681415

JAMES M. DAWSON, P. ENG.
Geological Engineer

#1 - 219 VICTORIA STREET • KAMLOOPS, B.C. V2C 2A1 • TELEPHONE (604) 374-0544

May 13, 1982

Mr. A. F. Reeve,
Barrier Reef Resources Ltd.,
904 - 675 West Hastings St.,
Vancouver, B. C. V6B 1N2

Dear Bert:

At your request I researched the Kwanika - Pinchi project in some detail and have concluded that except for a small area between Falls River and West Kwanika Creek of approximately 160 square miles (see attached sketch) there is no direct evidence for epithermal gold mineralization.

As you point out there is no direct evidence of Tertiary volcanic activity other than the presence of mercury and lesser arsenic and antimony mineralization along the Pinchi fault system.

The only gold occurrence of any significance is the Lustdust property (Occurrence #9). This is now covered by a large block of claims which also cover 2 other vein type gold-silver showings (large block in SE corner of area of interest) which are not described in detail anywhere in the literature. The last recorded work on the Lustdust property was done by Granby in 1978. The Lustdust mineralization is described as "lenses of massive pyrrhotite with pyrite, sphalerite, chalcopyrite and galena occurring at the contact of a greenstone unit with a limestone unit within a predominantly argillite succession." A 1970 map of the district shows a number of hornblende - feldspar porphyry and quartz porphyry dikes adjacent to the Lustdust showing.

continued

May 13, 1982

Almost all the placer occurrences are located northwest of and unrelated to the Lustdust and adjacent showings. Except for Vital Creek they all had minor production of a few tens to a few hundreds of ounces. Production from Vital Creek was about 4000 ounces. Most of the gold recovered was coarse, +900 fine and found in pre-glacial stream channels.

A number of northeast-trending linears are discernable on topographic maps and in particular, the placer occurrences on Vital, Kelly, Alice and Harrison Creeks when plotted exactly seem to be closely spatially related to such a thru-going linear (see attached sketch).

Such lode occurrences as are known in the area of most of the placers are (on Tom and Quartzite Creeks) described as minor, low grade occurrences in narrow quartz veinlets.

I must admit I am much less enthusiastic about this project now that I have looked at it in more detail. As I see it now we have still not ruled out the possibility of Carlin - type occurrences and a satisfactory source for the placer gold on Quartzite, Vital, Harrison, Alice and Kelly Creeks has not yet been found (assuming it is not totally eroded). However I see no way of totally disproving it without a programme of dense silt and soil sampling within the "main area of interest". Such a programme would cost a minimum of $10,000.00 to $15,000.00 and without a preliminary look I wouldn't want to recommend it.

respectfully submitted:

KERR, DAWSON AND ASSOCIATES LTD.,

J. M. Dawson, P. Eng.
Geologist.

JMD/bl

JAMES M. DAWSON, P. ENG.
Geological Engineer

#1 - 219 VICTORIA STREET • KAMLOOPS, B.C. V2C 2A1 • TELEPHONE (604) 374-0544

RECEIVED
APR 23 1982

April 16, 1982

Mr. A. F. Reeve,
Barrier Reef Resources Ltd.,
#904 - 675 West Hastings St.,
Vancouver, B. C. V6B 1N2

Dear Bert:

As you mentioned yesterday that you might be interested in my Kwanika - Pinchi proposal, I am enclosing a copy for your perusal.

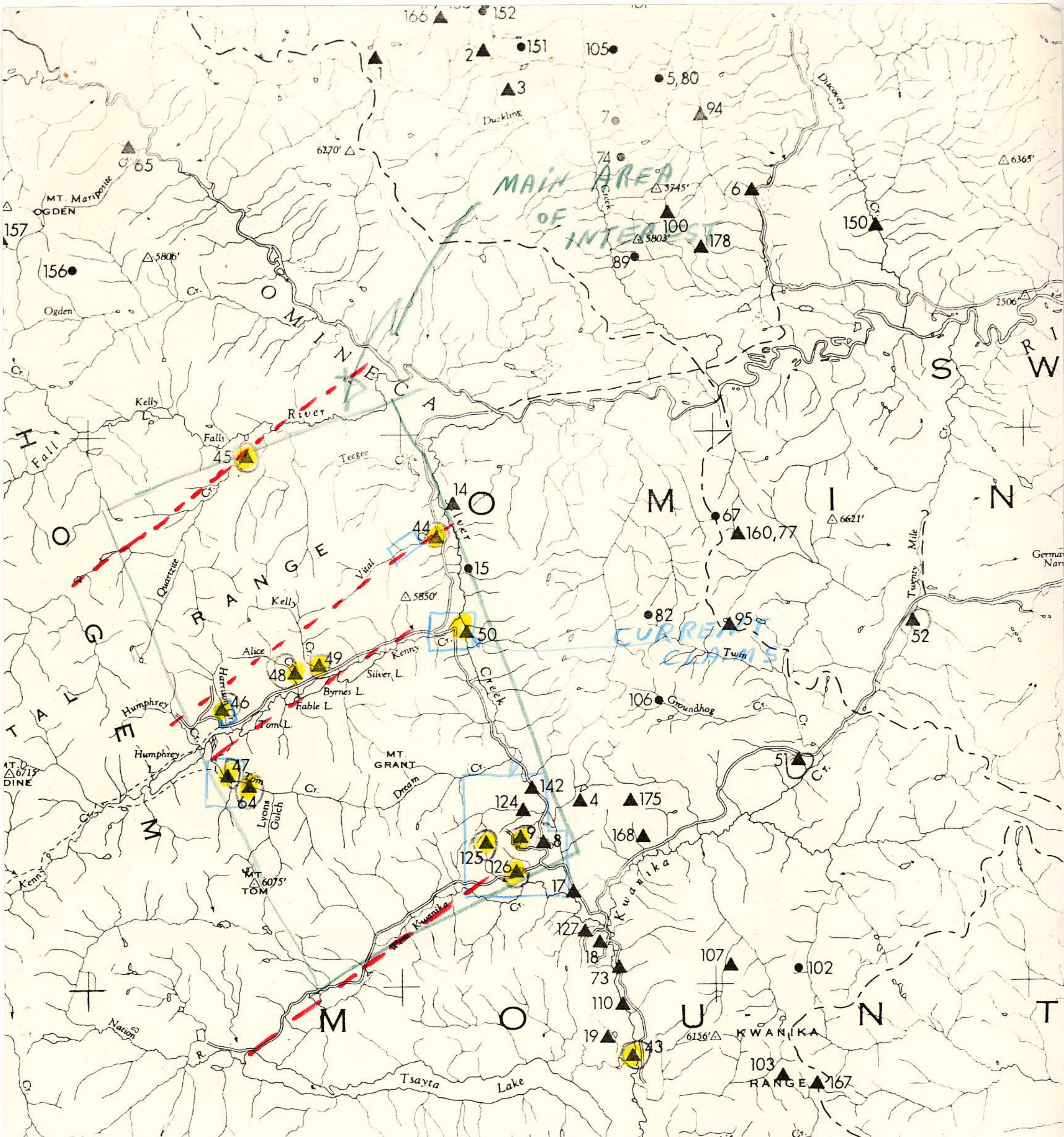
Yours very truly,

KERR, DAWSON AND ASSOCIATES LTD.,

J. M. Dawson, P. Eng.
Geologist.

JMD/bl

Enclosure


MAIN AREA OF INTEREST
CURRENT CLAIMS
MT. Mariposite
OGDEN
Ogden
Cr.
OMINECA
River
Kelly
Falls
Teegee
HOGEM RANGE
Quartzite
Kelly
Alice
Vital
Kenny
Silver L.
Byrnes L.
Fable L.
Tom L.
Harrison
Humphrey
Humphrey L.
Creek
MT. GRANT
Dream
Lyons Gulch
MT. TOM 6075'
Tom
Duckling
Discovery
Twenty Mile
Twin
Groundhog
German Nar
Kwanika
W. Kwanika
OMINECA MOUNTAINS
KWANIKA RANGE
Nation R.
Tsayta Lake
Halobia
6156'
6621'
6365'
5850'
5806'
6270'
5745'
5803'
2506
6152'
6263'
KLOWKUT PK. 6653'
MITCHELL RANGE
LIMESTONE RIDGE
Albert Lake
Indata Lake
SAWTOOTH MTN
Rottacker
5885'
Tliti
(Proposed Location) PGE
166 152 2 151 105 1 3 5,80 94 7 74 65 6 100 178 150 157 156 89
45 14 44 15 82 95 50 52 49 48 46 106 51 47 64 142 4 175 124 9 8 168 125 126 17
127 18 73 107 102 110 19 43 103 167 154 109 16 98 112 20 80 66 67 160,77

Exploration Proposal

- for -

Bulk tonnage, Epithermal Precious Metal Deposits

- in the -

Kwanika - Pinchi District
Omineca Mining Division
British Columbia

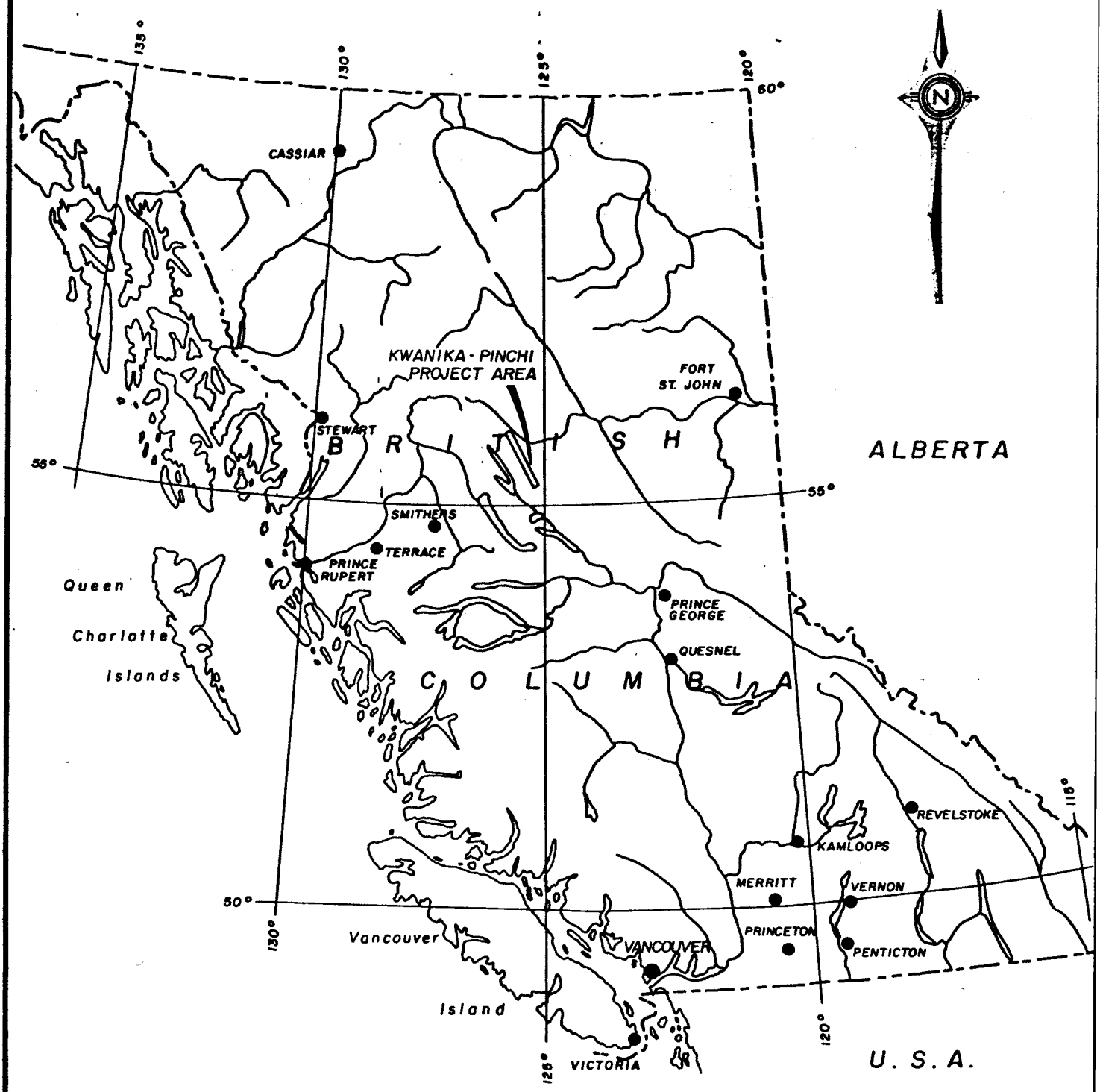
Prepared by;

Kerr, Dawson and Associates Ltd.,
#206 - 310 Nicola Street,
Kamloops, B. C. V2C 2P5

J. M. Dawson, P. Eng.

February 11, 1982

TABLE OF CONTENTS



LOCATION MAP
KWANIKA - PINCHI PROJECT
OMINECA MINING DIVISION
BRITISH COLUMBIA

Technical Work by: Kerr, Dawson & Assoc. Ltd.	Date : Feb., 1982.
Scale : 1cm. = 87 km.	Dwg No. 1

Introduction:

This report presents a proposal to explore for Carlin-type, bulk-tonnage, epithermal, precious metal deposits in the Kwanika-Pinchi district of central British Columbia.

The rationale for selecting the area is discussed along with a proposed method of exploration and a budget for Phase I of the programme.

Maps showing location of area, regional geology and mineral occurrences are appended to this report.

Location, Access and Geography:

The area selected averages about 10 miles wide by about 60 miles long (NW - SE) and is located in the west half of N.T.S. quadrangle 93N. The northern limit is at approximately 55°05'N. The area is roughly centered about longitude 125°30'W. The center of the project area is roughly 450 miles north of Vancouver and about 150 miles northwest of Prince George, B. C.

The central part of the project area is road accessible from Manson Creek, a small settlement on the Omineca road approximately 160 road miles north of Vanderhoof. The town of Vanderhoof is located on the northern Trans-Provincial Highway about 60 miles west of Prince George. An unimproved dirt road leads westerly from Manson Creek for about 50 miles to the junction of Kwanika and West Kwanika Creeks. From here additional 4 wheel drive roads lead north to the Omineca River and west to the placer diggings along Kenny Creek.

The northern extension of the British Columbia Railway (under construction) runs northwesterly paralleling the project area about 20 miles to the west.

The area lies within the Omineca Mountains and is composed of scattered ranges of rather rounded mountains interspersed with lower, more subdued topography. There is a northwest grain to the country, paralleling regional strike and the prominent linear representing the Pinchi fault zone.

Relief is in the order of 3000 feet, maximum elevations being about 6000 feet and major valley bottoms about 3000 feet a.s.l. The topography is generally moderate and can be easily negotiated on foot.

The area is relatively densely tree covered with mature spruce, fir and pine. Tree line is about 5300 feet (a.s.l.) at this latitude.

Climate is typically north temperate with long cold winters and short warm summers. Fieldwork can generally be carried out from June through October.

Previous Exploration and Mining Activity:

Placer gold was first discovered on Vital Creek about 1870 and intermittent, small scale production was obtained from this creek and about 8 others in the project area over the following 70 years.

Four lode deposits containing some gold are known in the area but only one (Lustdust) has had any significant exploration. The deposit was mapped, trenched and drilled by a consortium of major companies in the mid 1960's.

Extensive exploration, development and limited mining for mercury was carried out between 1940 and 1945 on a number of occurrences along the Pinchi fault zone.

In more recent times extensive exploration for porphyry copper and molybdenum deposits was carried out in the Hogem Batholith and the Babine camp, east and west respectively of the proposed project area. However, to the writer's knowledge very little exploration has been carried out in the zone of current interest.

A recent check of claim holdings in the area shows only a few small claim blocks over some of the known showings.

Geology:

The project area covers a segment of the Pinchi fault zone and adjacent rock assemblages. The bulk of these rocks are part of the Cache Creek Group, located southwest of this major fault system.

The Cache Creek rocks are grouped into three main subdivisions (see figure 2). At the base of this package is a thick sequence consisting primarily of massive limestone with minor interbeds of argillite, chert, slate and greenstone. Sometimes this limestone may be cherty or contain dolomitic and/or argillaceous horizons.

Above this lower unit is a subdivision consisting of about 50% ribbon chert and argillaceous quartzite, 30% argillite and slate, 15% greenstone and about 5% limestone and conglomerate.

The uppermost unit consists of about 90% andesitic flows, tuffs and breccias and 10% or less of argillite, slate, chert, quartzite and limestone.

East of the Pinchi fault zone, narrow bands of Takla Group and younger rocks are present around the western margin of the Hogem granitic rocks.

The Takla rocks in this area consist of a lower unit of andesitic to basaltic flows, tuffs and breccias and an upper unit of predominantly interbedded black argillites, brown siltstones and shales.

The youngest rocks in the area are a few erosional remnants of lower Cretaceous conglomerate and sandstone.

The most prominent structural feature in the area is the Pinchi fault zone which can be directly traced for more than 150 miles along strike. There are a number of subsidiary, parallel faults or splays which occur over a width of more than one half mile.

Extensive brecciation, carbonatization, dolomitization, silicification and intrusion of lenses of serpentine is characteristic of the main and subsidiary fault zones.

Mineralization:

Mercury occurrences comprise the most common mineralization type currently known in the project area. Cinnabar occurs in dolomitized limestone as veinlets, blebs and grains filling pre-existing openings such as fissures and solution cavities, and replacing limestone adjacent to openings. Mercury mineralization also occurs along fractures in altered serpentine and carbonate-quartz-mariposite rock. Minor antimony and arsenic minerals are found in some of the deposits.

The second most prominent mineralization type is placer gold which is found along at least nine creeks in the central part of the area. In addition there are frequent occurrences of arquerite, a natural amalgam of mercury and silver containing 86.6% silver by weight, in many of the creeks in the vicinity of the mercury showings. Nuggets as large as several ounces have been found. As yet this mineral has not been located in place.

There are four known lode occurrences which contain gold, only one of which (Lustdust) has had any substantial exploration. This occurrence is described as vein-like replacements along a shear zone carrying stibnite, boulangerite and sphalerite. Quoted reserves are 230,000 tons grading 0.07 oz Au, 1.84 oz Ag and 1.5% Zn per ton. Only one of the known, gold-bearing lodes is situated such that it might be an obvious source for one of the placer occurrences.

Exploration Potential:

The Pinchi fault zone is a strong, regional feature with a large number of epithermal mercury deposits associated with it. Minor arsenic and antimony are associated with mercury and at least one hot spring is known to occur along this system. The association of Hg-Sb-As with gold has been documented in numerous epithermal districts worldwide. The presence of ultrabasic rock with carbonate-quartz-mariposite alteration is another feature common to many producing, precious metal camps. In addition, "Carlin-type" epithermal gold or gold-silver deposits, of which a number of examples are currently being mined or extensively evaluated in the Western United States, are hosted by various types of limestone. Limestone is an abundant rock type in the Kwanika-Pinchi area.

It has been the writer's experience that where placer gold occurrences are found, significant lode occurrences are usually present nearby. The sources of most of the placers in the Kwanika-Pinchi project area have not yet been found.

The requirements for any epithermal deposit are usually: 1). a major fault zone, 2). evidence of significant epithermal, mineralizing activity, 3). adequate ground preparation, 4). favourable host rocks and 5). an adequate trapping mechanism so that the hydrothermal solutions are not dissipated. Four of the five requisite features are known to be present in this district.

The writer has examined and evaluated numerous precious metal deposits in Western Canada, Western U.S., Eastern Canada, Northwest Territories and South Africa and has been closely associated with the discovery of three gold-silver deposits currently in the advanced exploration or immediate pre-mining stages. It is his considered opinion that an excellent environment exists in the Kwanika-Pinchi area for the discovery of significant, epithermal, precious metal deposits.

Proposed Exploration Methods:

Kerr, Dawson and Associates Ltd. has evaluated numerous districts for precious metal deposits and has been successful in locating a number of significant occurrences which have been missed by others. The method employed is detailed prospecting, alteration mapping and property examination by experienced personnel together with a high density of soil, silt and rock geochemical sampling so that subtle and/or hidden mineralization can be detected.

The initial phase of this exploration programme could be accomplished in 2 ½ weeks by a four man, helicopter supported crew consisting of one senior geologist, one junior geologist and two seasoned prospectors and is estimated to cost $55,000.00.

Phase II would consist of ground acquisition and preliminary evaluation of claim blocks. Costs would be proportional to the amount of ground acquired.

Respectfully submitted:

KERR, DAWSON AND ASSOCIATES LTD.

J. M. Dawosn, P. Eng.
Geologist.

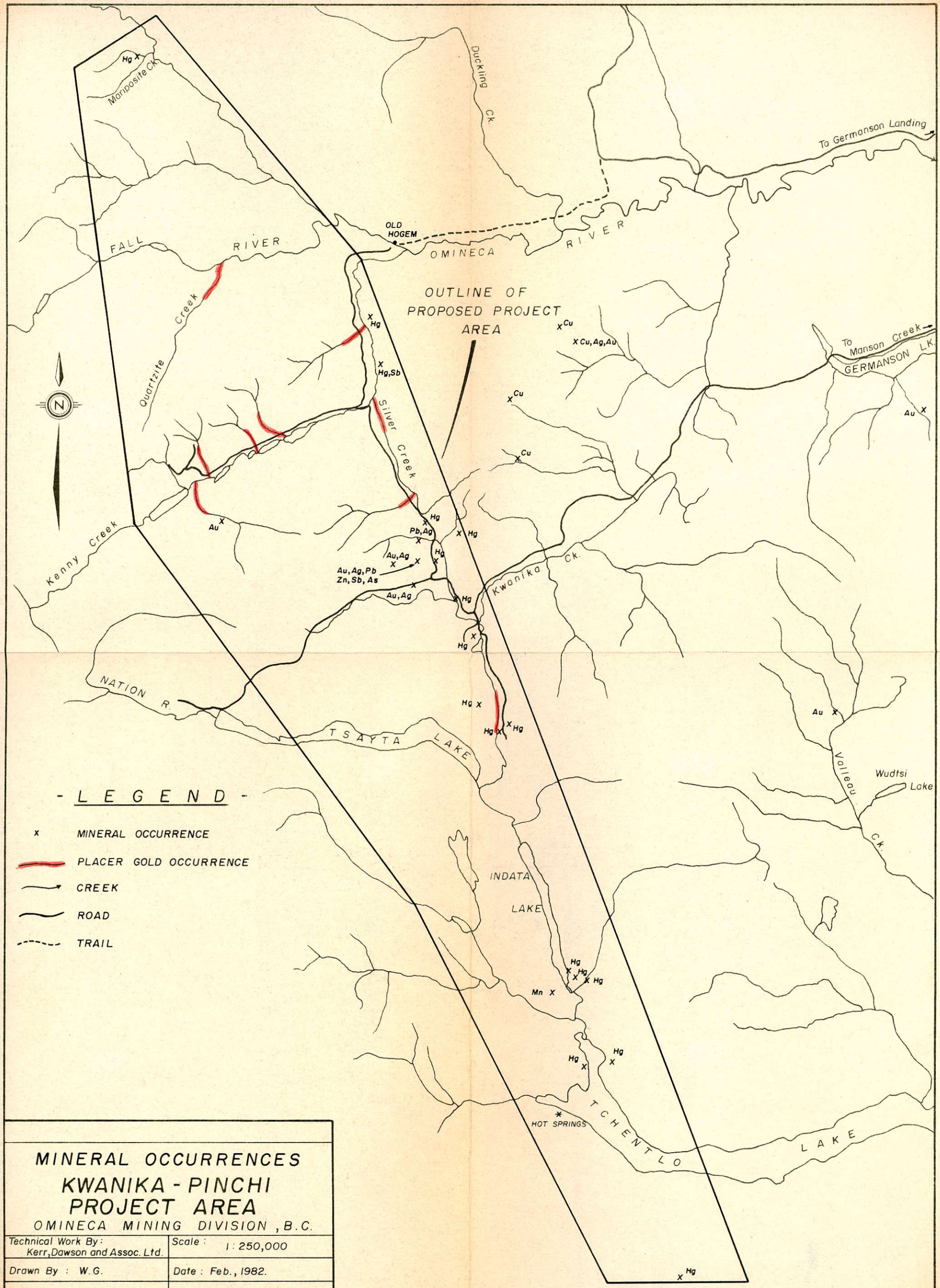
February 12, 1982
Kamloops, B.C.

Appendix A

Proposed Budget for Phase I

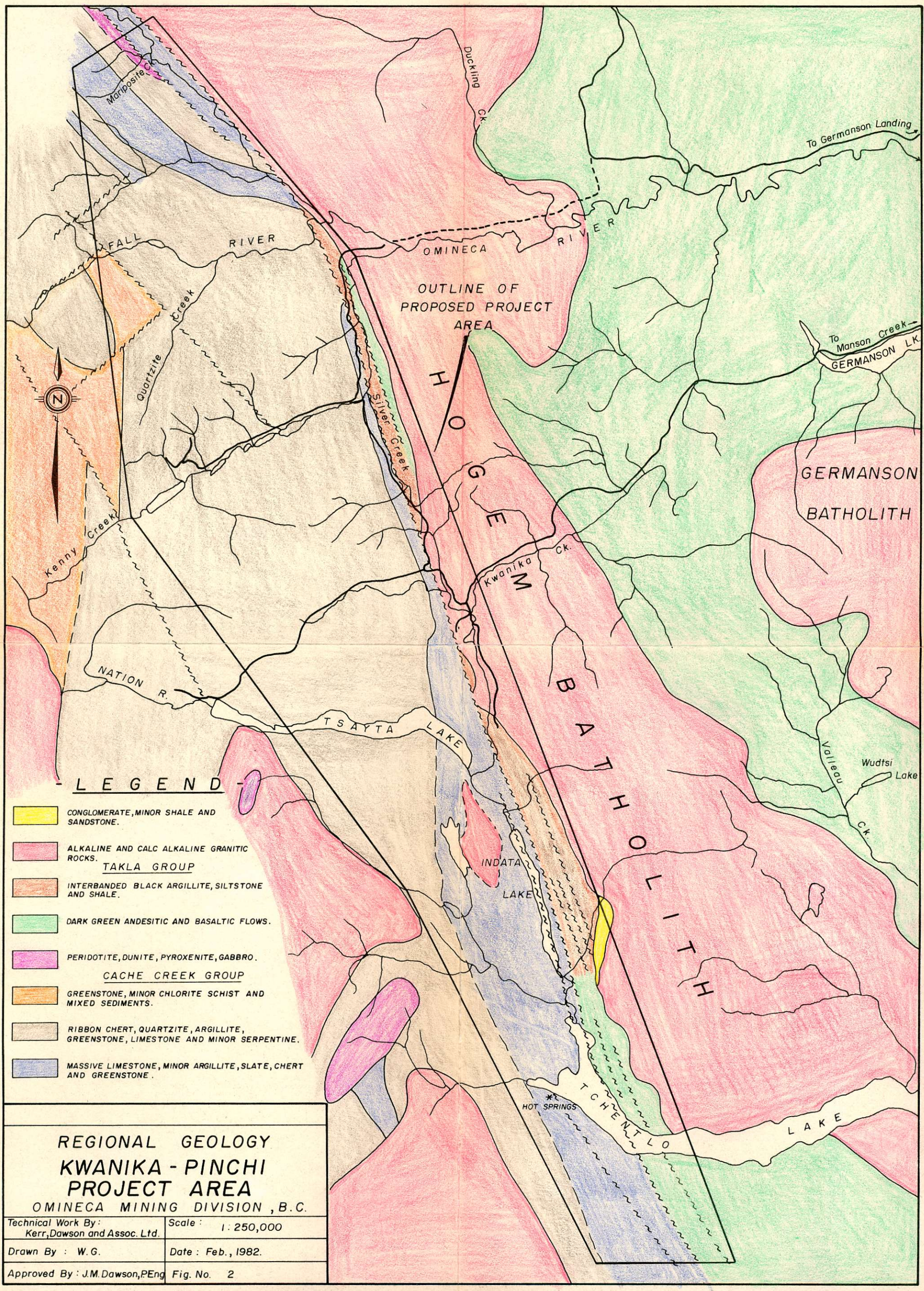
PHASE I BUDGET

1).	LABOUR:		
	1 Senior Geologist, 18 days @ $300.00/day	$5,400.00	
	1 Junior Geologist, 18 days @ $200.00/day	3,600.00	
	2 Senior Prospectors, 18 days @ $175.00/d/ea.	6,300.00	
			$15,300.00
2).	HELICOPTER SUPPORT:		
	25 hours @ $550.00/hr.		13,750.00
3).	GEOCHEMICAL ANALYSES:		
	1500 Samples @ $8.00/ea.		12,000.00
4).	ROOM AND BOARD:		
	64 man days @ $35.00/man/day		2,240.00
5).	TRUCK RENTAL:		
	18 days @ $40.00/day	720.00	
	3000 miles @ $0.40/mi.	1,200.00	
			1,920.00
6).	Field equipment and Supplies, maps, telephone, freight and office overhead.		1,600.00
7).	Compilation and Interpretation of data & Preparation of final report.		3,000.00
			$49,810.00
	CONTINGENCY: Approximately 10%		5,190.00
	TOTAL COST OF PHASE I		$55,000.00



MINERAL OCCURRENCES
KWANIKA - PINCHI PROJECT AREA
OMINECA MINING DIVISION, B.C.

Technical Work By: Kerr, Dawson and Assoc. Ltd.	Scale: 1 : 250,000
Drawn By : W.G.	Date : Feb., 1982.
Approved By : J.M. Dawson, PEng	Fig. No. 3



REGIONAL GEOLOGY
KWANIKA - PINCHI PROJECT AREA
OMINECA MINING DIVISION, B.C.

Technical Work By: Kerr, Dawson and Assoc. Ltd.	Scale: 1 : 250,000
Drawn By : W.G.	Date : Feb., 1982.
Approved By : J.M. Dawson, P.Eng	Fig. No. 2