLF-EM/magnetometer surveys were completed at various line spacings on the property by Greenwich Resources Ltd. in 1981. The 400 m line spacing portion of the survey returned spurious results unworthy of reporting due to the wide line spacing. Also the lack of a base station recorder or correction of diurnal fluctuation of magnetometer surveys seriously detracts from reported results. VLF-EM survey results in the area of the mine workings are again tentative due to the 100 m line spacing and probable structural complexities. Several weak to moderate conductors traverse through the area surrounding the old mine workings. Future geophysical work should include greater detailed surveys with less line bias in the Red Rock area.

#### 11.0 CONCLUSIONS AND RECOMMENDATIONS

The Pend D'Oreille project comprising eleven mineral claims, well situated in the Salmo lead-zinc camp of the Kootenay Arc is underlain by favourable Lower Cambrian stratigraphy. A former, albeit very small producer, the Red Rock mine is centrally located within the claim group. Preliminary evaluation of geological data from the property indicates galena, sphalerite and pyrite replacement style mineralization is hosted by the Reeves Member limestone on the Big John claim. Lead-zinc ore bodies hosted by similar stratigraphy have been exploited at the nearby Reeves MacDonald, Jersey and H.B. mines. An exploration model applicable for the Pend D'Oreille project would focus on locating a mineral deposit similar in size and tenor to the areas past producers of approximately 5 to 7 million tons of 5% combined Pb-Zn.

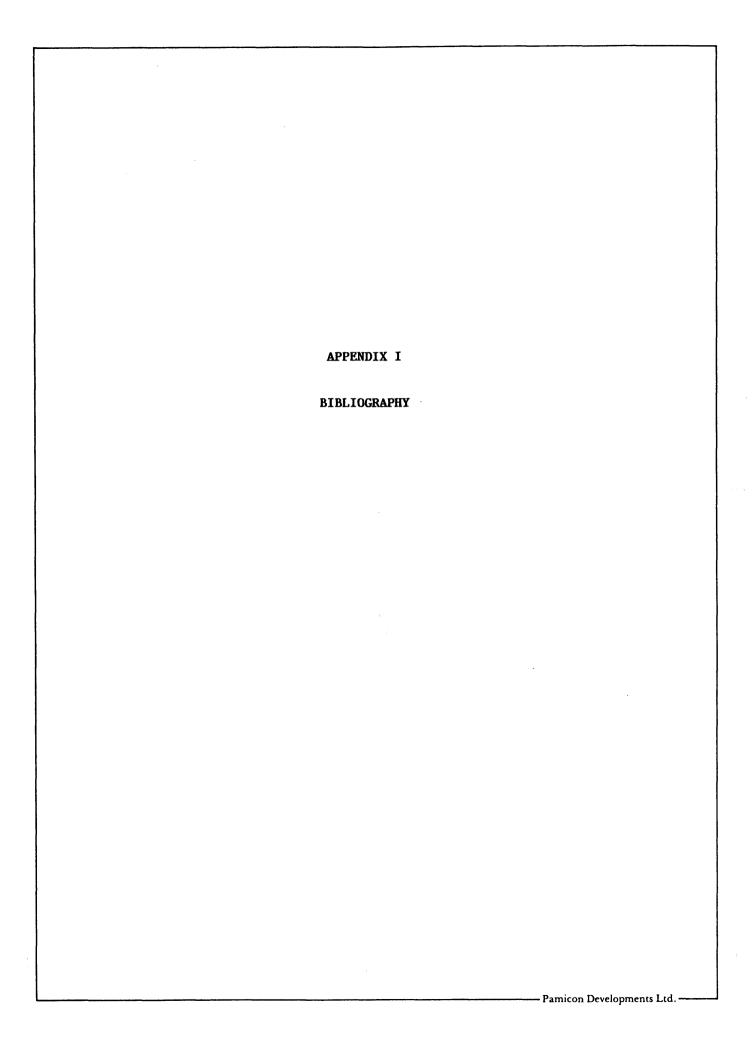
Retention of the entire claim group is strongly advised and a two phase program of exploration is recommended. Phase I, \$135,000 includes provision for grid preparation, surveying, geological, geophysical and geochemical surveys, underground mapping and channel sampling. A Phase II exploration program may include mechanized trenching and underground and surface diamond drilling work over geological targets in the Red Rock mine area and fill-in geochemical soil surveys elsewhere on the property should favourable results from Phase I be returned. Budgets are detailed in the appendices.

M. A. STAMMERS

Respectfully submitted,

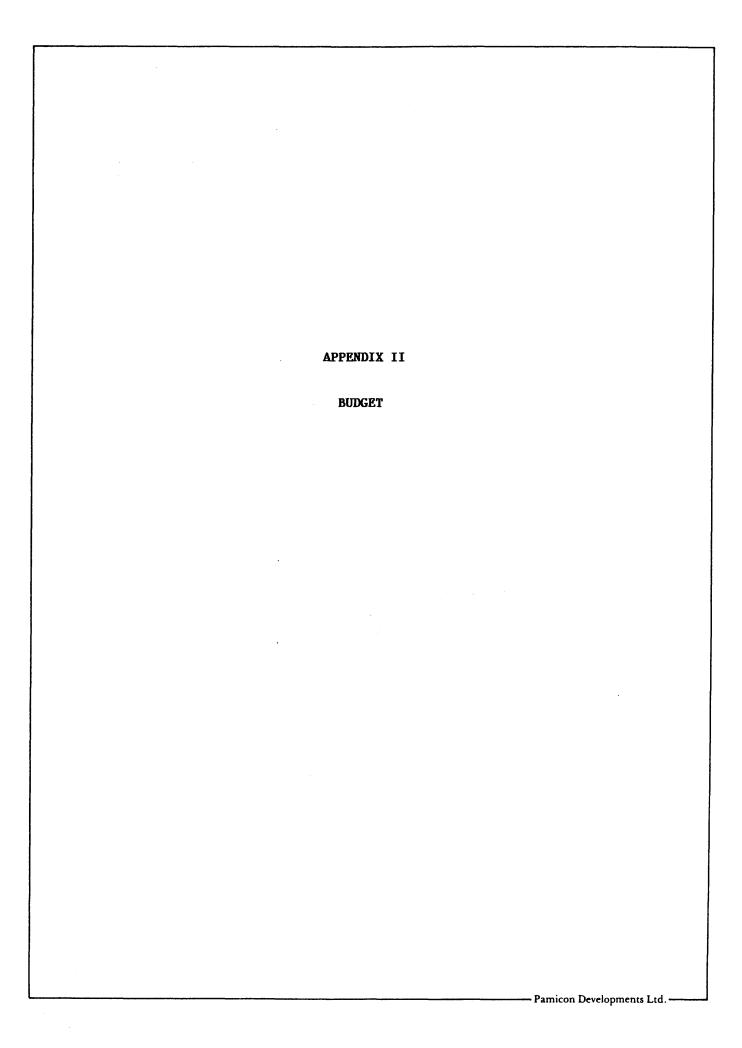
Michael A. Stammers, Geologi

Charles K. Ikona, P.Eng.



#### BIBLIOGRAPHY

- Addie, G.G. (1970): The Reeves MacDonald Mine, Nelway, British Columbia; in Lead-Zinc Deposits in the Kootenay Arc, Northeastern Washington and Adjacent British Columbia, Washington Dept. of Nat. Res. Bulletin No. 61, Editor A.E. Weissenborn, pp 83 88.
- B.C. Minister of Mines (1988): Ministry of Energy, Mines and petroleum Resources, Min File No.: 082F SW pp 758 760, 1411 1466, 1893 1894.
- Fyles, J.T. (1970): Geological Setting of the Lead-Zinc Deposits in the Kootenay Lake and Salmo Areas of British Columbia; in Lead-Zinc Deposits in the Kootenay Arc, Northeastern Washington and Adjacent British Columbia, Washington Dept. of Nat. Res. Bulletin No. 61, Editor A.E. Weissenborn, pp 45 53.
- Fyles J.T. and C.G. Hewlett (1959): Stratigraphy and Structure of the Salmo Lead-Zinc Area; B.C. Dept. of Mines Bulletin No. 41, 171 pp.
- Hand, J.S. (1982): Assessment report Red Rock Property (Wallack Claims), Nelson Mining Division, Greenwich Resources Inc., B.C. Assessment Report No. 10,225, 31 pp.
- Santos, P.J. (1991): Report on the Big John (Red Rock) Property, Pend D'Oreille Project, Nelson M.D., Jopec Resources Ltd., company report.
- Walker, J.F. (1934): Geology and mineral deposits of Salmo Map Area, British Columbia, GSC Memoir 172, pp 54 64.



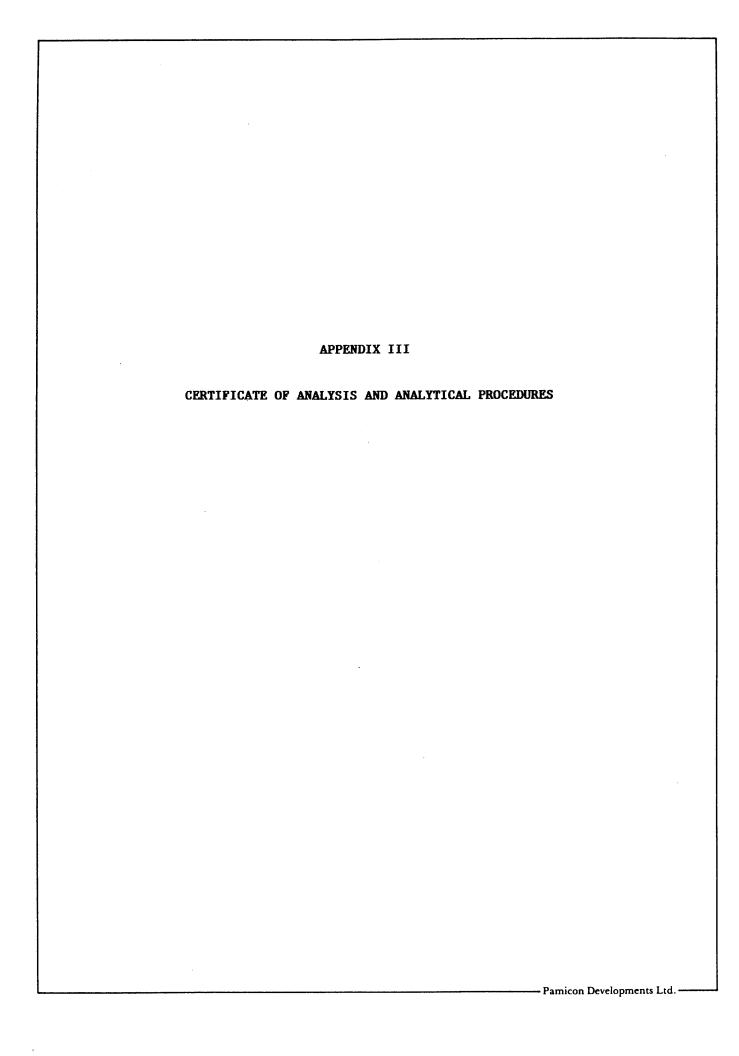
# BUDGET

PHASE I		
WAGES Geologist - 30 days @ \$375 Prospector - 15 days @ \$300 Grid Prep/Samplers/Surveyors - 4 x 30 days @ \$225 Geophysics - 2 x 10 days @ \$350	\$ 11,250 4,500 27,000 7,000	\$ 49,750
SUPPORT 185 man days @ \$75		13,875
GENERAL EXPENSES  Truck Rentals - 3 trucks x 30 days @ \$75  Geophysical Equipment Rental Survey Equipment Rental Field Expendibles Assays - 100 rock @ \$25 - 1,500 soils @ \$15  Engineering, Management, Reporting	\$ 6,750 2,000 500 5,000 25,000 10,000	
Engineering, Management, Reporting		49,250
Contingency @ 10%		112,875 11,287
GST		124,162 8,691
Total - Phase I	•	\$132,853
PHASE II - Estimate only, subject to review of Phase I	results	
WAGES Geologist - 30 days @ \$375 Sampler - 30 days @ \$225	\$ 11,250 6,750	\$ 18,000
SUPPORT 60 man days @ \$75		4,500

\$249,000

GENERAL EXPENSES			
Drilling			
Underground Diamond Drilling			
500 metres @ \$100 inclusive	\$ 50,000		
Surface Diamond Drilling			
1000 metres @ \$100 inclusive	100,000		
		\$150,000	
Assaying - 400 core samples @ \$25		10,000	
- 300 soil samples @ \$15		4,500	
Trenching and Reclamation		5,000	
Engineering, Management, Reporting		20,000	
			189,500
			212,000
Contingency @ 10%			21,000
•			
			233,000
GST			16,000

Total - Phase II





# **Chemex Labs Ltd.**

Analytical Chemists \* Geochemists \* Registered Assayers 212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221

To: PAMICON DEVELOPMENTS LIMITED

711 - 675 W. HASTINGS ST. VANCOUVER, BC V6B 1N4

Project : Comments:

Page Number :1 Total Pages :1 Certificate Date: 13-JUN-91 Invoice No. :19115942 P.O. Number :

·							CERTIFICATE OF ANALYSIS				A9115942		
SAMPLE DESCRIPTION		REP ODE	Au oz/T	Ag oz/T	Cu %	Pb %	Zn %	Cd %					
461601 461602 461603 461604 461605	208 208 208	294 294 294 294 294	0.022 0.008 0.006 0.002 0.002	2.82 6.01 2.72 3.02 0.59	0.14 0.02 0.09 0.10 0.08	4.52 18.70 6.11 5.31 0.34	6.56 15.40 17.10 9.45 22.1	0.042 0.088 0.106 0.076 0.162					
									•				
		-							·				
		-											

CERTIFICATION:



# **Chemex Labs Ltd.**

Analytical Chemists \* Geochemists \* Registered Assayers 212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 To: PAMICON DEVELOPMENTS LIMITED

711 - 675 W. HASTINGS ST. VANCOUVER, BC V6B 1N4

A9115942

Comments:

**CERTIFICATE** 

A9115942

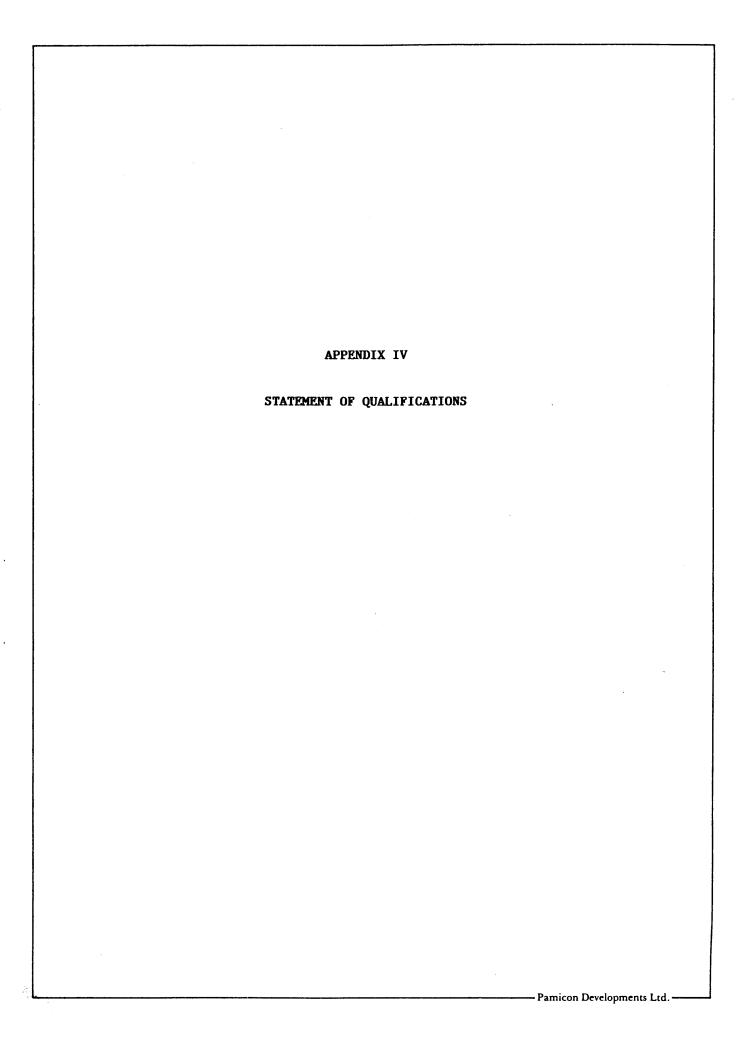
PAMICON DEVELOPMENTS LIMITED

Project: P.O. #: **JOPEC** 

Samples submitted to our lab in Vancouver, BC. This report was printed on 13-JUN-91.

	SAMPLE PREPARATION							
CHEMEX	NUMBER SAMPLES	DESCRIPTION						
208 294	5 5	Assay ring to approx 150 mesh Crush and split (0-10 pounds)						

398 5 Au oz/T: 1/2 assay ton FA-AAS 0.002 385 5 Ag oz/T: Aqua regia digestion AAS 0.01 301 5 Cu %: HCl04-HN03 digestion AAS 0.01 312 5 Pb %: HCl04-HN03 digestion AAS 0.01 316 5 Zn %: HCl04-HN03 digestion AAS 0.01 320 5 Cd %: HCl04-HN03 digestion AAS 0.01 320 5 Cd %: HCl04-HN03 digestion AAS 0.001	CODE	NUMBER SAMPLES	R ES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPEF LIMIT
	385 301 312 316	5 5 5 5	Zn %: HC104-H	NO3 digestion	AAS AAS AAS	0.01 0.01 0.01 0.01	20.00 20.0 100.0 100.0 100.0
				•			
				·			
					·		

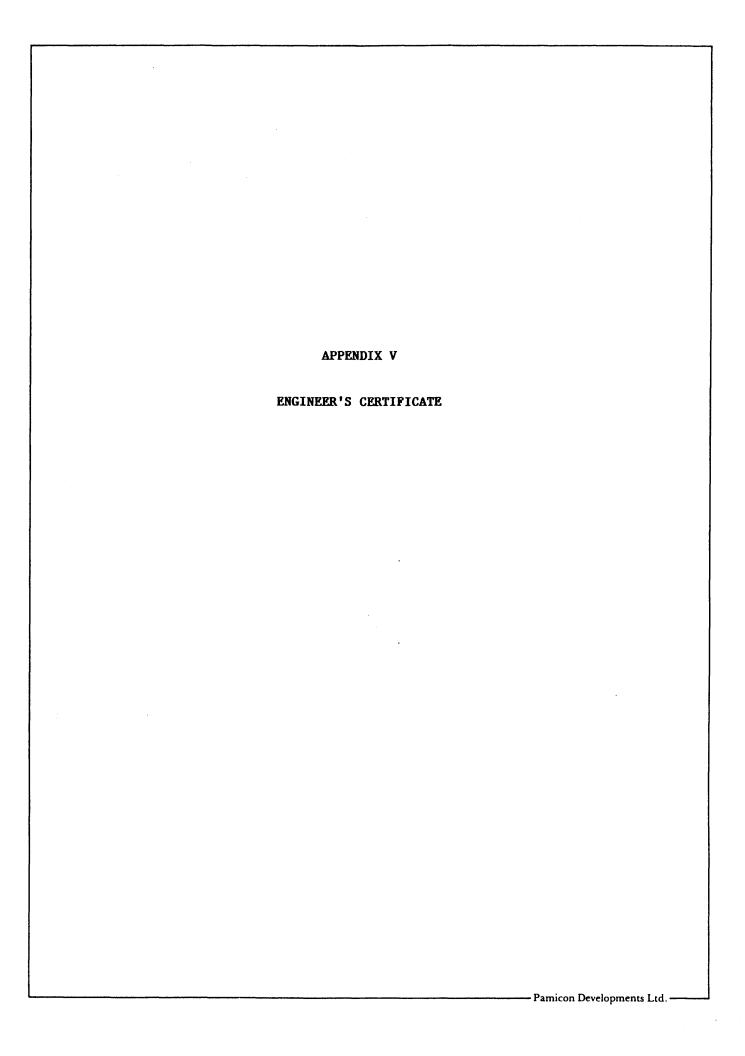


#### MICHAEL A. STAMMERS, Geologist, FGAC

- I, MICHAEL A. STAMMERS, of 941 Kennedy Avenue, North Vancouver, in the Province of British Columbia, DO HEREBY CERTIFY:
- 1. I am a graduate of McMaster University (1977) and hold a combined Honours B.A. in Geology and Geography.
- 2. I have practiced in my profession with various mining companies in Yukon, British Columbia and the Northwest Territories for 17 years.
- 3. I am a Fellow of the Geological Association of Canada.
- 4. This report is based on personal examination of the property made on May 29, 1991 and a review of available literature.
- 5. THAT I have no interest in the property described herein, nor in securities of any company associated with the property, nor do I expect to receive any such interest.
- 6. THAT I hereby grant permission to Jopec Resources Ltd. for the use of this report in any prospectus or other documentation required by any regulatory authority.

DATED at Vancouver, B.C., this day of March 1991.

Michael A. Stammers, Geologist FGAC



#### ENGINEER'S CERTIFICATE

- I, CHARLES K. IKONA, of 5 Cowley Court, Port Moody, in the Province of British Columbia, DO HEREBY CERTIFY:
- 1. THAT I am a Consulting Mining Engineer with offices at Suite 711, 675 West Hastings Street, Vancouver, British Columbia.
- 2. THAT I am a graduate of the University of British Columbia with a degree in Mining Engineering.
- 3. THAT I am a member in good standing of the Association of Professional Engineers of the Province of British Columbia.
- 4. THAT this report is based on information provided by Jopec Resources Ltd., on a review of all other information on the area and on several year's experience in exploration and mining in the Kootenay Arc area of B.C.
- 5. THAT I have no direct or indirect interest in the property described herein or the securities of the company nor do I expect to receive any such interest.
- 6. THAT I consent to the use by Jopec Resources Ltd. of this report in a Prospectus or Statement of Material Facts or any other such document as may be required by the Vancouver Stock Exchange or the Office of the Superintendent of Brokers.

DATED at Vancouver, B.C., this day of Oct , 1991.

C.K. Ikona, P.Eng.

Pamicon Developments Ltd. -

REPORT ON THE
SNOW CREEK PROJECT
FOR
JOPEC RESOURCES LTD.

Located in the Nakusp Area Slocan Mining Division British Columbia NTS 82F/13E and 82K/4E 49°57' North Latitude 117°40' West Longitude

- prepared by MICHAEL A. STAMMERS, FGAC, Geologist
CHARLES K. IKONA, P.Eng.

October, 1991

# REPORT on the SNOW CREEK PROJECT

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Ice and SC Claims

— Pamicon Developments Ltd. —

# REPORT on the SNOW CREEK PROJECT

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#### 1.0 SUMMARY

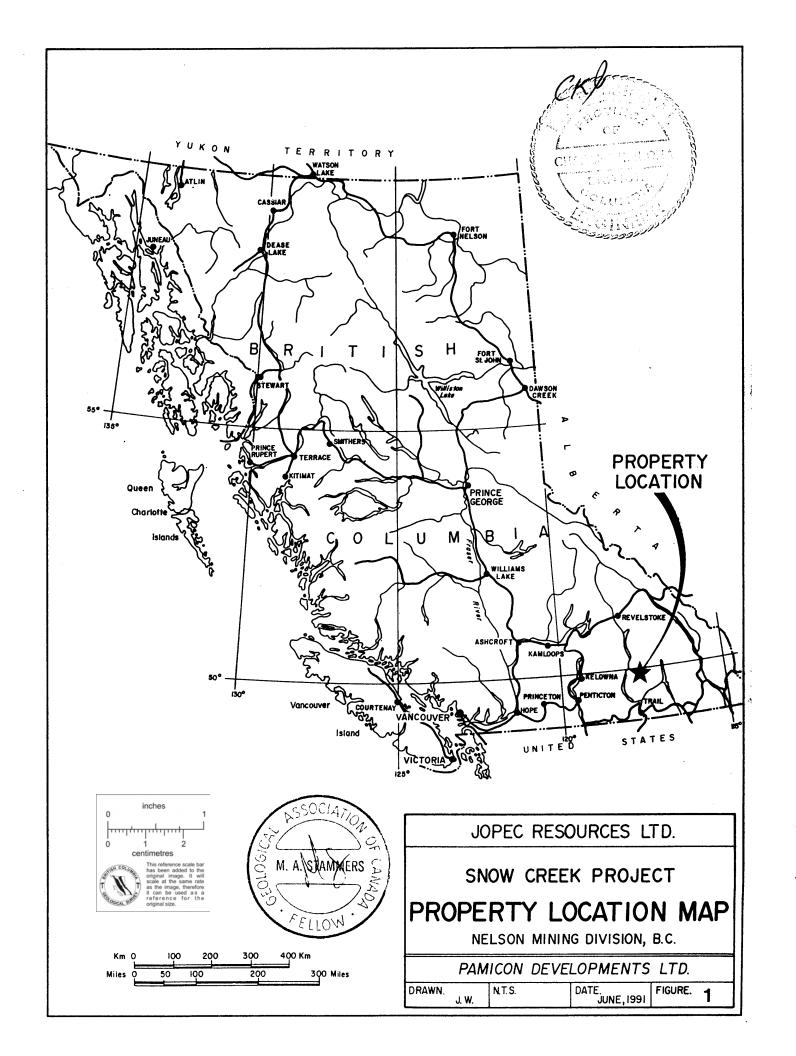
This report, prepared at the request of Jopec Resources Ltd. presents a summary of exploration work completed to date on the Snow Creek project, Slocan Mining Division, south central British Columbia (Figure 1). The property, under option to Jopec, comprises nine modified grid claims staked by the vendor, P.J. Santos, in 1990 totalling 131 units, including the contiguous ICE #1 to #4 and SC #1 to #4 claims and the separate J.O. #1 claim to the north.

The project area adjoins the Tillicum Mountain property of Esperanza Explorations Ltd. (now named Columbia Gold Mines Ltd) and the Strebe Gold property owned by local prospectors. Published reserves in all categories determined from exploration and development work in the 1980's for the Tillicum Mountain deposits are 1,443,500 tons grading 0.27 oz/ton Au<sup>1</sup>. The Strebe gold property, situated between the J.O. #1 and SC claims, has an estimated total reserve, all categories of 300,000 tons grading 0.25 oz/ton Au (Roberts, March 1989).

Geological mapping indicates that the Snow Creek property and neighbouring Tillicum Mountain and Strebe claims are underlain by a highly deformed, metamorphosed, volcano-sedimentary succession (Lower Jurassic Rossland and Mississippian Milford Groups) intruded by feldspar porphyry sills (BCEMPR Open File 1989-3).

The Snow Creek project is in an early stage of exploration with previous work by others consisting of airborne geophysical surveys over most of the presently held claims (Pezzot and White 1983), a soil and stream silt geochemical survey over a portion of what is now the ICE claims (Godwin 1983) and another small geochemical program over a part of the SC #3 claim (Wahl 1983). Results of this work are summarized later in the text.

<sup>&</sup>lt;sup>1</sup>Paper presented to B.C. and Yukon Chamber of Mines 1989 Cordilleran Round-Up by J.S. Brock and W.J. Roberts



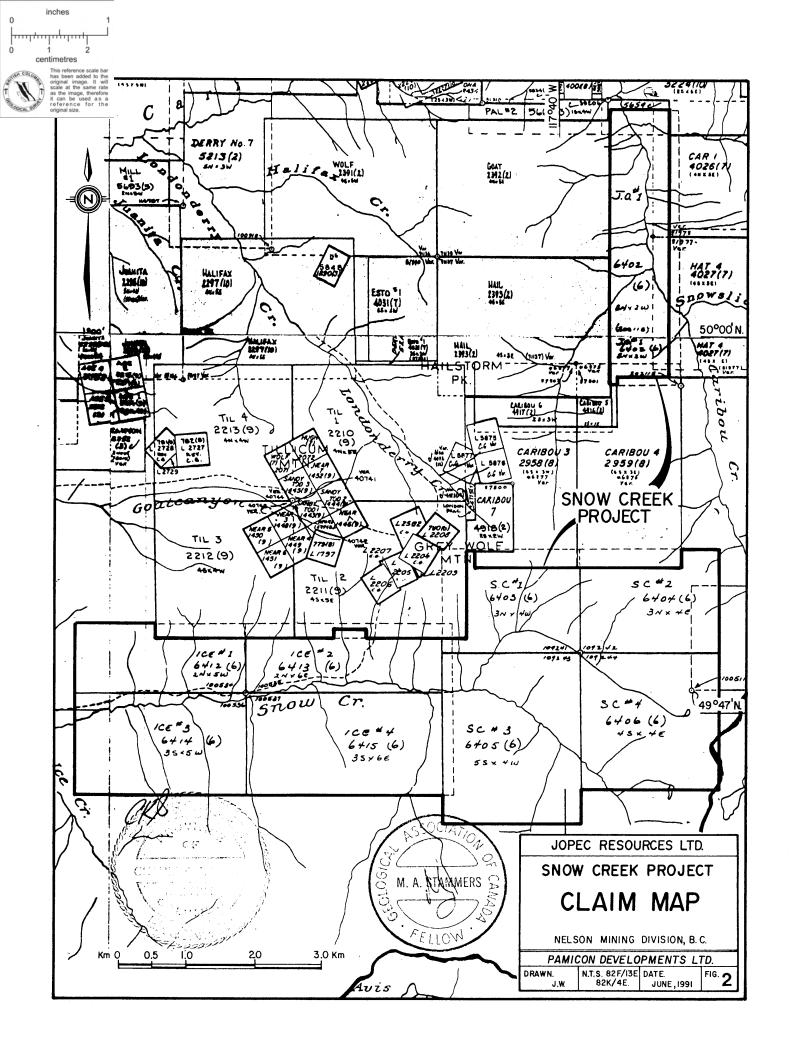
Geological and geochemical work was completed in September and October 1990 under the supervision of P.J. Santos, P.Eng. Two assessment reports were subsequently filed for the J.O. #1 claim (Santos, March 20, 1991) and the SC and ICE claims (Santos, March 30, 1991). Results of this work program were mixed with geological mapping identifying gossanous outcrops of calc-silicate rocks intruded by quartz diorite porphyry on the J.O. #1, ICE and SC claims. Subsequent rock geochemical sampling of these outcrops yielded low to moderately anomalous gold values ranging from <5 ppb Au to 350 ppb Au (over 10 feet) on the J.O. #1 claim and from <5 ppb Au to 100 ppb Au on the ICE and SC claims. Sample types include rock chip on the J.O. #1 claim and rock chip and float grab samples on the ICE and SC claims. Stream silt samples collected from the SC and ICE claims returned low to moderately anomalous gold values ranging from <5 ppb Au to 100 ppb Au.

The Snow Creek properties are in an early stage of exploration and development within an emerging gold camp. Jopec's claims are underlain by geology similar to that hosting other mineral occurrences and deposits in the area. Retention of the entire ICE, SC and J.O. claims is advised and a first phase program comprising geological, geochemical and geophysical surveys, grid preparation and prospecting work is recommended. Favourable first phase results should be followed up by expanded ground surveys and mechanized trenching and/or diamond drilling where warranted.

This report is intended to summarize all available information on the properties and M.A. Stammers, co-author of this report, completed a personal examination of a portion of the ICE and SC claims on May 30, 1991.

# 2.0 LIST OF CLAIMS (Figure 2)

Records of the Mining Recorder of the Slocan Mining Division show that the following claims are recorded in the name of Jopec Resources Ltd.



		Ar	ea	
Claim Name	Record No.	<u>Units</u>	<u>Hectares</u>	Expiry Date
J.O. #1	6402(6)	16	400	June 18, 1994
SC #1	6403(6)	12	300	June 20, 1993
SC #2	6404(6)	12	300	June 20, 1993
SC #3	6405(6)	20	500	June 20, 1993
SC #4	6406(6)	16	400	June 20, 1993
ICE #1	6412(6)	10	250	June 28, 1993
ICE #2	6413(6)	12	300	June 28, 1993
ICE #3	6414(6)	15	375	June 28, 1993
ICE #4	6415(6)	18	450	June 28, 1993

No legal surveys have been conducted on the claims and the actual number of units and area may vary due to claim overlapping.

The ICE #1 to #4 and SC #3 claims were examined by one of the writers, Mr. M. Stammers on May 30, 1991. The remainder of the claims were not accessible at the time due to prevailing snow conditions. Claim posts noted during this visit appeared to conform to regulations of the Ministry of Energy, Mines and Petroleum Resources of British Columbia.

#### 3.0 LOCATION, ACCESS AND TOPOGRAPHY

The claims are located between Arrow and Slocan Lakes, south and east of Tillicum and Grey Wolf Mountains some 30 km south of the town of Nakusp, south central British Columbia (Figure 1).

#### 3.1 J.O. #1 CLAIM

The J.O. #1 claim has coordinates of latitude 50°00'N and longitude 117°38.5'W on NTS 82K/4E. The claim lies northeast of Hailstorm Peak at elevations between 4,000 feet (1219 metres) and 6,500 feet (1981 metres) above sea

level. The topography is moderate to steep and is drained by Caribou Creek. Most of the property has been logged but some merchantable timber still remains. Access to the J.O. #1 claim is by way of the Shannon Creek road which joins Highway 6 at Hills, B.C. 24 kilometres from the property. The claim is adjacent to the Tillicum gold property to the west and the Strebe gold property to the south.

#### 3.2 SC AND ICE CLAIMS

The contiguous SC and ICE claims are located on the south side of Grey Wolf Mountain at latitude 49°57'N and longitude 117°46'W on NTS 82F/13E. Access to the claims is by car or truck on the recently constructed Snow Creek logging road which joins Highway 6 at Burton 20 kilometres away. A B.C. Hydro power line from the Watshan hydroelectric power dam runs alongside Highway 6. The claims adjoin the Tillicum Mountain and Strebe gold properties to the north. The topography of the property is moderate to steep with elevations between 3,500 feet (1067 metres) and 6,500 feet (1981 metres) above sea level and the area is drained by the headwaters of Snow Creek. The major part of the property is covered with merchantable timber and a system of logging roads is being constructed by Westar Timber as part of a 5 year logging program.

# 4.0 HISTORY

# 4.1 AREA HISTORY

High grade silver mineralization was discovered on Hailstorm Ridge in the late 1890s and a small shipment of unspecified ore was shipped in 1899. The Hailstorm silver prospect was explored from underground by Cominco in 1929/30 by approximately 1400 feet of crosscuts, drifts and raises. There was little further work conducted in the general area until the 1980s. Two silver rich skarn deposits are presently defined: The Silver Queen with a drill indicated

reserve of 3 million tons of 3.0 oz/ton Ag and the Hailstorm with undetermined reserve figure (Roberts, 1989).

In 1980 prospectors located the first indication of gold mineralization at Tillicum Mountain and optioned it to Welcome North Mines and Esperanza Explorations which led to the definition of the Heino-Money and East Ridge zones on Tillicum Mountain between 1981 and 1989. Published reserves in all categories for the Tillicum Mountain deposits are 1,443,500 tons grading 0.27 oz/ton Au.¹ Bulk sample shipments made in 1981 and 1985-87 produced 3160 ounces of gold (BCMPR Open File 1989-22). An additional shipment of material from the deposit is to be made to the Goldstream mill near Revelstoke for test milling and concentrating (Oct. 7, 1991 Vancouver Stockwatch). The Strebe gold property, discovered in 1985 subsequent to a geochemical survey (Stokes, 1983), is situated between the J.O. #1 and SC claims and has an estimated total reserve, all categories of 300,000 tons grading 0.25 oz/ton Au (Roberts, March 1989).

#### 4.2 PROPERTY HISTORY

This section briefly summarizes work completed by others in the area which is now covered by the Snow Creek property. Results are presented separately in the appropriate sections on geochemistry and geophysics.

The J.O. #1 claim area was previously staked as the Pal claim where no ground work was recorded. However a regional airborne geophysical survey (magnetometer and VLF-EM) conducted over the Tillicum Mountain property by Esperanza extended onto the presently defined J.O. #1 claim (Pezzot and White, June 1983).

<sup>&</sup>lt;sup>1</sup>Paper presented to B.C. and Yukon Chamber of Mines 1989 Cordilleran Round-Up by J.S. Brock and W.J. Roberts

The SC claims were originally staked as the Olga, Ruza, Au 3, Trib, and Tower claims. Aerial geophysical surveys were conducted over the Olga, Ruza and Au 3 claims (Pezzot and White, June 1983). In addition to the geophysical surveys, a minimum geological mapping and grid establishment program was undertaken on a portion of the same claims (Ostensoe, 1984). Exploration work on the Trib claim, comprising a portion of the present SC #3 and ICE #4 claims included a small geochemical survey totalling 10 silt and 29 soil samples (Wahl, 1983).

The area comprising the present ICE claims was originally staked as the Olga 1, King Midas and KM claims. An aerial geophysical survey was conducted on the Olga 1 claim (Pezzot and White, 1983), while a geochemical survey was done on part of the KM claims. The survey which was completed in 1983 comprised 576 soil and 13 silt samples (Godwin, 1983). A large portion (about 75%) of this work area is presently staked as the ICE #1 and #2 claims.

#### 5.0 JUNE 1990 TO JULY 1991 WORK PROGRAM

This section describes work completed by the vendor or Jopec Resources during the period June 1990 to July 1991. Details of this work, including results follow in later sections of the report.

Prior to claim acquisition, the property vendor (P.J. Santos, P.Eng.) undertook a research program correlating previously completed Tillicum Mountain area exploration data. This information, combined with the vendor's personal experience in the area led to the development of an exploration model linking certain geophysical anomalies with favourable geology.

In June 1990, the vendor conducted aerial reconnaissance over the geophysical (magnetic) anomalies and effectively correlated them to distinctive colour gossans on the ground (Santos, personal communication). The ICE, SC and J.O. #1 claims were then acquired by the vendor through staking to cover these favourable features. Concurrent with the staking program, the helicopter was

utilized to verify, where possible, rock types and mineralization associated with the gossans.

On the J.O. #1 claim, field work was completed by the vendor from September 1 to 7, 1990 and consisted of rock geochemical chip sampling and geological mapping in the west central portion of the claim. A total of 22 rock samples was collected and fire assayed for Au-Ag using geochemical techniques and geochemically analysed for 30 additional elements by ICP (Santos, March 20, 1991 Assessment Report).

From September 6 to 11 and October 7 to 19, 1990 an exploration program comprising geologic mapping, rock geochemical sampling, silt sampling and prospecting was completed by the vendor on the SC and ICE claim group. A total of 13 rock chip and 7 silt geochemical samples were collected. All 20 samples were assayed for Au, Ag, Pb and Zn and later run through a 30 element ICP (Santos, March 30, 1991 Assessment Report).

In February 1991, Jopec completed further aerial reconnaissance over more of the gossanous areas and also undertook cyanidation and gold assay testing on 12 samples previously reporting low to moderately anomalous geochemical gold values (Santos, March 20 and 30, 1991).

Minor road work comprising repairing washouts and clearing fallen trees and rocks from the main Snow Creek access road was completed by Jopec in April 1991. Other work of a preparatory nature undertaken by Jopec in May and July 1991 included the cutting of approximately four kilometres of picketted baseline on the ICE claims and about four kilometres of access (foot) trails on the SC claims.

#### 6.0 GEOLOGY

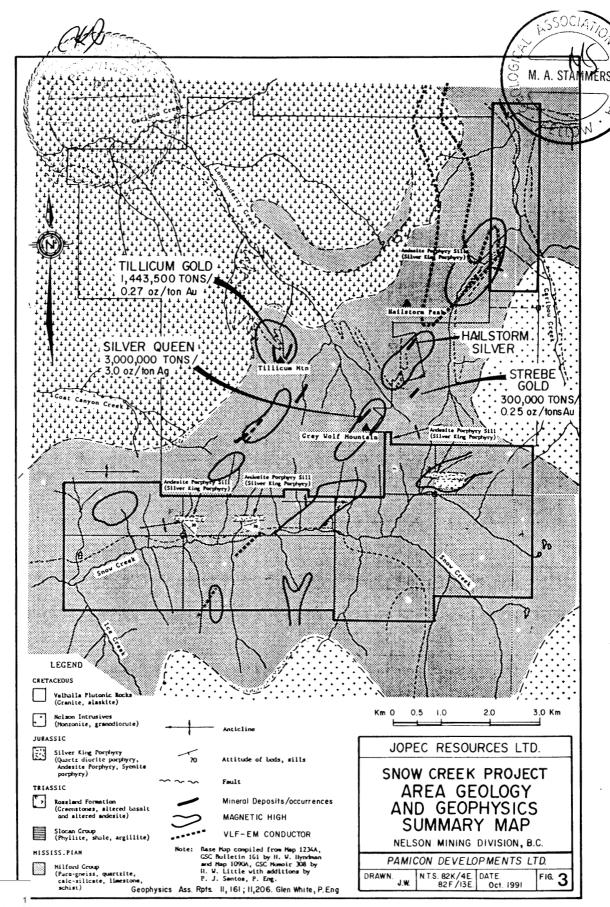
#### 6.1 REGIONAL GEOLOGY (Figure 3)

General geology of the area is shown on Figure 3. The area is underlain by a succession of metamorphosed sedimentary and lesser volcanic rocks of the Lower Jurassic Elise and Hall Formations of the Rossland Group. This supracrustal sequence is intruded to the north by the Goat Canyon-Halifax Creek stock of Jura-Cretaceous age (Valhalla plutonics) and to the south by the Nemo Lakes quartz monzonite stock of Eocene age (Nelson intrusives). Feldspar porphyry intrusions (correlated with the Silver King Porphyry by Santos, January 1991) related to the areas precious metal skarn alteration form bands of sill-like bodies that vary from 1 to over 200 m in width (BCEMPR Open File 1989-3). In general these swarms tend to strike east-west to northeast and are steeply dipping. Previous government geological maps and reports of the area assigned the principal stratigraphic units to either the Triassic Milford or Kaslo Groups. Ettlinger and Ray (BCEMPR, Open File 1989-3) freely admit that the age, stratigraphy and structure of the rocks in the Tillicum Mountain area are controversial.

Maps and geology by Santos prepared on behalf of Jopec Resources (January 1991, March 20 1991, and March 30 1991) and used elsewhere in this text as direct quotations and excerpts use formational names and ages as described by earlier government workers. The economic geology of the Snow Creek project will not be affected as to whether or not host rocks are Pennsylvanian to Triassic Milford Group or if they are Jurassic Rossland Group.

#### 6.2 PROPERTY GEOLOGY (Figures 3 to 5)

The following descriptions of property geology are excerpted from reports by P.J. Santos, P.Eng. on behalf of Jopec Resources Ltd. (January 30, 1991, March 20, 1991, March 30, 1991). Preliminary geology maps are presented for the J.O. #1 claim (Figure 4) and for the ICE and SC claims (Figure 5).

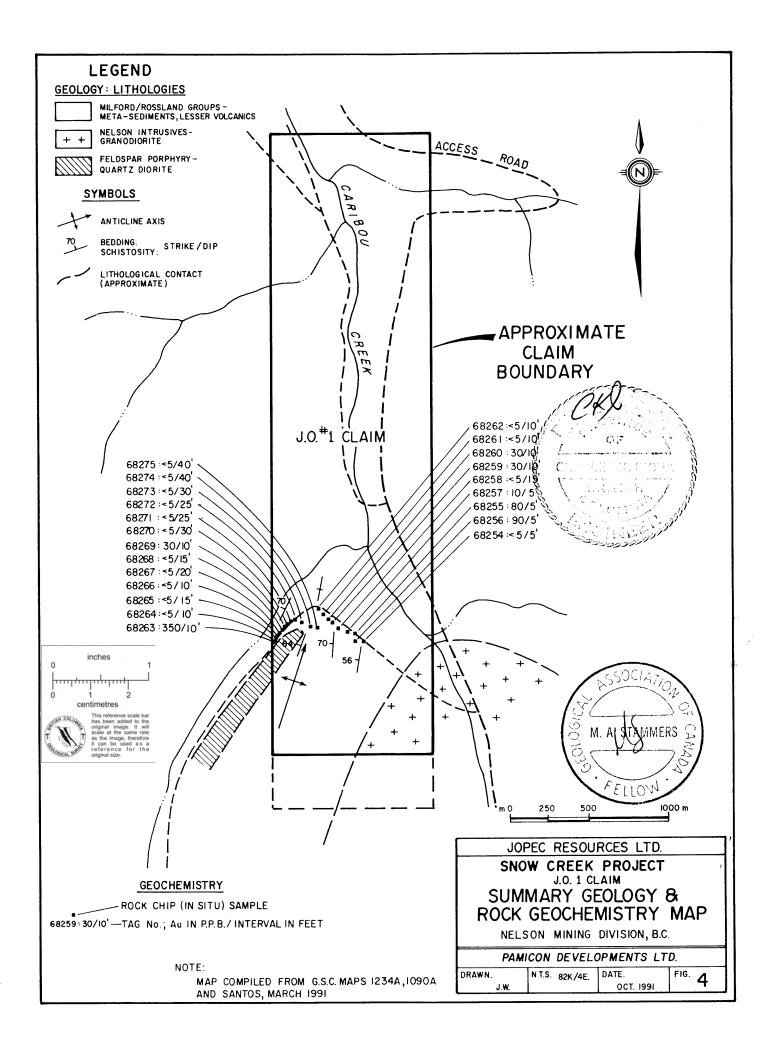


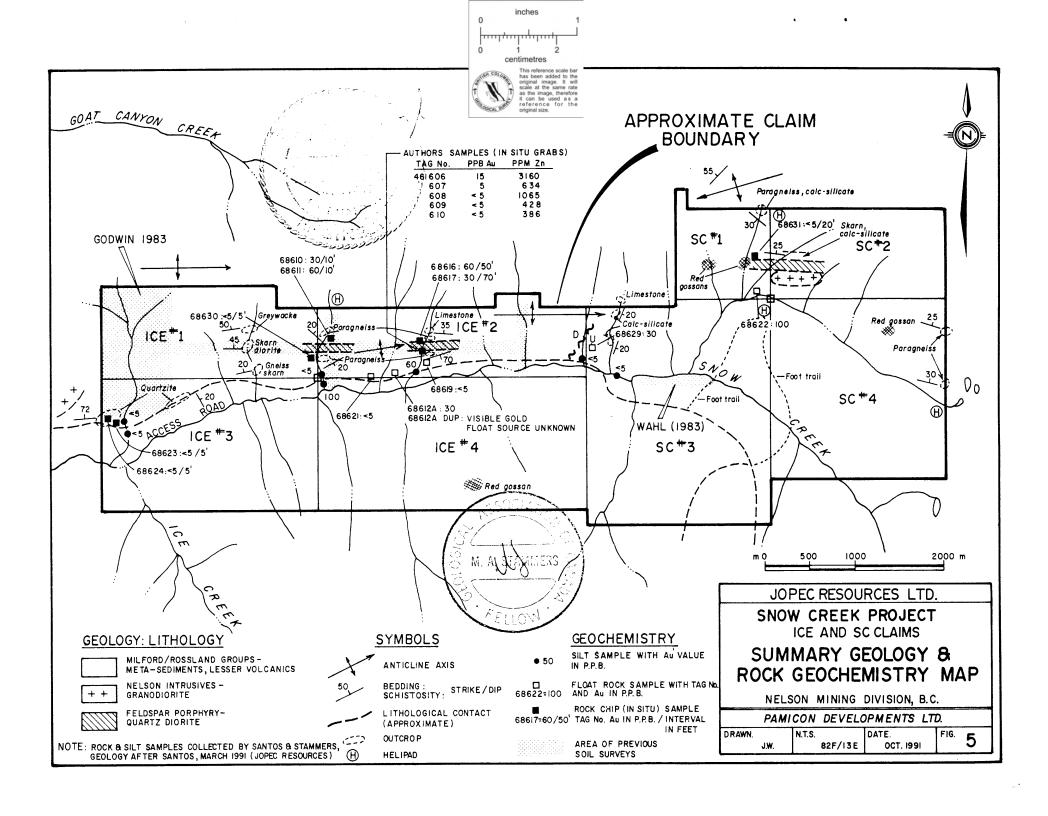
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"Jopec Resources' property is entirely underlain by rock units belonging to the Milford and Slocan Groups, and dykes associated with later plutonic activity.

The Milford Group consists of para-gneiss (gneiss derived from sedimentary rocks), quartzites, pellitic (argillaceous or clayey) calc-silicates (silicified limestones), argillites, schist. recrystalized limestone, and pebble conglomerate. Pyrrhotite and pyrite are contained within these rock units as disseminations, concentrations, streaks, and semi-massive aggregates distinctive rusty-coloured outcrops are formed where the rocks are exposed to oxidation. Galena (lead sulphide) and sphalerite (zinc sulphide) occur along thin bands in the calc-silicates forming distinct dark layers interfingered with the lighter calc-silicates.

The Slocan Group consists of altered volcanics such as tuffs and greenstones that are underlain by Milford rocks. This formation appears to be gradational to the Milford Group and its occurrence in the property is relatively inconsequential.

The Silver King Porphyry is dioritic (or andesitic) in composition and range in texture to an andesite porphyry to a dioritic porphyry. The intrusion occurs in the form of sills following the general trend of the bedded Milford Group. The Silver King Porphyry predates the Upper Cretaceous granitic intrusive (Nelson) and intrudes only the Milford and is in turn intruded by the Upper Cretaceous intrusives.

The Milford and Slocan Groups form a series of anticlines and synclines with the axes trending to the northwest north of Grey Wolf Mountain. The axes trend east-west south of Grey Wolf Mountain."

#### 7.0 MINERALIZATION

No significant, in situ precious or base metal mineralization has been found to date on the Snow Creek property either by previous workers or the present claim owners. Minor to trace geochemical amounts of gold, silver, zinc, lead and copper are associated with a variety of lithologies but most commonly with pyrite-pyrrhotite bearing calc-silicate quartz skarn. Maximum values recorded from rock geochemical sampling by Santos (March 20 & 30, 1991) and from co-author Stammers (five samples) are: 350 ppb Au, 1.4 ppm Ag, 3160 ppm Zn, 248 ppm Pb, and 975 ppm Cu. Additional information on sample results follows in the section entitled Rock Geochemistry. Skarn and hornfels rock units are spatially related to feldspar porphyry sills and often form distinctive gossans.

One float sample of calc-silicate rock containing visible gold was collected during the September/October 1990 rock geochemical and geological sampling program on an avalanche debris fan on the ICE #2 claim. The gulley in which the avalanche occurs originates upslope to the north on an adjoining claim group, passes through the ICE #2 claim and ends at the valley bottom at Snow Creek. A portion of this sample (68612A) returned a gold value of 30 ppb Au. The discrepancy between the analytical result and the visible gold in the cut hand specimen could possibly be explained by the sometimes erratic nature of distribution of gold mineralization within a single sample. Further investigation of this discrepancy is warranted and more importantly, a bedrock source for the visible gold mineralization must be found on Jopec Resources' claims before any significance can be attached to this discovery.

#### 8.0 GEOCHEMISTRY

#### 8.1 ROCK GEOCHEMISTRY

# 8.1.1 J.O. #1 Claim (Figure 4)

On the J.O. #1 claim, a total of 22 rock geochemical chip samples were collected over widths ranging from 5 to 40 feet during the 1990 exploration program. Sixteen of the samples returned values of less than 10 ppb Au, three samples were weakly anomalous at 30 ppb Au, and three samples returned weakly to moderately anomalous values of 80, 90, and 350 ppb Au. Subsequent cyanidation and gold assay testing on five of these samples reconfirmed initial analytical results. Although these values are clearly uneconomic, they do represent a an area worthy of some follow up exploration including additional sampling, mapping and prospecting.

A brief description of the highest gold results follows and their location on the claim is plotted on Figure 4. Sample 68263 was collected from a grey, massive-bedded, carbonaceous sequence of siltstone and fine grained sandstone. A chip sample across 10 feet gave a geochemical result of 350 ppb gold, 1.4 ppm silver and 778 ppm zinc.

Samples 68255 and 68256 are located proximal to each other and were taken from a series of thinly interbedded, very fine grained quartzite and silty quartzite. Some of the beds are more pyritic than others giving a characteristically banded appearance. Chip sampling across 5 feet in both samples yielded respective rock geochemical values of 80 ppb Au from 68255 and 90 ppb Au from 68256. No other elements returned significant values.

# 8.1.2 ICE and SC Claims (Figure 5)

A total of 13 rock geochem chip and float grab samples were collected on the ICE and SC claims during the 1990 exploration program and 5 rock chip samples

were collected by co-author, Stammers during his May, 1991 visit to the property. Results for these samples are reported in full in the March 30, 1991 assessment report by Santos. Samples collected on the ICE #2 claim by Stammers were delivered, by him to Chemex Labs Ltd., North Vancouver and complete results and analytical procedures are appended to this report. Sample locations and gold results are shown on Figure 5.

Of the eighteen samples collected, eleven returned gold values (including all five taken by the author) of less than or equal to 15 ppb Au, four had weakly anomalous results of 30 ppb Au and three samples collected during the 1990 exploration program were weakly to moderately anomalous with values of 60, 60 and 100 ppb Au (68611, 68616, and 68622). Subsequent cyanidation and gold assay testing on seven of these samples reconfirmed initial analytical results. Sample 68611, a chip sample across 10 feet of light green, calcsilicate skarn containing fine seams of galena and sphalerite returned values of 60 ppb Au, 18 ppm Pb and 158 ppm Zn (Santos, March 30, 1991). Sample 68616 returned values of 60 ppb Au, 92 ppm Cu and 85 ppm Zn across an interval of 50 The host rock lithologies for this sample include biotite quartzite with disseminated pyrite and a dark green, rusty tremolite-chlorite skarn assemblage. Grab sample 68622, a piece of float material from an avalanche debris fan returned values of 100ppb Au, 134 ppm Zn and 16 ppm lead. sample comprised calc-silicate quartz skarn with fine grain bands of pyrite, galena and sphalerite (Santos, March 30, 1991).

Considering other elements, two samples (461606 and 461608) collected by the author were anomalous in zinc. Host rock lithologies included a feldspar porphyry sill and a quartz biotite gneiss which respectively ran 3160 ppm Zn, 248 ppm Pb and 15 ppb Au and 1065 ppm Zn. Sample 68610 (Jopec), a 10 foot chip sample taken across the contact area between a feldspar porphyry sill and an interbedded hematite bearing quartzite and black argillite sequence ran 975 ppm Cu and 30 ppb Au.

#### 8.2 STREAM SILT GEOCHEMISTRY (Figure 5)

A total of seven silt samples were collected during the 1990 exploration program on the ICE and SC claims and are described in the March 30, 1991 assessment report by Santos. Sample locations and gold results are shown on Figure 5. Five samples returned results of less than 5 ppb Au while weak to moderate gold values of 60 (68615) and 100 (68613) ppb Au were obtained from two south flowing drainages on the ICE 2 claim. It must be noted that these drainages not only pass through Jopec's claims, but also flow through adjoining ground owned by others to the north. Further silt sampling is required in order to determine the exact location of the source of these values. No other elements reported anomalous results.

#### 8.3 PREVIOUS GEOCHEMICAL SURVEYS BY OTHERS

Previous geochemical work by others has covered only a small portion of the presently held Snow Creek Project. This section describes the results of stream silt and soil surveys completed on the KM claim group (Godwin, 1983) and the Trib claim (Wahl, 1983). All of this historic work was completed by other companies and is available for viewing as assessment reports. The authors have used definitive topographical features including drainages to ascertain ground common to the present ICE and SC claims. The locations of earlier soil grids are plotted on Figure 5 but due to the absence of multistation Au anomalies, none of the results from previous workers are shown.

The survey area on the KM group can be closely correlated with the ICE #1 and #2 claims with the majority of the approximately 400 soil samples collected over the present, western ICE #1 claim. Samples were collected every 50 metres on lines 100 metres apart in this area and analysed for gold-arsenic. In addition, two 2.8 km long east-west lines (200 m apart) and two , 1.0 km long north-south reconnaissance style lines were sampled over what is now the eastern ICE #1 and ICE #2 claims. Results of this gold-arsenic survey returned eight single station values of greater than 25 ppb Au. The maximum

value returned was 90 ppb Au. Follow-up of the greater than 25 ppb Au is advised and work should include mini soil grids, mapping and prospecting. Arsenic values ranged from below detection limits to 63 ppm As. The stream silt portion of the survey did not include gold analyses and related base metal and silver values range up to weakly anomalous values of 70 ppm Cu, 74 ppm Pb, 321 ppm Zn and 2.0 ppm Ag.

For comparative evaluation, follow-up work on four gold values of 30, 40, 120 and 170 ppb Au from a reconnaissance, contour soil survey (Stokes, 1983) led to the subsequent discovery of the Strebe gold deposit.

A total of 10 silt and 29 soil samples were collected on the Trib claim which predates a portion of the SC 3 claim. Results of the survey returned one single station soil anomaly of 45 ppb Au and one anomalous silt value of 100 ppb Au.

# 9.0 PREVIOUS GEOPHYSICAL SURVEYS BY OTHERS (Figure 3)

This section summarizes the portion of an airborne VLF-EM/magnetometer survey completed in November, 1982 by Western Geophysical Aero Data Ltd. over the area now covered by the ICE, SC and J.O. #1 claims (Pezzot and White, June 10 and June 21, 1983). The magnetometer used was a Barringer Proton Precession airborne magnetometer Model Nimbin M-123 and the VLF instrument used a Sabre Airborne VLF system using the Seattle and Annapolis channels.

A simplified interpretation of survey results, including those on the neighbouring Tillicum Mountain property is presented on Figure 3. A total of six weak magnetic highs with gradients ranging from 100 to 200 gammas occur on the Snow Creek property. Preliminary interpretation of these anomalies by Pezzot and White suggest they may be explained by one or more of the following models: a) Possible outlines of buried or near surface intrusive bodies containing a higher proportion of magnetics than surrounding Milford metasediments; b) An indication of a different facies of the sedimentary sequence

or c) Topographic features such as peaks and ridges (Pezzot and White, June 1983, p. 7-8). For comparative evaluation, a similar weak magnetic high anomaly of 100 to 200 gammas gradient is located over the Heino-Money Pit gold deposit on the adjacent Tillicum Mountain property.

Also shown on Figure 3 are three VLF-EM conductors located on the ICE #2 to #4 and J.O. #1 claims. These anomalies are classed by Pezzot and White as weak or possible and are in part, coincident with weak magnetic highs. The feature located near the western J.O. #1 claim boundary is interpreted to be likely caused by a combination of topographic effects and and increased conductivity of the sedimentary rocks compared to the surrounding intrusives. A portion of this VLF-EM feature is described as having higher frequency conductivity anomalies present which could reflect sulphide mineralization (Pezzot and White, June 1983, p.9). The two features shown on the ICE claims remained unexplained. For comparative purposes no VLF-EM responses are directly associated with gold mineralization at the Heino-Money Pit on the neighbouring Tillicum Mountain claim group.

#### 9.1 REVISED GEOPHYSICAL INTERPRETATION

Following the June 1990 and February 1991 aerial examinations of the geophysical anomalies and some ground evaluation, Santos and Jopec Resources correlated magnetic highs with colour gossans and stratigraphic horizons which contain abundant pyrrhotite, pyrite and weak geochemical gold values (Santos, March 20 and 30, 1991; Santos, personal communication). Further investigation of these magnetic features on the ground employing mapping and detailed sampling is required.

#### 10.0 DISCUSSION AND CONCLUSIONS

Jopec's Snow Creek claims are in an early stage of exploration and development. The properties are well located in an emerging gold camp and are underlain by geology similar to that hosting other known mineral occurrences and deposits in the area.

Two types of potential targets exist in the area:

- small tonnage skarn deposits containing either high grade gold or silver values
- larger lower grade gold deposits associated with one or more of the sedimentary or meta-sedimentary sequences of the Milford/Rossland Groups.

Work to date on the properties has indicated geophysical features from airborne reconnaissance which require further evaluation. Several chip samples have yielded weak to moderate geochemically anomalous gold values over widths ranging from 5 to 50 feet. While these results are not of ore grade they make these units worthy of further investigation.

The piece of float located on the ICE #2 claim on the north side of Snow Creek containing visible gold is of unknown origin. Prospecting may be able to trace this to its source.

## 11.0 RECOMMENDATIONS AND BUDGETS

The following exploration program is recommended for the Snow Creek properties of Jopec Resources.

#### PHASE IA

- conduct a reconnaissance style mapping, prospecting and silt sampling program over the claim group. During this program airborne magnetometer highs and VLF conductors should be examined

- soil sampling along contour lines should be conducted in areas where previous work has yielded some gold values which appear to be anomalous. These would consist of the ICE claims to the north of Snow Creek the northwest portion of the SC claims and the southern portion of the J.O. #1 claim

#### PHASE IB

Upon completion of the above, grids should be established in areas requiring further work. These grids would be used to control detailed geologic mapping, prospecting, sampling and ground magnetometer and VLF electromagnetic surveys.

# PHASE II

Subject to results of the Phases IA and IB programs, a second phase program may be warranted. This would most likely consist of expansion of the detailed grid work along with trenching and/or drilling.

The following budget is recommended for this program.

#### PHASE IA

7,500
6,000
13,500
7,500
2 000
3,000
7,000
;

Expendible Field Supplies	2,0	000
Miscellaneous Equipment Rental	1,0	000
Engineering and Management	_5,0	000
	52,	500
Contingency	5,0	000
GST	4,0	000
		\$ 61,500
PHASE IB		
Gridwork - allow for 20 line k	ri lomat was	
Grid Establishment @ \$200/k		າດດ
· · · · · · · · · · · · · · · · · · ·		750
Mapping - 10 man days @ \$37		
Prospecting - 10 man days @		000
	• • • • • • • • • • • • • • • • • • •	500
Geophysical Surveys (allow		
equipment and interpreta	ntion) 7,0	000
Support - 140 man days @ \$75	10,:	500
Vehicle Rental - 2 x 20 days @	3,0	000
Access and Analysis		
Assay and Analysis	612 000	
800 soil samples @ \$15	\$12,000	
100 rock assay @ \$25	2,500	
	14,	500
Expendible Field Supplies	2,5	500
Miscellaneous Equipment Rental	1,0	000
Engineering and Management	_10,0	000
	63,	750
Contingency	10,0	000
GST	5.0	000
		78,750
Total - Phase I		\$140,250

- Pamicon Developments Ltd. -

# PHASE II - Subject to results of Phase I

Expansion of grids and possible trenching and/or drilling.

Preparation of detailed budget is not possible at this time,
however should this stage proceed \$150,000 should be available for this type of work

Phase II

ELLCM

\$150,000

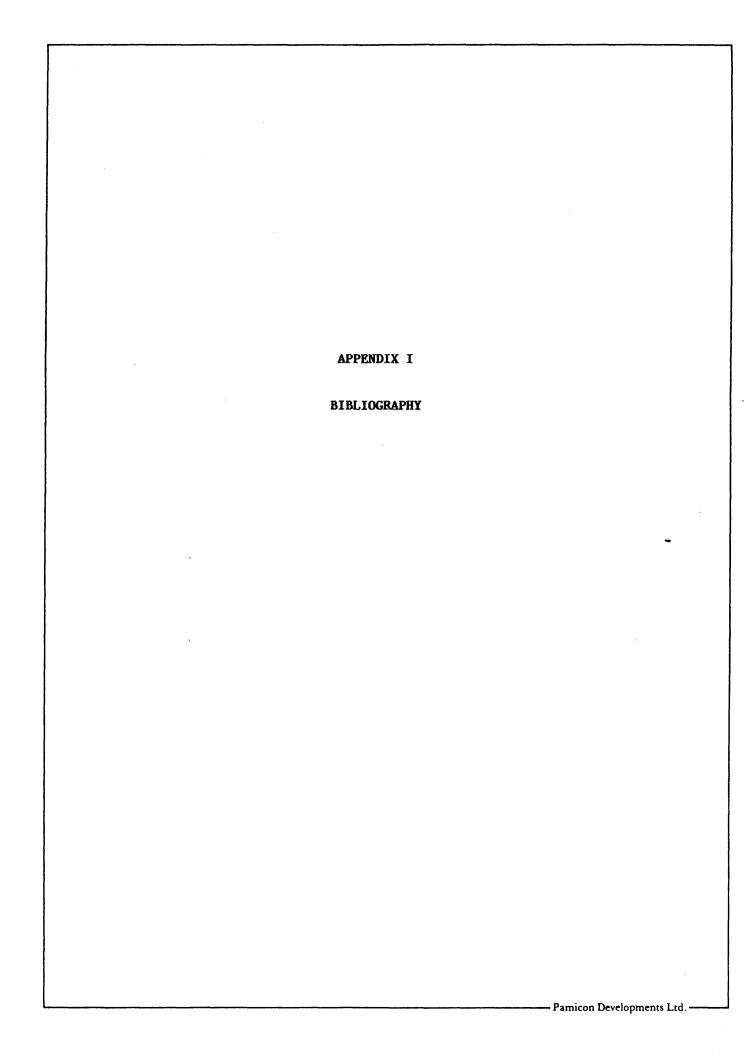
Total - Phases I and II

\$290,250

Respectfully submitted,

M.A. Stammers, Geologist,

C.K. Ikona, P.Eng.



#### **BIBLIOGRAPHY**

- (author unknown) (1989): Report on the Strebe Property, Caribou Claims, Slocan Mining Division, Caribou Creek Area for Esperanza Explorations Ltd., unpublished report, 23 pp.
- Beaty, R.J. and A.E. Muir (1983): Geological and Geochemical Investigations of the Park-Snowslide Claim Group, Tillicum Mountain Region, Slocan Mining Division, B.C. Assessment Report No. 11,870, 18 pp.
- Crooker, G. (1984): Geological and Geochemical report on the Au 2 Claim,
  Tillicum Mountain Area, Slocan Mining Division, for Kilembe Resources
  Ltd., B.C. Assessment Report No. 12,690, 16 pp.
- Dewonck, B., J. McClintock and W. Roberts (1986): Summary of the Exploration and Pilot Mining Program, Esperanza Gold Property, Snow Lakes Area, Southeast British Columbia, Slocan Mining Division, B.C. Assessment Report No. 15,700, 109 pp.
- Esperanza Explorations Ltd. and Le Teko Resources Ltd. (1983): Geophysical Report on an Airborne VLF-Electromagnetometer and Magnetometer Survey, Til 1-4, Juanita, Wolf, Goat, Halifax, Hail Claims, Slocan Mining Division, B.C. Assessment Report No. 11,161, 22 pp.
- Ettlinger, A.D. and G.E. Ray (1989): Precious Metal Enriched Skarns in British Columbia, An Overview and Geological Study, B.C. Ministry of Energy, Mines and Petroleum Resources Paper 1989-3, 128 pp.
- Godwin, C.I. (1983): Assessment Report of King Midas Mineral Claim Groups, Burton, B.C. for Condaka Metals Corp. and Esperanza Explorations Limited, B.C. Assessment Report No. 11,727, 55 pp.
- Hyndman, D.W. (1968): Petrology and Structure of Nakusp Map Area, British Columbia, GSC Bulletin 161.

- Little, H.W. (1960): Nelson Map Area, West Half, British Columbia (82FW/2), GSC Memoir 308, 205 pp.
- Mulligan, R. (1952): Bonnington Map Area, British Columbia, GSC Paper 52-13, 37 pp.
- Ostensoe, E.A. (1984): Report of Surveys and Geological Mapping, Olga, Olga 1, Ruza and Au 3 Claims, Snow Creek Area, Slocan Mining Division, B.C. Assessment Report No. 12,939, 10 pp.
- Pezzot, E.T. and E.W. White (1983): Braemar Resources Corp., Geophysical Report on an Airborne VLF-Electromagnetometer and Magnetometer Survey, Olga 1, Olga, Ruza, Au 3 Claims, Slocan Mining Division, B.C. Assessment Report 11,206, 16 pp.
- Roberts, W.J. (1988): Report on the Strebe Property, Caribou Claims for Esperanza Explorations Ltd., Slocan Mining Division, Caribou Creek Area, unpublished report, 71 pp.
- Roberts W. and J. McClintock (1983): 1983 Exploration Report on the Tillicum Gold Property, Slocan Mining Division, B.C. Assessment Report No. 12,269, 211 pp.
- Santos, P.J. (1991): Assessment Report on SC and ICE Claim Groups, March 30, 1991.
- Santos, P.J. (1991): Assessment Report of the J.O. #1 Claim, March 20, 1991.
- Schroeter, T.G., C. Lund and G. Carter (1989): Gold Production and Reserves in British Columbia, B.C. Ministry of Energy, Mines and Petroleum Resources, Open File 1989-22, 85 pp.



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers 212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 To: PAMICON DEVELOPMENTS LIMITED

711 - 675 W. HASTINGS ST. VANCOUVER, BC V6B 1N4

Project : JOPEC Comments:

Page Number :1-B Total Pages :1 Certificate Date: 17-JUN-91 Invoice No. :19115943 P.O. Number :

CERTIFICATE OF ANALYSIS	A9115943

SAMPLE DESCRIPTION	PRI		Mo ppm	Na %	Ni ppm	ppm p	pp. Pb	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	ppm U	ppm V	bbur M	Zn ppm	
461606 461607 461608 461609 461610	205 205 205 205 205 205	294	1 2 6 7 1	0.04 0.10 0.07 0.04 0.08	6 54 29 22 10	530 1280 1070 1010 1520	248 214 186 198 234	< 5 < 5 < 5 < 5 < 5	2 5 3 1	25 104 49 81 60	0.11 0.27 0.19 0.14 0.14	< 10 < 10 < 10 < 10 < 10	< 10 < 10 < 10 < 10 < 10	19 134 137 50 48	10 10 10 < 10 < 10	3160 634 1065 428 386	
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CERTIFICATION:

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# **Chemex Labs Ltd.**

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To: PAMICON DEVELOPMENTS LIMITED \* \* \*

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Page Number :1-A Total Pages :1 Certificate Date: 17-JUN-91 Invoice No. :19115943 P.O. Number :

Project : Comments: JOPEC

											CERTIFICATE OF ANALYSIS			YSIS	A9115943						
SAMPLE DESCRIPTION	PRE		Au ppb FA+AA	ppm Ag	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	PPm Cd	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	PPm Hg	K %	I.a ppm	Mg ∜	Mn ppm
461606 461607 461608 461609 461610	205 205 205 205 205 205	294 294 294	15 5 < 5 < 5 < 5	0.6 0.2 < 0.2 0.6 0.4	0.70 2.16 0.84 1.22 0.95	< 5 < 5 < 5 < 5 < 5	70 20 20	< 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 2 < 2 < 2 < 2 < 2 < 2	0.27 1.35 0.77 1.49 1.11	22.0 4.0 8.5 4.0 2.5	1 12 7 5 4	89 212 136 107 54	37 90 112 81 61	1.94 3.66 3.17 1.50 2.04	< 10 10 < 10 < 10 < 10	1 < 1 1 1 1	0.17 0.29 0.05 0.06 0.10	10 10 < 10 < 10 < 10	0.33 1.60 0.34 0.25 0.23	725 370 225 145 160
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Analytical Chemists \* Geochemists \* Registered Assayers 212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 To: PAMICON DEVELOPMENTS LIMITED

711 - 675 W. HASTINGS ST. VANCOUVER, BC V6B 1N4

A9115943

Comments:

**CERTIFICATE** 

A9115943

PAMICON DEVELOPMENTS LIMITED

Project: P.O. #: JOPEC

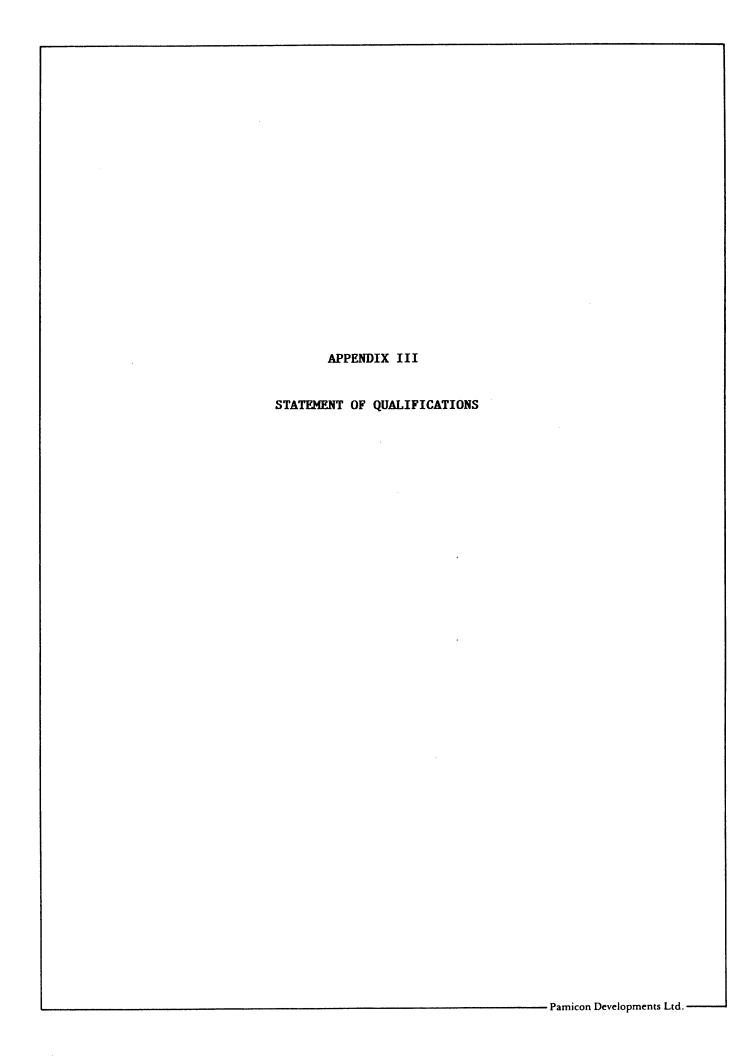
Samples submitted to our lab in Vancouver, BC. This report was printed on 17-JUN-91.

SAMPLE PREPARATION								
CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION						
205 294 298	5 5 5	Geochem ring to approx 150 mesh Crush and split (0-10 pounds) ICP - AQ Digestion charge						
* NOTE	1: _							

The 32 element ICP package is suitable for trace metals in soil and rock samples. Elements for which the nitric-aqua regia digestion is possibly incomplete are: Al, Ba, Be, Ca, Cr, Ga, K, La, Mg, Na, Sr, Ti, Tl, W.

# **ANALYTICAL PROCEDURES**

	<del>,</del>				
CHEMEX	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
100 922 921 923 924 925 926 927 928 930 931 935 936 937 938 939 940 941 942 943 958 944 945 947 948 949 950	555555555555555555555555555555555555555	Au ppb: Fuse 10 g sample Ag ppm: 32 element, soil & rock Al %: 32 element, soil & rock As ppm: 32 element, soil & rock Ba ppm: 32 element, soil & rock Be ppm: 32 element, soil & rock Bi ppm: 32 element, soil & rock Ca %: 32 element, soil & rock Cd ppm: 32 element, soil & rock Cd ppm: 32 element, soil & rock Cu ppm: 32 element, soil & rock Cu ppm: 32 element, soil & rock Fe %: 32 element, soil & rock Ga ppm: 32 element, soil & rock Hg ppm: 32 element, soil & rock Hg ppm: 32 element, soil & rock Mg %: 32 element, soil & rock Mn ppm: 32 element, soil & rock Mn ppm: 32 element, soil & rock Mn ppm: 32 element, soil & rock Na %: 32 element, soil & rock Na ppm: 32 element, soil & rock Na ppm: 32 element, soil & rock Na ppm: 32 element, soil & rock Pppm: 32 element, soil & rock Sc ppm: 32 element, soil & rock	FA-AAS ICP-AES	5 0.2 0.01 5 10 0.5 2 0.01 0.5 1 1 0.01 10 0.01 5 1 0.01 10 0.01 1 10 2 5 1 1 0.01 1 10 2 5	10000 200 15.00 10000 100.0 10000



## MICHAEL A. STAMMERS, Geologist, FGAC

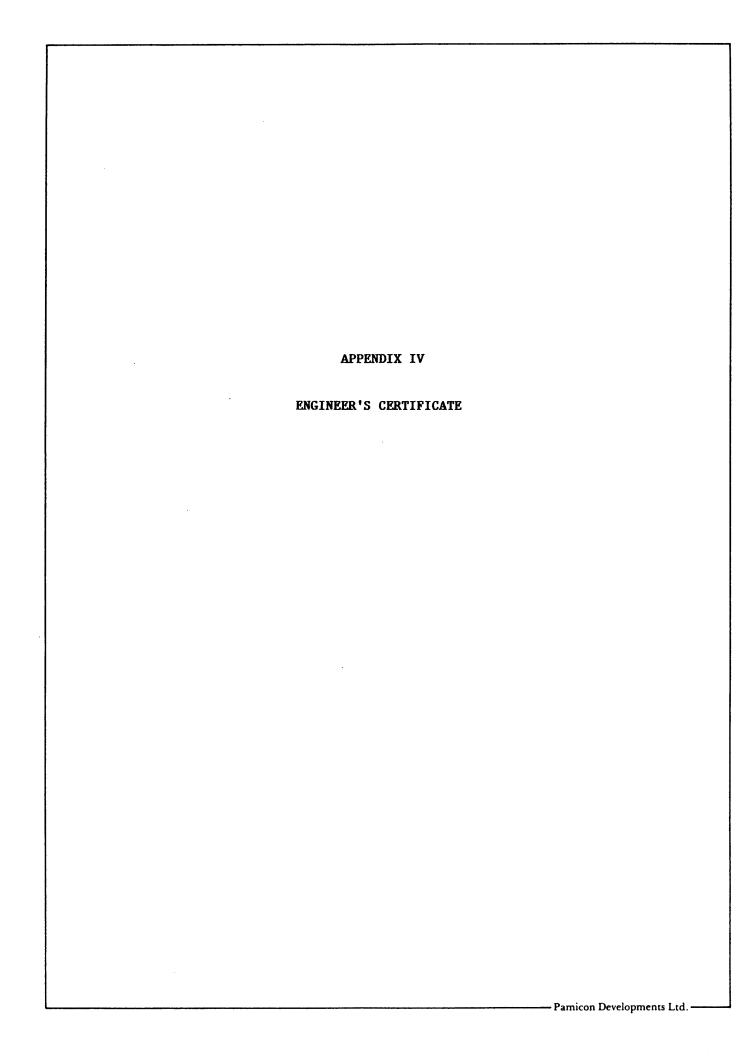
- I, MICHAEL A. STAMMERS, of 941 Kennedy Avenue, North Vancouver, in the Province of British Columbia, DO HEREBY CERTIFY:
- 1. I am a graduate of McMaster University (1977) and hold a combined Honours B.A. in Geology and Geography.
- 2. I have practiced in my profession with various mining companies in Yukon, British Columbia and the Northwest Territories for 17 years.
- 3. I am a Fellow of the Geological Association of Canada.
- 4. This report is based on a personal examination of the ICE #1 to #4 and SC #3 claims made on May 30, 1991.
- 5. THAT I have no interest in the property described herein, nor in securities of any company associated with the property, nor do I expect to receive any such interest.
- 6. THAT I hereby grant permission to Jopec Resources Ltd. for the use of this report in any prospectus or other documentation required by any regulatory authority.

DATED at Vancouver, B.C., this b day of croser, 1991.

M. A. STAMMERS

Michael A. Stammers, Geologist, FGAC

Pamicon Developments Ltd. -



#### ENGINEER'S CERTIFICATE

- I, CHARLES K. IKONA, of 5 Cowley Court, Port Moody, in the Province of British Columbia, DO HEREBY CERTIFY:
- THAT I am a Consulting Mining Engineer with offices at Suite 711, 675
   West Hastings Street, Vancouver, British Columbia.
- 2. THAT I am a graduate of the University of British Columbia with a degree in Mining Engineering.
- 3. THAT I am a member in good standing of the Association of Professional Engineers of the Province of British Columbia.
- 4. THAT this report is based on information provided by Jopec Resources Ltd., on a review of all other information on the area and on several year's experience in exploration and mining in the Kootenay Arc area of B.C.
- 5. THAT I have no direct or indirect interest in the property described herein or the securities of the company nor do I expect to receive any such interest.
- 6. THAT I consent to the use by Jopec Resources Ltd. of this report in a Prospectus or Statement of Material Facts or any other such document as may be required by the Vancouver Stock Exchange or the Office of the Superintendent of Brokers.

DATED at Vancouver, B.C., this 6 day of Oct , 1991.

C.K. Ikona, P.Eng.



Suite 2000 1055 Dunsmuir Street P.O. Box 49279 Four Bentall Centre Vancouver, British Columbia V7X 1P4 Telephone: (604) 669-4466 Telecopier: (604) 685-0395

# **AUDITORS' REPORT**

To the Directors of Jopec Resources Ltd.

We have examined the schedule of reimbursed deferred exploration and development costs relating to the Snow Creek Project for the period January 1, 1991 to July 31, 1991, prepared in accordance with Section 3.3 of the Option Agreement between the Company and Perfecto J. Santos dated April 29, 1991, as amended May 15, 1991 and December 20, 1991. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances.

In our opinion, this schedule presents fairly the deferred exploration and development costs reimbursed to Perfecto J. Santos for the period January 1, 1991 to July 31, 1991, in accordance with the provisions of Section 3.3 of the Option Agreement referred to above and generally accepted accounting principles.

Vancouver, B.C.

January 10, 1992

**Chartered Accountants** 

Delate Fail

# JOPEC RESOURCES LTD.

# SCHEDULE OF REIMBURSED DEFERRED EXPLORATION AND DEVELOPMENT COSTS RELATING TO THE SNOW CREEK PROJECT FOR THE PERIOD JANUARY 1, 1991 TO JULY 31, 1991

Staking		
Surveying, drafting and research		\$4,000
Labour	4,324	
Helicopter	9,592	
Filing fees, option payments	685	
Miscellaneous	<u> 385</u>	
		\$18,986
Assessment work		
Geology	9,500	
Mapping and sampling	5,031	
Labour	14,077	
Truck rentals	1,930	
Miscellaneous	3,632	
		34,170
		•
Technical report		
Professional fees	4,012	
Miscellaneous	1,975	
		5,987
		.,
Other		
Professional fees - research and mineral		
evaluation	6,750	
Travel expenses	1,381	
Miscellaneous	534	
Wild Charles		8,665
		0,000
		\$ <u>67,808</u>

# **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: January 30, 1992

**ISSUER** 

President

ON BEHALF OF THE BOARD OF DIRECTORS

Genevieve Wilychko

Genevieve Welychko

**PROMOTERS** 

**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: January 30, 1992

YORKTON SECURITIES INC.