

ARCHER, CATHRO
AND ASSOCIATES LTD.
CONSULTING GEOLOGICAL ENGINEERS

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Hyland Joint
Venture, Watson Lake
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PKV ✓
GWH ✓
ECJ

WHITEHORSE, Y.T. 667-4415

6TH FLOOR, TWO BENTALL CENTRE, VANCOUVER, B.C. 688-2568

POST OFFICE BOX 4127
WHITEHORSE, Y.T.

October 18, 1972

Mr. W. Sirola
Kerr Addison Mines Ltd.
405-1112 West Pender
Vancouver, B.C.

Dear Mr. Sirola,

Bob Cathro mentioned that your company has indicated interest in reviewing Joint Venture exploration proposals. I have enclosed a summary proposal of a 1973 exploration program for stratiform zinc-lead deposits in the Selwyn Basin of Yukon. Also enclosed are summaries of budget distribution, schedule of charges, exploration method and usual forms of agreement. We are attempting to finance the project with four participants each contributing \$45,000. for a quarter interest. If you are interested in the concept I would be pleased to discuss it with you at greater depth.

Yours truly,

ARCHER, CATHRO & ASSOCIATES LTD.

A.R. Archer
A.R. Archer

ARA:st

I have spoken to W. Sirola on this. The area is OK though has been worked, and Archer & Cathro are capable of good work. However, an investment of \$45,000 for 25% interest would not compare favourably with W. Sirola's proposed programme in the Selwyn Range, nor would it provide work for our own personnel.

I agree with debanking this
PKV
Nov 15/72

RECEIVED
OCT 19 1972

KERR ADDISON
MINES LTD.

Per.....

ARCHER, CATRO

AND ASSOCIATES LTD.

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PROPOSED HYLAND JOINT VENTURE

General

This firm is making initial preparations for a reconnaissance exploration program northeast of Watson Lake, Yukon, during the 1973 field season. The program will consist of a seven man crew doing geological studies, prospecting and geochemical sampling and will be supported by a helicopter and fixed wing aircraft. The estimated cost is \$180,000.00 and financing will be sought between November 1 and December 31, 1972. This preliminary proposal will provide a brief outline of the intent and scope of the project.

Project Area

The project area is a sub-rectangular block about sixty miles by eighty miles, with the long axis oriented north, along the south edge of the Selwyn Intrusions. The attached map shows the area in relation to the existing road network, main towns, drainage system, general geology and known mineral occurrences.

Exploration Concept

General - The project area is in the southern portion of the Selwyn Basin, which is a unique tectonic feature of the Canadian Cordillera. Here, metasedimentary rocks, somewhat similar to these in Omineca Belt of British Columbia, are found on the northeast side of the Rocky Mountain-Tintina Trenches. A large granitic body, called the Selwyn Batholith in this summary,

cuts the Selwyn Basin in the Frances Lake area, and is surrounded by a swarm of smaller stocks. This is the only area in the Canadian Cordillera in which any significant intrusions occur east of the Rocky Mountain-Tintina Trenches. With the exception of the Whitehorse Copper Belt and the Clinton Creek Mine(asbestos) , all of the economic Yukon deposits-Keno Hill, Anvil, and Cantung-are found in the Selwyn Basin. It may also be significant that the Tintina and Rocky Mountain Trenches intersect at a low angle in the Watson Lake Area. This structural hinge, combined with a pronounced western bend to the Cordillera, may indicate a Precambrian transverse basement structure beneath the Selwyn Basin which has influenced its location and may be partially responsible for the later intrusive activity.

It is becoming increasingly obvious that the finer grained facies of the Lower Cambrian and Hadrynian sequences within the Selwyn Basin are important host rocks for stratabound zinc-lead deposits (see Gabrielse, Western Miner, February 1969, pp 22-26, copy attached). The best known deposits, Faro, Vangorda and Swim in the Anvil District, the MacMillan (or Quartz Lake) Deposit and possibly the indefinitely dated Tom Deposit, range between 1 and 60 million tons in size and grade 8 per cent to 15 per cent combined zinc and lead, plus 1 to 2 ounces of silver. The Tom and Quartz Lakes deposits both occur in calcareous horizons while the deposits in the Anvil District occur in a slightly siliceous, possibly tuffaceous, phyllite unit. The Vangorda, Tom and MacMillan(Quartz Lake) deposits outcrop and were found by simple prospecting. The Anvil and Swim deposits were found mainly by geophysical exploration in the vicinity of the Vangorda

deposit. With the exception of the Anvil district, very little of the favourable Lower Cambrian to Hadrynian sections has been explored by modern geochemical exploration techniques on a regional basis.

Hyland Joint Venture Area - The area outlined on the attached 1"=16 mile map was chosen for regional stratiform zinc-lead exploration because it is the most poorly explored portion of the favourable formations that is relatively accessible to the present Yukon road network. The only known stratiform deposit within the project area, the MacMillan or Quartz Lake showing, was found by prospecting in the late 1800's by miners searching for placer gold. No placer gold was found in southeastern Yukon and the Klondike discovery in 1896 drew most prospectors from the area. The MacMillan deposit was restaked in 1948 and was explored until 1953 and in 1967-68. Asarco now holds the major interest. This work stimulated more prospecting activity but the rather subdued, well timbered, terrain with poor outcrop prevented effective coverage. Only a few small portions of the area have been explored by geochemistry, the only method that would be expected to be effective in this setting.

The project area is almost entirely underlain by Lower Cambrian to Hadrynian clastic rocks that generally exhibit a coarse to fine grain facies change from east to west. Calcareous sections are numerous and Hadrynian volcanic flows containing minor copper mineralization are found east of the Coal River. The MacMillan deposit, which contains about 1 million tons grading about 10 per cent zinc, 5 per cent lead and 1.8 oz/ton silver, will be the subject of careful geochemical and stratigraphic orientation at the

start of the project. To the northwest, near Mt. Billings, the Cambrian and Hadrynian sediments occur as a linear roof pendant in the Selwyn Batholith. Here, good exposures and good access (Cantung Highway) has resulted in the discovery of numerous zinc-lead showings by conventional prospecting in the last ten years. Summary description of the two best showings in the Mt. Billings area, the Black Jack and Fir Tree, and of the MacMillan(Quartz Lake) Deposit, are attached. The location of these showings suggest that the finer grained facies, or the westernmost portion, of the Lower Cambrian and Hadrynian sediments may be most favourable for stratiform deposits. Perhaps coincidentally, the two largest tungsten deposits in North America, the Cantung Mine and the Mactung deposit (being developed by Amax) occur within or on the margins of plutons that cut these same Lower Cambrian sediments.

The Hyland Joint Venture will use a combination of stream sediment geochemistry, detailed stratigraphic mapping and prospecting, with the main emphasis toward stratiform zinc-lead and minor emphasis on tungsten. The western portion of the area will be explored first. The general exploration sequence will be reconnaissance exploration followed by similar, but more detailed, exploration over favourable stratigraphic sequences so found. A portion of the budget is allocated for claim staking and subsequent property exploration.

LEGEND



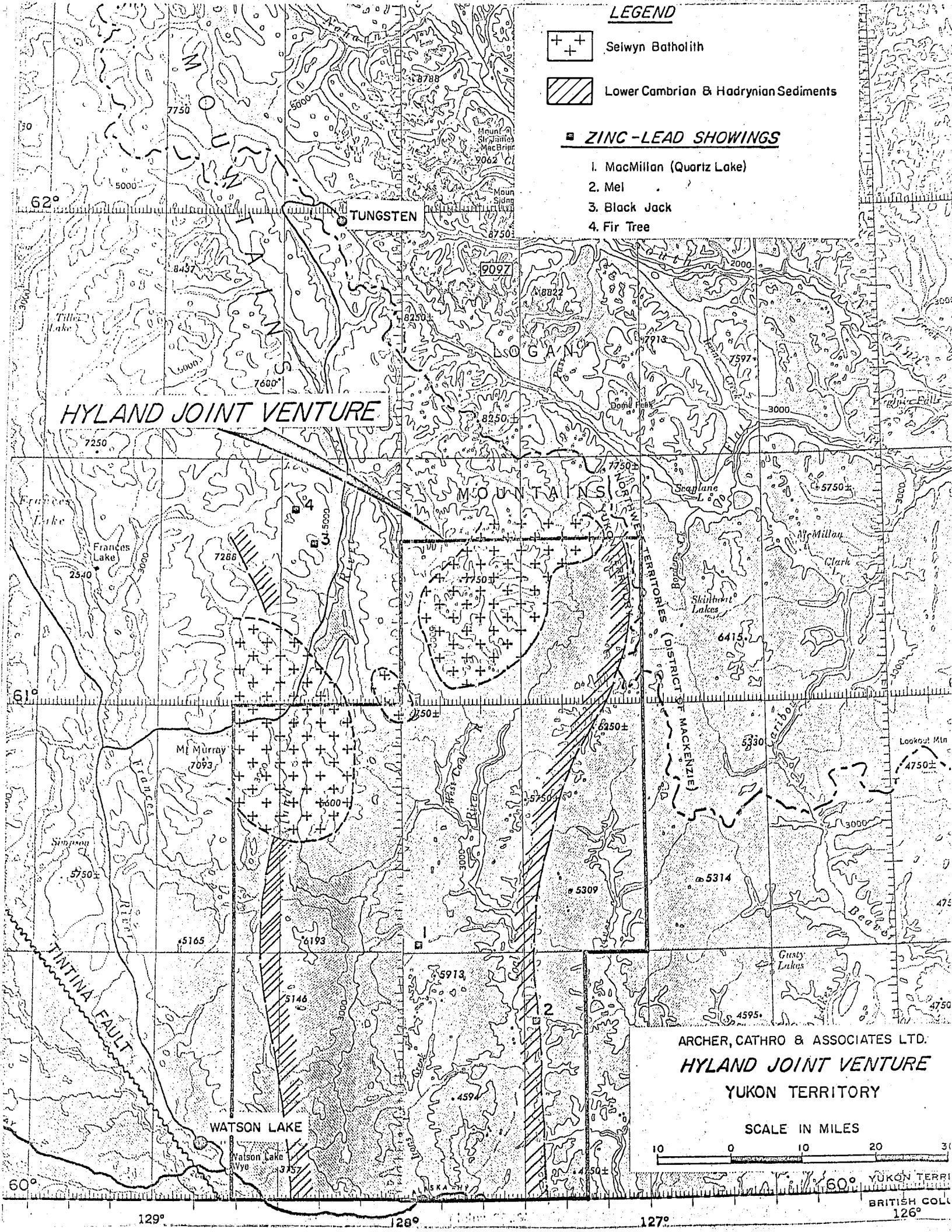
Seiwyn Batholith



Lower Cambrian & Hadrynian Sediments

ZINC-LEAD SHOWINGS

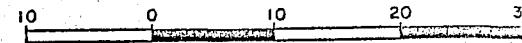
- 1. MacMillan (Quartz Lake)
- 2. Mel
- 3. Black Jack
- 4. Fir Tree



HYLAND JOINT VENTURE

ARCHER, CATHRO & ASSOCIATES LTD.
HYLAND JOINT VENTURE
 YUKON TERRITORY

SCALE IN MILES



129°

128°

127°

YUKON TERRITORY
 BRITISH COLUMBIA