

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

# KETTLE RIVER RESOURCES LTD.

Incorporated under the laws of  
the Province of British Columbia

## PROSPECTUS

Date: December 21, 1981

### NEW ISSUE

#### OFFERING OF 800,000 UNITS

(Each Unit consisting of one share and one  
Series "A" Share Purchase Warrant)

	Price to Public	Commission	Proceeds to Issuer if all Units are Sold
Per Unit: .....	\$0.70	\$0.15	\$0.55
Total: .....	\$560,000.00	\$120,000.00	\$440,000.00*

\*Before deduction of expenses of this offering, estimated to be \$12,000.00.

THERE IS NO MARKET FOR THE COMPANY'S SECURITIES.

A PURCHASE OF THE UNITS OFFERED BY THIS PROSPECTUS MUST BE CONSIDERED A SPECULATION SINCE THE COMPANY'S MINERAL CLAIMS ARE STILL ONLY IN THE EXPLORATION STAGE. THE PROPERTY OF THE COMPANY IS WITHOUT A KNOWN BODY OF COMMERCIAL ORE AND THE PROPOSED PROGRAM IS AN EXPLORATORY SEARCH FOR ORE. SEE ALSO "ELEMENTS OF RISK" ON PAGE 6.

NO SURVEY HAS BEEN MADE OF THE COMPANY'S LOCATED MINERAL CLAIMS AND, THEREFORE, IN ACCORDANCE WITH THE MINERAL LAWS OF THE PROVINCE OF BRITISH COLUMBIA, IN WHICH THE CLAIMS ARE SITUATE, THEIR EXISTENCE AND AREA COULD BE IN DOUBT.

THIS ISSUE IS SUBJECT TO A MINIMUM SUBSCRIPTION BASED ON THE TOTAL OFFERING (SEE ITEM "PLAN OF DISTRIBUTION" PAGE 1). FOR DETAILS OF THE MINIMUM SUBSCRIPTION, SEE PAGE 4.

THE SHARES OFFERED BY THIS PROSPECTUS REPRESENT 33.8% OF THE TOTAL NUMBER OF SHARES TO BE ISSUED AND OUTSTANDING UPON COMPLETION OF THIS OFFERING AND THE SHARES ISSUED TO PROMOTERS, DIRECTORS AND CONTROLLING PERSONS FOR CASH AND PROPERTIES REPRESENT 44.9% OF THE TOTAL NUMBER OF SHARES TO BE ISSUED AND OUTSTANDING UPON COMPLETION OF THIS OFFERING.



KETTLE RIVER RESOURCES LTD.

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## NAME AND INCORPORATION OF COMPANY

The full name of the Company is KETTLE RIVER RESOURCES LTD. Its registered and records office is Suite 1620 - 701 West Georgia Street, Vancouver, British Columbia. Its head office is 214 - 1045 Haro Street, Vancouver, British Columbia.

The Company was incorporated by Memorandum on the 17th day of October, 1980, under the laws of the Province of British Columbia. The Company changed its name to KETTLE RIVER RESOURCES LTD. on July 24, 1981, and will be a reporting company when the Superintendent of Brokers issues a receipt for this Prospectus.

## PLAN OF DISTRIBUTION

The Company offers by this Prospectus 800,000 units, each Unit consisting of one common share of the Company and one Series "A" Share Purchase Warrant, at a price of \$0.70 per Unit. The Company will sell Units of this issue on a first come first served basis through duly registered Investment Dealers to residents in the Province of British Columbia and will pay a commission of up to 21% or 15¢ per Unit to such Investment Dealers for each Unit sold. The Company may also sell the Units directly to the public through trading directors at a price of \$0.70 per Unit. Trading directors will not be paid any commission.

Two Series "A" Share Purchase Warrants shall entitle the holder to purchase one additional common share of the Company at a price of \$0.80 per share if exercised on or before 180 days from the date of the Company obtaining listing on the Vancouver Stock Exchange but in any event, no longer than one year from the date of this Prospectus. At such time as the Company obtains a listing, replacement warrants will be issued disclosing the new expiry date.

## DIRECTORS AND OFFICERS

<u>Name and Address</u>	<u>Principal Occupation for Past Five Years</u>	<u>Position With Company</u>
George Oxley MacDonald Stewart P.O. Box 130 Greenwood, B.C.	Geologist; Director of New Frontier Petroleum, Inc., Transcost Resources Corporation, Dentonia Resources Ltd., Kelly Petroleum Inc., and Oneida Resources Corporation	President & Director

<u>Name and Address</u>	<u>Principal Occupation for Past Five Years</u>	<u>Position With Company</u>
Brian Fagan 3672 Governor Drive San Diego, California U.S.A. 92122	Self-employed mineral property landman, Direc- tor of Brican Resources Ltd., Formerly Commercial Real Estate Salesman, Securities Salesman with Fisher Securi- ties.	Vice- President & Director
Kenneth Linton Daughtry Tronson Road R.R. #4 Vernon, B. C.	Consulting Geologist Director of Brican Resources Ltd.	Secretary & Director
William Ritchie Gilmour 13511 Sumac Lane Vernon, B. C.	Geologist	Director
James Thomas Fyles 1720 Kingsberry Crescent Victoria, B.C.	Retired; formerly Senior Assistant Deputy Minister, B.C. Ministry of Energy, Mines & Petroleum Resources	Director

#### DESCRIPTION OF SHARE CAPITAL STRUCTURE

The share capital structure of the Company consists of one class of shares only. All shares issued by the Company rank equally as to dividends, voting rights and as to any distribution of assets on winding-up or liquidation. There are no Indentures or Agreements limiting the payment of dividinds and there are no conversion rights, no special liquidation rights, pre-emptive rights or subscription rights. The presently outstanding share capital is not subject to any call or assessment and the shares offered hereby when issued and sold as described in this prospectus will not be subject to any call or assessment.

CAPITALIZATION

<u>Designation of Security</u>	<u>Amount Authorized to Issue</u>	<u>Amount out-standing at June 16, 1981 Balance Sheet</u>	<u>Amount out-standing at Dec. 21, '81</u>	<u>Amount out-standing if all Securities sold</u>
Common shares	10,000,000	1,565,001	1,565,001	2,365,001 *

\*The 2,365,001 shares do not include the issuance of any shares pursuant to the exercise of Series "A" Share Purchase Warrants.

PRIOR SALES

<u>Number Sold</u>	<u>Price</u>	<u>Total Cash Received</u>	<u>Commission Paid</u>
1	\$1.00	\$ 1.00	Nil
500,000	.20	100,000.00	Nil
315,000	.30	94,500.00	Nil

750,000 shares of the Company were issued for property at a deemed consideration of 1¢ per share. All of the outstanding shares issued for cash and property were issued during the past 12 months.

USE OF PROCEEDS

The net proceeds of the Company of \$440,000.00 from the sale of the securities together with approximately \$75,000.00 on hand of residual working capital will be spent in order of priority as follows:

	<u>Maximum</u>	<u>Minimum</u>
A. Cost of this issue	\$12,000.00	\$12,000.00
B. Provision for Listing Fee	2,000.00	2,000.00
C. Conduct claim boundary studies and general data compilation for all properties held	35,000.00	35,000.00
D. Reserve for payments for the B.C. Mine Area properties	20,000.00	20,000.00

		<u>Maximum</u>	<u>Minimum</u>
E.	Conduct Phase I of the program recommended for the Noranda Option Properties by J.B.P. Sawyers, P.Eng. in his report dated May 25, 1981 which consists of a boundary study, map compilation, assessment work and geological mapping, geophysical survey and trenching	\$73,000.00	\$73,000.00
F.	Conduct Phase II of the program recommended for the Noranda Option Properties in the report referred to in E. above, which consists of detailed geophysics and diamond drilling	149,000.00	---
G.	Conduct Phase I of the program recommended for the B. C. Mine Area properties by J.B.P. Sawyer P. Eng., in his report dated May 25, 1981 which consists of geological mapping, trenching and a geophysical survey	41,000.00	41,000.00
H.	Conduct Phase I of the program recommended for the Sappho Area properties by J.B.P. Sawyer P. Eng., in his report dated May 25, 1981 which consists of geological mapping trenching and geophysical surveying	39,000.00	39,000.00
I.	Reserve for future exploration on the properties presently held by the Company if such work is warranted and for general and administrative purposes.	144,000.00	128,000.00
	Total:	<u>\$515,000.00</u> =====	<u>\$350,000.00</u> =====

If all the Units offered hereunder are not sold, then priority will be given to the items listed under the "Minimum" column as shown above. It will require a minimum amount of \$275,000.00 to satisfy the above priorities.

If 500,000 Units offered by this Prospectus are not sold within 120 days from the date of the acceptance by the Superintendent of Brokers of this Prospectus, then all subscriptions for Units held by the Montreal Trust Company shall be returned to the subscribers without deductions. All subscriptions will be held by Montreal Trust Company in trust until such time as a minimum amount of \$275,000.00 net of commissions have been raised by the sale of 500,000 Units sold pursuant to this Prospectus in British Columbia or any other jurisdiction in which the Units have been qualified for sale and the Superintendent of Brokers has consented to the release of the funds. Any commissions, assessments or other fees or expenses will be borne by the Company. If the minimum amount is raised within the required period, the Vancouver Stock Exchange fee of \$2,000.00 will be held in trust by Montreal Trust Company for that purpose.

The Company may, pursuant to the recommendations of a qualified engineer, abandon in whole or in part any of its properties or may alter, as work progresses, the work program recommended or may make arrangements for the performance or all or any portion of such work by persons or companies and may use any money so diverted for the purpose of conducting work or examining other properties acquired by the Company after the date of this prospectus although the Company has no present plans in this regard. If any such event occurs during the primary distribution of the Units referred to in this Prospectus, an amendment to this Prospectus will be filed. If any such event occurs subsequent to completion of the primary distribution, shareholders will be notified.

No part of the proceeds shall be used to invest, underwrite or trade in securities other than those that qualify as investment in which trust funds may be invested under the laws of the jurisdiction in which securities offered by this Prospectus may be lawfully sold. Should the Company propose to use the proceeds to acquire non-trustee type securities after initial distribution of the securities offered by this Prospectus, approval by the shareholders must first be obtained and prior disclosure must be made to the securities regulatory bodies having jurisdiction over the sale of the securities offered by this Prospectus.

#### ELEMENTS OF RISK

The securities offered hereby are considered speculative due to the nature of the Company's business. There is no assurance that expenditures to be made by the Company will result in any discoveries of commercial ore bodies. Reference is made to the caption "DIRECTORS AND OFFICERS" on pages 1 and 2 under which it is disclosed that some of the directors of the Company are also directors of other mining companies. If additional properties become available in the areas in which the Company's properties are presently located, a conflict of interest may develop in that the directors may offer the other companies the right to participate in the exploration and development of such properties, if they have funds available to pay their proportionate share of the cost of acquisition and exploration expenditures.

#### DESCRIPTION OF BUSINESS AND PROPERTY OF THE ISSUER

The principal business of the Company is the acquisition, exploration and development of natural resource properties. The Company's mineral properties are located in the Greenwood Mining Division, southern British Columbia, and are designated as follows:

##### Noranda Option Properties

The Company holds an option to acquire a 49% interest in 94 mineral claims, 3 mineral leases and 57 Crown Granted mineral claims located in the Greenwood Mining Division, British Columbia. The Company acquired the option for \$1.00 pursuant to an agreement dated June 1, 1981, made with George O.M. Stewart and Kenneth L. Daughtry, both of whom are directors of the Company. Messrs. Stewart and Daughtry acquired the option from Noranda Exploration Company Limited of 1050 Davie Street, Vancouver, B.C. In order



to exercise the option the Company must spend \$300,000 on the property within 3 years of May 31, 1981. The Company is committed to do sufficient work on the property to maintain the property in good standing for 1 year. The Company deposited \$12,200 with Noranda Exploration Company Limited to assure that sufficient funds will be available to pay cash in lieu of assessment work, if such assessment work was not carried out in time. If the assessment work is performed, the \$12,200 will be refunded to the Company. As soon as the option is exercised, Noranda and the Company will enter into an operating agreement and each will be required to contribute its proportionate share to future expenditures. Noranda Exploration Company Limited will be the operator.

The cost of the properties to Messrs. Stewart and Daughtry was \$400.00, which amount does not include time spent by them in examining the properties and negotiating their acquisition.

Noranda Exploration Company Limited is a wholly-owned subsidiary of Noranda Mines Limited, a company which trades on the Toronto Stock Exchange.

B. C. Mine Area

The Company holds an option to purchase 3 Crown granted mineral claims and 1 reverted Crown granted mineral claim described as follows:

<u>Crown Granted Claims</u>		<u>Lot No.</u>
B. C.		882
London No. 2 Fr		465S
Mountain View		1533
<u>Reverted Crown Granted Mineral Claims</u>	<u>Record No.</u>	<u>Expiry Date</u>
Daisy Fraction (Reverted Crown Grant)	2299	June 26, 1985

The Company acquired the option pursuant to an agreement dated June 1, 1981 made with George O. M. Stewart and Kenneth L. Daughtry both of whom are directors of the Company, for \$5,000.00. Messrs. Stewart and Daughtry acquired the option pursuant to an agreement dated October 31, 1980 made with Althea Elizabeth Scott of

Victoria, British Columbia and Wesley Earl Dockstader of Grand Forks, British Columbia, for \$5,000.00. In order to exercise the option the Company paid \$10,000 on August 1, 1981, and must pay a further \$10,000 on the 1st day of August each year until 1988 and \$15,000 on the 1st day of August 1989. The total purchase price of the option is \$100,000. If the option payments are all made by the 1st day of August 1985, then the purchase price will be reduced by 10%.

The Company is the owner of 2 Crown granted mineral claims and 2 located mineral claims described as follows:

Crown Granted Claims

Lot No

Matabelle Fraction  
Mountain Rose

2114  
794

Mineral Claims

Record No.

Expiry Date

Ontario Fr.  
B. C.

2519 (1 unit)  
2382 (12 units)

December 1, 1982  
August 13, 1984

The Company purchased the Matabelle Fraction and Mountain Rose crown granted mineral claims for \$10,000.00 by agreement dated May 7, 1981 made between Fred Mahoney of Vancouver, B.C., Douglas Sandner and Kenneth Sandner, both of Christina Lake, B.C. (the vendors), and George Stewart, who was acting as agent for the Company. The Company acquired the Ontario Fr and B.C. mineral claims by staking at a nominal cost.

Sappho Area

The Company is the owner of 9 mineral claims described as follows:

<u>Claim Name</u>	<u>Record No.</u>	<u>Expiry Date</u>
Alkalai	2383 (20 units)	August 13, 1982
Afton	2280 (16 units)	June 17, 1982
Ingerbelle	2773 (16 units)	July 3, 1982
P T #1	43 (2 units)	June 10, 1990
Sapho #1	2281 (1 unit)	June 17, 1982
Sapho #2	2282 (1 unit)	June 17, 1982
Sapho #3 Fr. to #4 Fr.	2732 to 2733	June 12, 1983
Sapho #5 Fr.	2731	June 12, 1982

The Company acquired the Alkalai claim from Brican Resources Ltd. of 1620 - 701 West Georgia Street, Vancouver, British Columbia pursuant to an agreement dated June 1, 1981, for 125,000 escrowed shares. Brian Fagan and Kenneth L. Daughtry are directors of the Company and of Brican Resources Ltd.

The Company acquired the Afton, Ingerbelle P T #1, Sapho #1 and Sapho #2 claims from Brian Fagan, Kenneth L. Daughtry, George O. M. Stewart and William R. Gilmour all of whom are directors of the Company, for 625,000 escrowed shares of the Company issued as follows:

George O. M. Stewart P.O. Box 130 Greenwood, B. C.	340,500
Brian Fagan 3672 Governor Drive San Diego, California	113,500
Kenneth L. Daughtry Tronson Road R. R. #4 11 E 6 Vernon, B. C.	113,500
William R. Gilmour 13511 Sumac Lane Vernon, B. C.	57,500

All of the shares have been issued and are held in escrow subject to the direction of the Superintendent of Brokers. The agreement may be inspected while the Company's shares are in primary distribution, during normal business hours at the Company's records office at 1620 - 701 West Georgia Street Vancouver, B. C. The cost of the Sappho Area Claim to the directors was \$2,000.00.

The Sappho #3 Fr. to #5 Fr. were acquired by the Company by staking at a nominal cost.

The Company's properties lie within an area bounded approximately by Eholt Creek to the north and the International Boundary (49°00' N) to the south, and extending from the main Provincial Highway (No. 3) easterly to 118°30' W meridian. Most of the claims, including the B.C. Mine Area properties and the claims and Crown Grants comprising the Noranda Exploration Company Limited option, are centred around Phoenix and extend northeasterly from there.

The Sappho claims are in the southern part of the area lying immediately north of the International Boundary on Norwegian Creek and McCarren Creek. The area is covered by topographic maps 82E, Penticton, in the 1:250,000 series, and in more detail by map 83E/2, Greenwood, in the 1:50,000 series.

Access to the Company's properties is by British Columbia Highway No. 3, the main southern Transprovincial highway, which passes through the City of Greenwood, west of the main Phoenix B. C. Mine Area and follows roughly along Eholt Creek to the area of the B.C. Mine



where it makes a sharp change of direction to the south. The highway passes through the Mountain Rose Crown Grant and within a mile of the former B. C. Mine workings. A gravelled road leaves the main highway at this point and leads to the mine workings, a distance of approximately  $1\frac{1}{2}$  to 2 miles. This road is passable to vehicles in the summertime but is generally blocked by snow during the winter months. A series of secondary roads passes between the more westerly part of Highway No. 3 at Greenwood and the more easterly part of the same highway to the south of the B. C. Mine through the area of the Phoenix Mine and the Noranda Option Properties. In the southern part of the area secondary roads lead from Highway No. 3 in the Boundary Falls area, south of Greenwood, into the McCarren and Norwegian Creek areas, and provide access to the Sappho Claims. These roads link up with Highway No. 3 again just north of Midway.

#### History and Previous Work

The history of the Boundary Camp including the Greenwood-Phoenix area dates from the late 19th Century with the discovery at Rossland of gold-copper deposits in 1890. The general prospecting throughout the area which these discoveries prompted led to further discovery of low grade copper deposits near Phoenix. Some development had begun on most of the major deposits of the area by 1900.

The period of greatest activity of many of the important mines based on gold-silver values in quartz veins appears to have been in the latter three or four years of the last century and the first five or six years of the twentieth century. The period from about 1920 to 1933 was one of very limited mining activity in the Greenwood

district. In 1933, the increase in the price of gold and favourable treatment rates offered for siliceous ores by the Consolidated Mining & Smelting Company at Trail, combined to revive outside interest in the District and a number of mines were reopened, including the Dentonia Mine, which supported the installation and operation of a 100 ton flotation mill until the end of August 1936. Other mines included the Knob Hill and Ironside Mine reopened in September 1936 with ore being hauled to a 50 ton flotation mill located about one mile north of Greenwood. Mining activity continued to be of a sporadic nature and limited to development work on a few gold-silver properties up to 1955 at which time the Granby Company began mining and milling copper-gold ore at Phoenix.

With reference to the Phoenix part of the camp, now largely covered by the properties comprising the Noranda option, the main area on which the most recent work has been done are on the Old Ironside (Lot 589), and Stemwinder (Lot 588) Crown Grants. By 1967, open pit mining had covered an area of 292 acres, which included all of the old Phoenix underground workings and most of the townsite. In 1967, the Phoenix mill treated 713,513 tons of ore, grading 0.845% copper. Work completed in that year on the property included construction of a dam across Twin Creek, which then served as a tailings dam, and diamond drilling on parts of the property adjoining the main pits. In 1969, mill capacity was increased from 2000 to 2500 tons per day and a new power line was built. All of the production in this year continued to come from the Old Ironsides pit, and included both mill feed and marginal material, the latter being stockpiled. Production in 1970 was 862,156 tons of ore, which yielded 22,361 tons of copper concentrate.

The Phoenix mine was closed in October 1976 but the mill continued to operate on stockpiled and custom ore until September 1978. All of the mining equipment previously located on the property has been removed.

During 1981, the Company did back-hoe trenching, line-cutting and geological mapping on the claims.

The B. C. Chartered Company Limited of Montreal, conducted work in the area of the B. C. Mine Claim, Daisy Fraction, and London Fraction, which still form part of the B.C. Property now controlled by the Company. Development included a single compartment shaft to a depth of 160 feet which was later to be deepened as a three compartment shaft. Work on the property in 1901 included some exploration diamond drilling, and ore was shipped from the property throughout the year. At this time the Mountain View Claim, part of the property controlled by the Company was part of a group known as Bluebell on which work in 1901 included up to 200 feet of shaft sinking and 500 feet of drifting and cross cutting.

By 1907 ownership of the B.C. Mine had passed to the British Columbia Copper Company, along with several other properties in the area. Some 1712 tons of ore were shipped to the B.C. Copper Company smelter at Grand Forks in that year, from the B. C. Mine.

In 1918, the B. C. Mine property was acquired by A. M. Dockstader and E. Vant who began preparations for resumption of operations. The Minister of Mines Report for 1938 reports that the B. C. Mine was at that time managed by Mr. Dockstader on behalf of the B. C. Eholt Mines Limited. In 1938 seven men were employed for the summer months,

four of whom were working underground. Work was confined to a small shaft located about 500 feet from the main workings, which was put in repair and had a gasoline-driven hoist installed. In 1938, about 150 tons of ore were mined but were not treated. More recent work included diamond drilling in two holes by the Phoenix Copper Company Limited (Granby) in 1965, and further drilling and mapping in 1966.

In late 1980 the Company pumped out the shaft down to the first level and was able to enter the underground workings to this depth for examination purposes.

There is no surface or underground plant or equipment on the properties.

In the 1960's the area of the Sappho claims was covered by the Cabin Group of 20 mineral claims optioned by Silver Standard Mines Ltd. from some local Greenwood residents. Work was carried out on some of the claims under the direction of R.H. Seraphim in 1967 including mapping of surface workings, magnetometer survey, and excavation of five trenches. These trenches were examined by J.B.P. Sawyer, P.Eng. as part of the property examination in April 1981. During 1981, the Company did back-hoe trenching, line-cutting and geological mapping.

Work on the Company's properties will be done by independent contractors employed by the Company. It is anticipated that only one crew will be operating on the Company's three separate properties at any given time. The decision with respect to which properties will be explored will be made by the directors from time to time as the various programs progress.

THERE IS NO KNOWN BODY OF COMMERCIAL ORE ON THE PROPERTIES AND THE PROPOSED PROGRAM IS AN EXPLORATORY SEARCH FOR ORE PRIMARILY COPPER AND GOLD. FOR DETAILS OF THE CLAIMS SEE THE SUMMARY REPORT OF J.B.P. SAWYER, P.ENG. DATED MAY 25, 1981, A COPY OF WHICH IS INCLUDED HEREIN. THE COMPLETE ENGINEERING REPORT BY J.B.P. SAWYER, P.ENG. DATED



MAY 25, 1981, MAY BE INSPECTED WHILE THE COMPANY'S SHARES ARE IN PRIMARY DISTRIBUTION, DURING NORMAL BUSINESS HOURS, AT THE COMPANY'S RECORDS OFFICE AT 1620 - 701 WEST GEORGIA STREET, VANCOUVER, B.C. THE COMPANY'S CONTINUING RIGHT TO HOLD THE CLAIMS DEPENDS UPON FULL COMPLIANCE WITH THE MINERAL ACT.

OPTION TO PURCHASE SHARES

Pursuant to an agreement dated October 15, 1981, the Company granted a non-transferable director's option to James Thomas Fyles to purchase 98,000 shares of the Company at the following prices and within the following dates:

<u>Prior to</u> <u>October 1, 1982</u>	<u>Oct. 1, 1982 to</u> <u>Sept. 30, 1983</u>	<u>Oct. 1, 1983 to</u> <u>Sept. 30, 1984</u>	<u>Expiry Date</u>
\$1.00 per share	\$1.25 per share	\$1.50 per share	October 1, 1984.

The option is personal and non-assignable, and is subject to the approval of the appropriate regulatory authorities. No portion of the option may be exercised until 9 months after the date of this Prospectus. The option shall terminate upon Mr. Fyles ceasing to be a director of the Company.

PRINCIPAL HOLDERS OF SHARES

To the knowledge of the directors and senior officers of the Company, only the following hold beneficially, directly or indirectly, more than 10% of any class of shares of the Company as at December 21, 1981:

<u>Name and Address</u>	<u>Type of</u> <u>Ownership</u>	<u>Class and No.</u> <u>of Shares Owned</u>	<u>Percentage</u> <u>of Class</u>
George O.M. Stewart Box 130, Greenwood, B.C.	Direct	465,500	29.7%
Brian Fagan 3672 Governor Drive, San Diego, California	Direct	238,500	15.2%
Kenneth L. Daughtry Tronson Road, R.R. #4 Vernon, B.C.	Direct	238,500	15.2%

The following table shows the respective percentage of shares of the Company beneficially owned either directly or indirectly by the directors and senior officers of the Company as a group.

<u>Designation of Class</u>	<u>Percentage of Class</u>
Common Shares	67.9%

Based on 2,365,001 shares to be outstanding if the Units offered by this Prospectus are sold, 44.9% of the shares have been issued to directors, officers, promoters and controlling persons for property, services and cash and 33.8% are being offered to the public.

#### INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

Reference is made to the caption "Description of Business and Property of the Company" for the shares issued to directors for property.

#### PROMOTERS

The directors of the Company are the promoters of the Company. Reference is made to the caption "Description of Business and Property of the Company" wherein the interests of the directors in the properties acquired by the Company and the considerations received by them therefor are disclosed. The promoters also purchased 437,500 shares of the Company at a price of 20¢ per share while the Company was a nonreporting company. Reference should also be made to the caption "OPTION TO PURCHASE SHARES" for particulars of a director's option granted to James Thomas Fyles.

REMUNERATION OF DIRECTORS AND SENIOR OFFICERS

Gary Logan, a former director, was paid \$1,225 for management fees. There has been no remuneration paid to the current directors or senior officers since the Company was incorporated. However, Kenneth L. Daughtry, George O.M. Stewart and William R. Gilmour, all of whom are directors of the Company, will from time to time perform geological services for the Company. They will be paid engineering fees which will not exceed standard fees charged by the industry. In addition, Brian Fagan, a director of the Company, may be paid for management services provided to the Company \$750.00 per month during the fiscal year ended May 31, 1982.

ESCROWED SHARES

As of the date of this Prospectus, 750,000 shares are held in escrow by Montreal Trust Company, Vancouver, B. C., subject to the direction or determination of the Superintendent of Brokers ("Superintendent"). The escrow restrictions provide that the shares may not be traded in, dealt with in any manner whatsoever, or released nor may the Company, its Transfer Agent or Escrow Holders make any transfer or record any trading of shares without the consent of the Superintendent.

In the event the Company loses or abandons or fails to obtain title to all or a part of the property or assets for which it allotted all or any part of the escrow shares, the Company will declare any such event to the Superintendent by way of Directors' resolution and the holders of such shares, the Trustee thereof, and the Company have agreed that such number of said shares as the Superintendent determines shall have become subject to the cancellation, shall be surrendered to the Company by way of gift for cancellation. The complete text of the Escrow Agreement is available for inspection at

the registered office of the Company, 1620 - 701 West Georgia Street  
Vancouver, B. C.

<u>Designation of Class</u>	<u>Number of Shares Held in Escrow</u>	<u>Percentage of Class</u>
Common Shares	750,000	47.9%

POOLED SHARES

815,000 shares of the Company sold for cash have been voluntarily pooled with Montreal Trust Company, 466 Howe Street, Vancouver, B. C.

25% of the shares will be released when the shares of the Company commence trading on the Vancouver Stock Exchange and instalments of 25% will be released every 3 months thereafter until all of the shares have been released.

PRELIMINARY EXPENSES

As at June 16, 1981 the date of the Company's financial statements, the following expenses were incurred by the Company:

Exploration and Development:	\$42,844.00
Administration	<u>13,455.00</u>
Total:	<u>\$56,299.00</u>

It is not expected that any further preliminary expenses will be incurred.



AUDITORS, TRANSFER AGENTS AND REGISTRARS

The Auditors of the Company are MacKay and Partners, Chartered Accountants, of 200 Granville Street, Vancouver, B. C.

The Company's Registrar and Transfer Agent is Montreal Trust Company of 466 Howe Street, Vancouver, B. C.

MATERIAL CONTRACTS

There are no material contracts which have not been disclosed in the Prospectus.

All material contracts of the Company may be inspected while the Company's shares are in primary distribution, and for 30 days after completion of primary distribution, during normal business hours at the Company's Records Office at 1620 - 701 West Georgia Street, Vancouver B. C.

PURCHASER'S STATUTORY RIGHT OF RESCISSION

Section 60 and 61 of the Securities Act, (British Columbia) provides, in effect, that where a security is offered to the public in the course of primary distribution:

- (a) A Purchaser has a right to rescind a contract for the purchase of a security while still the owner thereof if a copy of the last Prospectus, together with Financial Statements and Reports and summaries of Reports relating to the securities as filed with the Superintendent of Brokers were

not delivered to him or his Agent prior to delivery to either of them of written confirmation of the sale of the securities. Written notice of intention to commence an action for rescission must be served on the person who contracted to sell within 60 days of the date of delivery of the written confirmation, but no action shall be commenced after the expiration of three (3) months from the date of service of such notice;

(b) A Purchaser has the right to rescind a contract for the purchase of such security while still the owner thereof if the Prospectus or any amended Prospectus offering such security contains an untrue statement of material fact or omits to state any material fact necessary in order to make any statement therein not misleading in the light of the circumstances in which it was made, but no action to enforce this right can be commenced by a Purchaser after expiration of 90 days from the later of the date of such contract or the date on which such Prospectus or amended Prospectus is received or is deemed to be received by him or his Agent.

Reference is made to the said Act for the complete text of the provisions under which the foregoing rights are conferred.

OTHER MATERIAL FACTS

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

**KETTLE RIVER MINES LTD.**  
**FINANCIAL STATEMENTS**  
**JUNE 16, 1981**

**Auditors' Report**

**Statement 1 - Balance Sheet**

**Statement 2 - Changes in Financial Position**

**Notes to the Financial Statements**

**Schedule 1 - Deferred Exploration Expenses**

**Schedule 2 - Deferred Administrative Expenses**

# MacKay & Partners

Chartered Accountants

## AUDITORS' REPORT

To the Shareholders of  
KETTLE RIVER MINES LTD.

We have examined the balance sheet of Kettle River Mines Ltd. as at June 16, 1981 and the statement of changes in financial position for the period from the date of incorporation, October 17, 1980, to June 16, 1981. 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, these financial statements present fairly the financial position of the company as at June 16, 1981 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 applied on a consistent basis.

*MacKay & Partners*

Vancouver, Canada  
June 18, 1981

CHARTERED ACCOUNTANTS

**KETTLE RIVER MINES LTD.**

**BALANCE SHEET**

**STATEMENT 1**

**JUNE 16, 1981**

**ASSETS**

**CURRENT**

Cash	\$ 71,737
Term deposit	45,000
Accounts receivable	<u>520</u>
	117,257

REFUNDABLE DEPOSIT (Note 3)	12,200
EXPLORATION ADVANCE	6,139
FIXED (Notes 1 and 4)	7,064
MINERAL PROPERTIES (Notes 1 and 3)	75,566
INCORPORATION COSTS	<u>1,054</u>
	<u>\$219,280</u>

**LIABILITIES**

**CURRENT**

Accounts payable and accrued liabilities	\$ 10,692
Due to officers, shareholders and directors	<u>6,587</u>
	17,279

**SHAREHOLDERS' EQUITY**

SHARE CAPITAL (Note 5)	<u>202,001</u>
	<u>\$219,280</u>

**APPROVED BY THE DIRECTORS:**

*Brian Fagan* Director  
*Rob Dany* Director

**KETTLE RIVER MINES LTD.**  
**CHANGES IN FINANCIAL POSITION** **STATEMENT 2**  
**FOR THE PERIOD FROM DATE OF INCORPORATION,**  
**OCTOBER 17, 1980, TO JUNE 16, 1981**

<b>WORKING CAPITAL PROVIDED BY:</b>	
Shares issued for cash	\$194,501
Shares issued for mineral claims	7,500
Interest income	<u>3,480</u>
	<b>205,481</b>

<b>WORKING CAPITAL USED FOR:</b>	
Refundable deposit	\$12,200
Exploration advances	6,139
Acquisition of mineral claims	22,747
Exploration expenditures (Net of depreciation)	41,429
Administrative expenditures	13,455
Incorporation costs	1,054
Acquisition of fixed assets	<u>8,479</u>
	<u>105,503</u>

<b>WORKING CAPITAL, CLOSING</b>	<b>\$ 99,978</b>
	<u><u>          </u></u>

<b>REPRESENTED BY:</b>	
Current assets	\$117,257
Current liabilities	<u>17,279</u>
	<u><u>\$ 99,978</u></u>

**KETTLE RIVER MINES LTD.**  
**NOTES TO THE FINANCIAL STATEMENTS**  
**FOR THE PERIOD FROM DATE OF INCORPORATION,**  
**OCTOBER 17, 1980, TO JUNE 16, 1981**

**1. SIGNIFICANT ACCOUNTING POLICIES**

**A) Mineral Properties**

The company capitalizes all acquisition, exploration and development costs and administrative expenses related to exploration and development of mineral properties on a property by property basis. The costs of sold or abandoned properties are charged to expense in the year of sale or abandonment. The costs of producing properties are depleted by the unit of production method based upon estimated proven reserves.

The allocation of deferred administrative expenditures among mining properties is based on the percentage of exploration expenditures incurred on each property to total exploration expenditures incurred in the period.

**B) Depreciation**

Depreciation is recorded on the declining balance basis using the rates as indicated in Note 4.

**2. RECOVERABILITY OF COST OF UNPROVED PROPERTIES**

The recoverability of costs of unproved mineral properties is subject to the discovery of sufficient commercially recoverable reserves.

**3. MINERAL PROPERTIES**

As at June 16, 1981, mineral claims owned or under option consisted of the following:

	<u>Acquisition Costs</u>	<u>Deferred Exploration Expenses</u>	<u>Deferred Adminis- trative Expenses</u>	<u>Total</u>
B.C. Mine				
Area Properties	\$15,243	\$ 38,558	\$ 8,976	\$62,777
Sappho Area				
Properties	7,503	3,536	822	11,861
Noranda Option				
Properties	<u>1</u>	<u>750</u>	<u>177</u>	<u>928</u>
	<u>\$22,747</u>	<u>\$ 42,844</u>	<u>\$ 9,975</u>	<u>\$75,566</u>



**KETTLE RIVER MINES LTD.**

**NOTES TO THE FINANCIAL STATEMENTS**

**FOR THE PERIOD FROM DATE OF INCORPORATION,**

**OCTOBER 17, 1980, TO JUNE 16, 1981**

**3. MINERAL PROPERTIES - Continued**

**A) B.C. MINE AREA PROPERTIES**

By way of an option agreement dated June 1, 1981, with two directors of the company, the company has acquired 100% of an option dated October 31, 1980 to acquire four mineral claims in the Greenwood Mining Division of B.C. for \$5,001.

In order to exercise the option the company must pay \$10,000 on August 1, 1981, and a further \$10,000 on the 1st day of August each year to 1988 with a final payment of \$15,000 due on August 1, 1989.

By an agreement dated May 7, 1981 the company has acquired a 100% interest in two mineral claims in the Greenwood Mining Division, B.C. for a payment of \$10,242.

A further two mineral claims in the Greenwood Mining Division of B.C. have been acquired for \$1 from a director of the company.

**B) SAPPHO AREA PROPERTIES**

Pursuant to an agreement dated June 1, 1981 with Brican Resources Ltd., the company has acquired one mineral claim in the Greenwood Mining Division of B.C. for \$1 and 125,000 escrow shares, assigned a value of \$1,250.

By an agreement dated June 1, 1981, an additional five claims in the Greenwood Mining Division of B.C. were acquired from four directors of the company for \$2 and 625,000 escrow shares, assigned a value of \$6,250.

**C) NORANDA OPTION PROPERTIES**

By an agreement dated June 1, 1981 with two directors, the company has acquired for \$1 all of the two directors' interest in an option agreement dated May 31, 1981 with Noranda Exploration Company, Limited. The option agreement provides for a 49% interest in 151 mineral claims and 3 mineral leases located in the Greenwood Mining Division of B.C.

In order to exercise the option, the company must incur \$300,000 of exploration expenditures on the property within 3 years of May 31, 1981. The company was also required to pay \$12,200 to Noranda as a deposit which is to be refundable to the company over the period of the first year of the agreement, provided that required assessment work is completed.

If the option should be exercised within the three year term of the agreement, then the company and Noranda will enter into an operating agreement and the company will be required to contribute 49% of future expenditures.

**KETTLE RIVER MINES LTD.**  
**NOTES TO THE FINANCIAL STATEMENTS**  
**FOR THE PERIOD FROM DATE OF INCORPORATION,**  
**OCTOBER 17, 1980, TO JUNE 16, 1981**

**4. FIXED ASSETS**

	<u>Rate</u>	<u>Cost</u>	<u>Accumulated Depreciation</u>	<u>Net Book Value</u>
Mining equipment	30%	\$8,081	\$ 1,415	\$ 6,666
Furniture and fixtures	20%	398	—	398
		<u>\$8,479</u>	<u>\$ 1,415</u>	<u>\$ 7,064</u>

**5. SHARE CAPITAL**

Authorized:  
10,000,000 common shares without par value

	<u>Number of Shares</u>	<u>Proceeds</u>
Issued in period:		
For cash	815,001	\$194,501
For mineral claims (Note 3)	<u>750,000</u>	<u>7,500</u>
Balance, end of period	<u>1,565,001</u>	<u>\$202,001</u>

**6. SUBSEQUENT EVENT**

Subsequent to the balance sheet date, the company intends to file a prospectus with the Securities Commission of British Columbia for the purpose of issuing 400,000 common shares to net the company \$440,000.

**7. RELATED PARTY TRANSACTIONS**

As is indicated in Note 3 to these financial statements, several agreements with directors of the company for the purchase of or acquisition of an option on mineral properties have been entered into by the company.

**8. REMUNERATION OF DIRECTORS AND SENIOR OFFICERS**

The aggregate remuneration paid or payable to directors and senior officers of the company for the period was \$1,225.

**9. JURISDICTION OF INCORPORATION**

The company is incorporated under the laws of the Province of British Columbia. Application has been made to change the company's name to Kettle River Resources Ltd.

**KETTLE RIVER MINES LTD.**  
**DEFERRED EXPLORATION EXPENSES**  
**FOR THE PERIOD FROM DATE OF INCORPORATION,**  
**OCTOBER 17, 1980, TO JUNE 16, 1981**

SCHEDULE 1

Accounting and secretarial	\$ 2,921
Contract labour and workers' compensation	18,701
Depreciation	1,415
Equipment rental	1,450
Equipment and supplies	2,431
Field expenses	320
Fuel	1,116
Geological consulting	8,625
Computer analysis	1,110
Insurance	350
Miners' licence	300
Office, printing and telephone	788
Recording and assessments	710
Sundry	8
Transport	2,059
Travel, food and accommodation	<u>540</u>
<b>TOTAL EXPENDITURES FOR THE PERIOD</b>	<b><u><u>\$ 42,844</u></u></b>

**ALLOCATION:**

B.C. Mine Area Properties	\$ 38,558
Sappho Area Properties	3,536
Noranda Option Properties	<u>750</u>
	<b><u><u>\$ 42,844</u></u></b>

**KETTLE RIVER MINES LTD.**  
DEFERRED ADMINISTRATIVE EXPENSES  
FOR THE PERIOD FROM DATE OF INCORPORATION,  
OCTOBER 17, 1980, TO JUNE 16, 1981

SCHEDULE 2

EXPENDED UPON:

Accounting and audit	\$ 3,500
Legal	2,542
Management fees	1,225
Office	739
Professional fees - consulting	4,650
Travel and accommodation	799
	<u>13,455</u>
Interest income	<u>3,480</u>
TOTAL EXPENDITURES (NET) FOR THE PERIOD	<u><u>\$ 9,975</u></u>

ALLOCATION:

B.C. Mine Area Properties	\$ 8,976
Sappho Area Properties	822
Noranda Option Properties	177
	<u>\$ 9,975</u>



SAWYER CONSULTANTS INC.

SUMMARY  
REPORT ON MINERAL PROPERTIES  
in the  
BOUNDARY DISTRICT  
Greenwood Mining Division, B.C.

for

KETTLE RIVER MINES LTD.

MAY 25th, 1981

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## INTRODUCTION

Kettle River Mines Ltd. has established a significant land position in the Boundary Mining District of Southern British Columbia by concluding a number of purchase and/or option agreements with individuals, junior companies, and with one major international mining group. The properties include staked claims, mining leases, and a number of Crown Grants all located in the general Greenwood-Phoenix area in the Greenwood Mining Division of British Columbia. This Summary is based on a more detailed report by J.B.P. Sawyer, P.Eng., dated May 25th, 1981, which describes the property holdings, and their regional geological setting, and presents a review of the overall potential of the area in terms of some revised geological ideas. The complete report is available at the offices of the Superintendent of Brokers, B.C. Department of Consumer & Corporate Affairs, Vancouver, of the Vancouver Stock Exchange, and of Kettle River Mines Ltd., in Greenwood, B.C. The reader is referred to this Report for more complete data and information.

## SUMMARY

Properties acquired in 1981 by Kettle River Mines Ltd. include the following:

- (a) in the southern part of the Boundary Camp, immediately north of the International Boundary on McCarren and Norwegian Creeks, four grid claims comprising a total of 56 units and two single staked claims;
- (b) in the northeastern part of the camp, five Crown Grants including the former B.C. and Mountain Rose Mines, one reverted Crown Grant, and two located claims, one of which is a grid claim comprising 12 units; and
- (c) a total of 94 located claims, 57 Crown Granted claims, and three mineral leases which cover a total of five Crown Granted claims, which have been optioned from Noranda Exploration Company, Limited by two of the Directors of Kettle River Mines Ltd. who have assigned the option to the Company. These claims cover the Phoenix Mine workings formerly mined by the Granby Mining Company Ltd. and adjacent claims.

The ores mined from the Phoenix area claims, including the Phoenix open pit orebody, and on the B.C. Mine and Mountain Rose Mine properties, consisted of high grade contact metasomatic or "skarn" deposits of high grade copper with some associated precious metal values. Known mineralized zones in all of these deposits have, essentially, been mined out, however some lower grade mineralization remains in places and there are believed to be good possibilities for finding additional mineralized zones as extensions of previously worked orebodies, either along strike or to depth. This possibility is judged to be somewhat enhanced by a re-evaluation of other "skarn" ore zones at the Craigmont Mine. The data

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which has been compiled as this orebody has been mined suggests a somewhat different mode of origin for the ore zones, and has recognized features which characterize these deposits which can be used to search for similar deposits elsewhere, for example in the Greenwood-Phoenix Camp.

In the southern part of the Boundary Area, the claims acquired by Kettle River Mines Ltd. cover the old Sappho showing and an arcuate belt of rocks extending generally northeasterly to easterly from it which include mineralized intrusive and volcanic rocks which are extensively altered and frequently well mineralized. These claims adjoin the former Lexington Mines property which includes the previously discovered City of Paris, Mabel, and No. 7 ore zones, and the extension of the same belt of rocks underlying the Kettle River Mines Ltd. properties. A drilling program is currently underway on these former Lexington Mines Ltd. (now Grenoble Enerby Ltd.) properties by a major corporation who have recently reported interesting mineralized drill intersections with significant precious metal values. In addition to this mineralization located to the east and northeast of the Sappho Area claims, mineralization is also known and has been reported on the southwesterly extension of this projected zone in the Curlew and Republic areas of Washington State. Occupying a position between two known mineralized areas, the Kettle River Mines Ltd. holdings in this area are considered excellent targets for further exploration.

Recommendations for further work, and cost estimates are given below.



## DISCUSSION AND CONCLUSIONS

It is apparent from the foregoing descriptions and the considerable amount of work carried out in the area over the past eighty years or more that the Boundary District constitutes a significant camp in which base and precious metal mineralization is widespread and of several different types. As is evidenced by the history of the area the camp has experienced several distinct periods of activity related either to economics - transportation facilities, availability of smelter capacity, and metal prices, - or to changes in geological ideas. It appears that the camp is now entering on another period of increased activity which results in part from improved metal prices but also from some recent changes in geological thinking which suggest that perhaps some of the mineralized zones previously thought to be worked out may in fact have extensions yet to be exploited.

In the past the contact metasomatic deposits which characterize the Phoenix Mine, and B.C. Mine Area have been viewed more or less in the classical "skarn" deposit context. The Craigmont Mine in south-central British Columbia, northwest of the Boundary Camp, was originally also considered in this light. As the ore in that deposit has been mined out, now virtually to exhaustion, workers have had an opportunity to study the general setting of the deposit in some detail and some of the most recent work (Morrison, 1980) has suggested that,

"The Craigmont deposit has more features in common with Cu-Fe deposits hosted in metavolcanic and metasedimentary rocks than it has with typical skarn deposits associated with porphyry copper deposits."

In his conclusions he says,

"In an area of complex facies variation, such as Craigmont, ore is localized in favourable host rocks facies adjacent to unfavourable facies that act as physical or chemical barriers to ore fluid migration. Locating such facies boundaries elsewhere within the contact aureole can be an important prospecting aid. The favourable facies at Craigmont is characterized by interbeds of limy and quartzofeldspathic sedimentary rocks with concentrations of iron in pyrite and biotite, and of copper disseminated chalcopyrite. Bedding planes and fractures apparently acted as channelways for fluids which leached iron and copper from the host rocks and concentrated them in the facies boundary trap."

The Kettle River Mines Ltd. geologists have carried out some studies in the Boundary Camp with this model in mind, and it appears to them, and I would agree, that the comparison is not unreasonable, that a similar style of mineralization may in fact characterize some of the "skarn" deposits of the Phoenix Camp. Some of the features described by Morrison at Craigmont appear similar to those described by several of the workers in the Boundary Camp, for example some of the banded ores described by Seraphim and observed during our field examination in the old Brooklyn pit. Further investigation along these lines is in our opinion warranted.

In the Lexington Mines (Grenoble Energy) area several problems of the geology have been recognized but unsolved for a number of years. In general the sulphide and associated precious metal mineralization in the area has been regarded as probably volcanogenic (Seraphim, personal

communication). The details of the volcanic stratigraphy and structure have not been fully elucidated but recent geological thinking suggests that these target areas are indeed valid targets for further investigation. The fact that Teck Corporation is currently engaged in a drilling program on the Lexington-Grenoble ground, and is apparently meeting with some success, lends credibility to this idea.

From all of the above we conclude that the Boundary Camp and specifically the B.C. Mine Area, Phoenix Area, and Sappho Area properties now controlled by Kettle River Mines Ltd. represent significant target areas in which some of these revised geological ideas can be tested, and that the land holdings themselves provide a sufficiently broad base to justify further exploration expenditures.

## RECOMMENDATIONS

Based on the above descriptions of the geology and mineralization in the Boundary Camp and specifically in the areas now controlled by Kettle River Mines Ltd., and the conclusions we have set out above, we recommend that further exploration be carried out on these properties. For convenience the recommendations will be sub-divided into the same property groupings as already established.

All or any of the work recommended below can be arranged into separate stages or phases which would optimize logistics and cost effectiveness of the programs. For example, initial stages on all of the areas could include surface work, geological mapping and prospecting, VLF-EM surveys, etc. Where appropriate second stage programs could involve more detailed geophysical work and/or more costly techniques such as induced polarization work. Diamond drill testing might constitute later (2nd or 3rd stage) phases of the work. By contracting all of the diamond drilling at one time, even though it might involve separate areas some saving in contract footage price, as well as in mobilization/demobilization costs can probably be effected.

### Noranda Option Properties

As we have already commented the properties covered by this agreement centre around the Phoenix mining operations and extend towards the B.C. Mine Area. Most of the work conducted in this area over the last many years has been that carried out by Granby Mining Ltd. which both led to and formed a part of their general mining operations. A great deal of hard data, grade and tonnage figures from production from the several zones and mines, detailed geological information - for example the mapping by Paxton reproduced in this report as Map 2, petrographic and metallurgical data, etc. has been developed from this. All of this material will be important in evaluating the areas in terms of the revised geological thinking outlined earlier. An important initial phase of work on the Noranda option properties therefore will be a complete compilation of available data, replotting of some of the mapping, and correlation of information from one area to the other. This will probably involve two or three geological personnel over a period of perhaps three to five months, and will necessarily include some field checking of data, etc. This is recommended as the first phase of the work program for the Noranda option properties.

One of the obligations under the terms of the option agreement between Daughtry and Stewart and Noranda is to maintain all of the properties in good standing. Reference to the list of these properties, Table I, shows that some of the claims require further assessment work prior to 1981 anniversaries. This assessment work is obviously mandatory and desirable, and can probably be planned in conjunction with the office study in such a way as to provide maximum benefit in terms of new data and information to aid in the overall assessment of the area. It is anticipated that approximately \$18,000.00 will be required to meet these immediate assessment work obligations.

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Further field exploration in this area, will involve,

- (1) In conjunction with the office study, re-evaluation of known high grade ore structures, and testing for extensions of ore structures.
- (2) Evaluation of the known gold bearing structures which occur in the mine area.
- (3) Testing and evaluation of any other zones or structures which may become apparent as the initial work progresses.
- (4) Work recommended under (1) to (3) above will probably also involve some diamond drilling.

#### B.C. Mine Area

Although it will be desirable eventually to get underground, and it would be most favourable to be able to use the existing shaft, the problems pertaining to safety described earlier will probably dictate that immediate access is impractical. There remains a considerable amount of surface work and drill testing which can be carried out, and this should form the first phase of exploration on the B.C. Mine Area properties. The objective of this work will be to explore for extensions of known ore structures both along strike and to depth, and to evaluate the immediately surrounding areas using geological and geophysical methods. The initial work program should therefore include the following.

- (1) Detailed geological mapping in the pit area and the immediately surrounding area. It may be necessary to carry out some surface trenching in order to expose bedrock in some of the surrounding area and so provision should be made for availability of a tractor and/or a backhoe in conjunction with this work.
- (2) It is known that Granby Mining carried out some EM and IP work some years ago and apparently some anomalies were detected along strike off the north end of the pit. These anomalies appear not to have been extensively tested. We recommend therefore that the immediate area of the pit and any other areas of the property in which geological mapping suggests favourable conditions be covered with EM surveys, initially probably VLF (EM-16 or similar type), and IP survey work. For the latter work frequency domain equipment would probably be preferred but details of the actual surveys should be determined by appropriate orientation work initially.
- (3) Any target areas outlined by the geological and/or geophysical work, and the anomalies originally defined by the Granby work on the north end of the pit should be tested by diamond drilling.
- (4) In order to correlate all of the above work of course it will be necessary to establish a surface picket line grid for control.

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### Sappho Area

Exploration in the Sappho Area should begin with some basic mapping and geological interpretation. Recommended work will include the following.

- (1) It will be necessary to establish some kind of control and for this purpose a picket line grid oriented so that the grid lines themselves cut the major structural trend of the area, i.e. from generally north-south or north/northwest-south/southeast in the Alkalai claim area trending to northwesterly-southeasterly through the Ingerbelle-Afton claims area.
- (2) The area should be geologically mapped in detail and the mapping should pay particular attention to the type and degree of alteration noting such things as development of secondary biotite, sericitization, silicification, etc. and associated mineralization. Because of relative paucity of outcrop it will probably be necessary to extend the trenching in order to provide geological observation points.
- (3) A considerable amount of trenching either with tractor or backhoe or both will therefore be necessary in all probability.
- (4) As in the other areas, geophysics might usefully be employed to detect structure and/or mineralization once the basic geological work is completed thus provision should be made for EM and IP surveys.
- (5) Any target areas detected from the geological and/or geophysical work should be drill tested so that some provision should be made for diamond drilling in this initial phase of the work.

SUMMARY OF COST ESTIMATES

Figures given below are rounded to the nearest \$1,000.00. For details see original reports.

This is a firm recommendation.

General area office studies, pre and post season costs \$ 35,000.00

Noranda Option Properties - These are firm recommendations for Phases I and II.

Phase I - office study, data compilation and related field checking	\$ 45,000.00
- contractual obligations re claims renewal, etc. and initial field work: geological mapping, geophysics, trenching, and related costs	28,000.00
Phase II - detailed geophysics (E.M. & I.P.), diamond drilling and related assaying, support costs, etc.	<u>149,000.00</u>
Sub total Noranda Option Properties	\$222,000.00

B.C. Mine Area

Phase I - This is a firm recommendation.	
- Control grid, geological mapping, geophysics (E.M. & I.P.), trenching, assaying, and related support costs	\$ 41,000.00
Phase II - Recommended contingent on positive results from Phase I.	
- Mine rehabilitation, diamond drilling, related assaying, support costs	<u>183,000.00*</u>
Sub total B.C. Mine Area Properties	\$224,000.00


Sappho Area

Phase I - This is a firm recommendation.	
- Control grid, geological mapping, geophysical surveys (E.M. & Mag), trenching, related assaying and support costs	\$ 39,000.00
Phase II - Recommended contingent on positive results from Phase I.	
Additional geophysical work (E.M. & I.P.), diamond drilling, related assaying and support costs	<u>163,000.00*</u>
Sub total Sappho Area Properties	\$202,000.00

Total - all "Firm" programs, Noranda Option, B.C. Mine Area, Sappho Area	\$337,000.00
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Total - all "Contingent" programs, B.C. Mine Area and Sappho Area - Phases II*	<u>346,000.00</u>
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<u>Grand Total</u>	<u>\$683,000.00</u>
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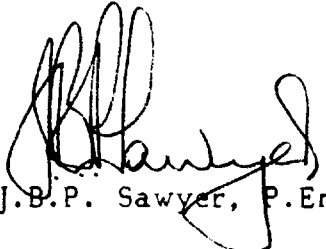
  
J.B.P. Sawyer, P.Eng.

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CERTIFICATE

I, J.B.P. Sawyer, DO HEREBY CERTIFY:

- (1) That I am a consulting geologist with business office at 1201 - 675 W. Hastings St., Vancouver, B.C., V6B 1N2, and President of Sawyer Consultants Inc.
- (2) That I am a graduate in geology of Manchester University (B.Sc. - 1953) and of the University of Western Ontario (M.Sc. - 1957).
- (3) That I am a Registered Professional Engineer (geological) in the Association of Professional Engineers of the Province of British Columbia, and a Registered Chartered Engineer with the Council of Engineering Professions, London.
- (4) That I am a Fellow of the Geological Association of Canada, a Member of the Canadian Institute of Mining & Metallurgy, a Fellow of the Geological Society of London, and Fellow of the Institution of Mining & Metallurgy, London.
- (5) That I have practised my profession as a geologist for the past twenty-six years.
- (6) That the information, opinions and recommendations in the attached report are based on personal observations made on the several properties on March 20th and April 28th, 1981, on discussions with K.L. Daughtry and W.R. Gilmour of K.L. Daughtry & Associates in Vernon on March 12th, 1981, and with K.L. Daughtry and B. Fagan of Brican Resources Ltd. in the period March 10th to May 18th, 1981; on personal review of published and private maps and reports pertaining to the area, as well as on personal knowledge of the general geology of the Boundary Mining Camp, and of the adjoining Curlew and Republic areas in Washington State.
- (7) That I own no interest in any of the subject properties nor in the shares or securities of Brican Resources Ltd., or Kettle River Mines Ltd., nor do I expect to receive any such interest.

  
 J.B.P. Sawyer, P.Eng.

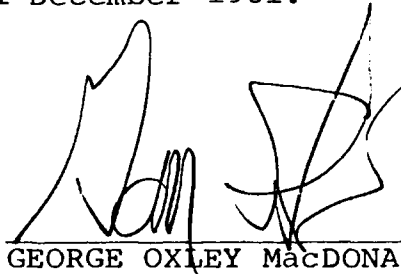
Dated at Vancouver, British Columbia, this 25th day of May, 1981.

**SAWYER CONSULTANTS INC.**

CERTIFICATE

The foregoing constitutes full, true and plain disclosure of all material facts relating to the securities offered by this Prospectus as required by Part 7 of the Securities Act, and the regulations under it.

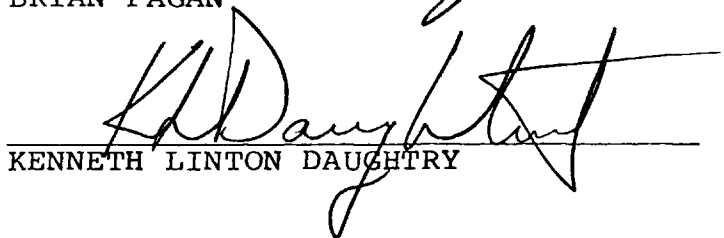
DATED this 21st day of December 1981.



GEORGE OXLEY MacDONALD STEWART



BRIAN FAGAN



KENNETH LINTON DAUGHTRY



WILLIAM RITCHIE GILMOUR



JAMES THOMAS FYLES