861545

PLACER DEVELOPMENT LIMITED

MEMORANDUM:

TO: H. Goddard DATE: November 18th, 1983

FROM: R.H. Pinsent FILE: 82E

RE: **ANARCHIST GROUP**

Figure 1, which is a detail from the 1:2,000,000 scale Tectonic Assemblage Map of the Canadian Cordillera, shows that the Mississippian to Triassic Thompson Assemblage (PTT) of south central British Columbia is restricted in outcrop area, and that it occurs in a large number of descrete areas of outcrop. The assemblage, where found, overlies Archean to Palaeozic "gneiss" (GNS) and it is overlain both by Upper Triassic to Lower Jurrasic volcanic strata belonging to the Nicola - Takla Group (TJT) and by appreciably younger volcanic strata belonging to the Cretaceous to Tertiary Ootsa Lake-Kamloops Group (KTO).

The Thompson Assemblage has been intruded by a wide variety of younger, batholithic, igneous intrusions including bodies of Middle to Late Jurassic grano-diorite (MJG), Early to Middle Cretaceous quartz monzonite (EKq) and Late Cretaceous to Early Tertiary diorite and gabbro (TKd).

The Thompson Assemblage in South Central British Columbia is mainly found within the Omenica Crystalline Belt at the south end of the Shuswap Metamorphic Complex. The unit is clearly deformed and the strata has suffered both regional and contact metamorphism. The Thompson assemblage in Figure 1 is defined as consisting of "acidic to intermediate volcaniclastics, chert, argillite, limestone, local basalt and acid volcanics; marine." In reality it is a composite of many volcanic and sedimentary formations defined by early mapping in individual pendants or descrete areas of outcrop.

The Thompson Assemblage has, in recent years, been subdivided into structural and tectonic terranes (Monger, 1977; Monger and Price, 1979 and Peatfield, 1979). The Paleozoic rocks which outcrop to the west of the Okanagan River (Old Tom Formation, Shoemaker Formation, etc.) are considered to represent remnants of obducted oceanic crust. In contrast; the Anarchist Group and the Mount Roberts Formation to the east of the River are thought to be part of a remnant of a subduction related island arc complex (Figure 2). The relations between the two units have been obscured by an intense period of deformation and orogenesis which occurred in the early Triassic, prior to the development of the Nicola volcanic arc. Faulting during the Triassic and more recently has caused tectonic inter-mixing of the two units. Bodies of serpentinite are common in the faults within this zone of mixing.

1600 - 1055 Dunsmuir Street, Vancouver, B.C. (604) 682-7082 Telex 04-55181
Mailing Address: P.O. Box 49330, Bentall Postal Station, Vancouver, B.C., Canada V7X 1P1

The Anarchist Group appears to be a typical "island arc" complex consisting of calc-alkaline andesite and dacite "greenstones" and a significant amount of marine sediment (argillite, limestone, sandstone, greywacke and tuff). The arc has not been well differentiated but the Anarchist Group in N.T.S. Area 82E is probably relatively proximal and the Mount Roberts Formation is probably relatively distal to the main axis of volcanism.

The mineral potential of the Anarchist Group strata is two fold: (1) large irregular replacement bodies containing chalcopyrite, pyrite and magnetite skarn appear to have been formed by thermal metamorphism of Anarchist Group limestone adjacent to plugs of Cretaceous granodiorite (e.g.: Phoenix Copper) and (2) Stratabound gold-bearing "massive sulphide" deposits are located on or near the interface between volcanic units and calcareous basinal argillite horizons (e.g, Sylvester K). The former have been mined out and the latter are currently in the process of evaluation. Figure 3, from the George Cross Newsletter, May 10th, 1983, shows the location of twelve stratabound mineral occurrences located to data in the Greenwood area which may be of this type. A thirteenth occurrence at Crystal Creek near Beaverdell, is held by Probe Exploration and Development Ltd.

The size, grade and overall potential of this type of deposit is, as yet, unknown. It is, however, clear that the Anarchist Group hosts stratabound "massive sulphide" mineralization and that the sulphide commonly contains significant amounts of Au and Ag.

I would suggest that the area of outcrop defined by the Anachist group would make a logical target for a grass roots exploration programme.

R.H. Pinsent

RHP/cs
Attachment

1600 - 1055 Dunsmuir Street, Vancouver, B.C. (604) 682-7082 Telex 04-55181
Mailing Address: P.O. Box 49330, Bentall Postal Station, Vancouver, B.C., Canada V7X 1P1

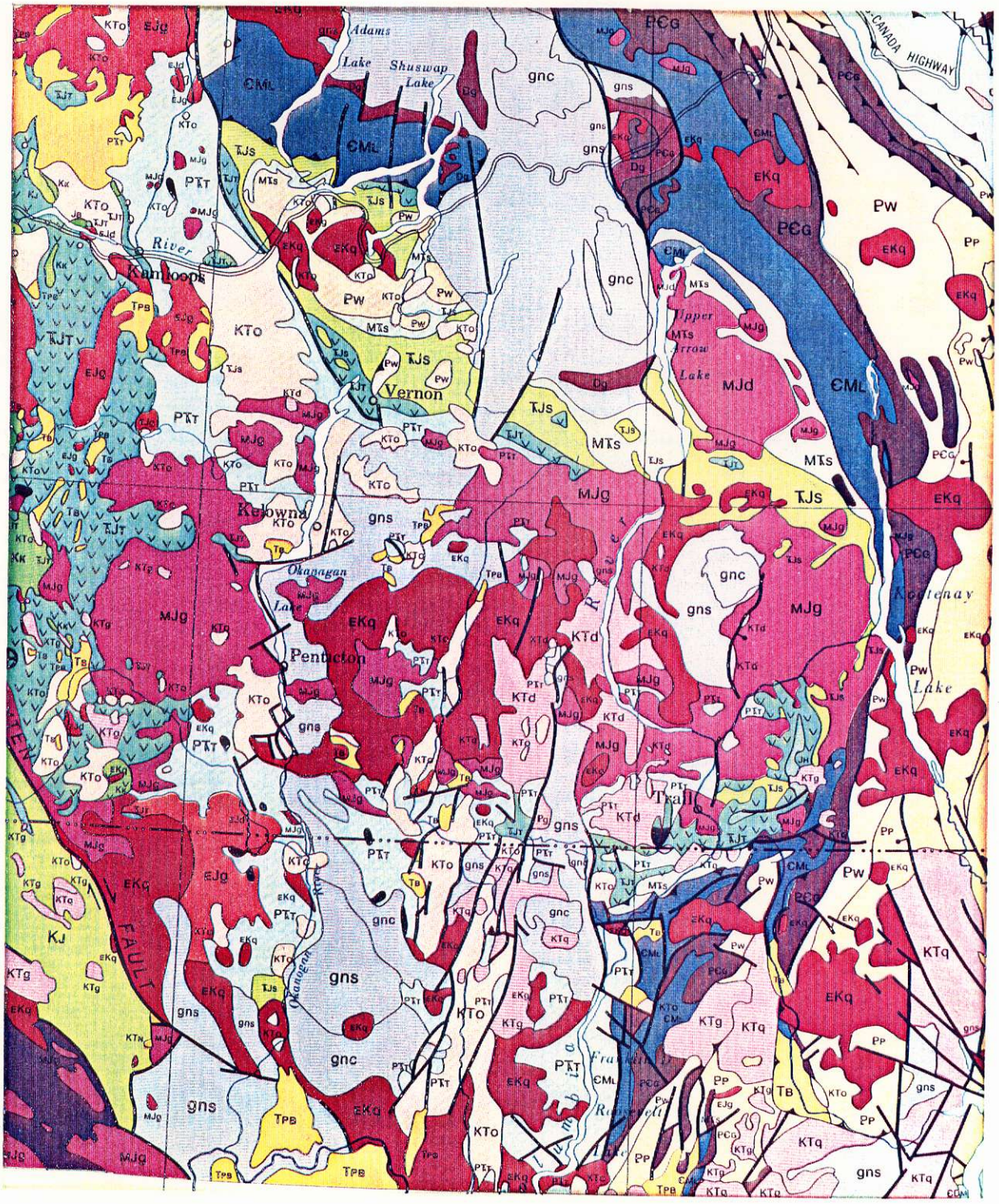
References:

Monger, J.W.H. (1977): Upper Paleozoic rocks of the Western Canadian Cordillera and their bearing on Cordillera Evolution: Can. J. Earth Sci: v.14, p. 1832-1859.

Monger, J.W.H., and Price, R.A., (1979): Geodynamic Evolution of the Canadian Cordillera - Progress and Problems: Can. J. Earth Sci., V. 16, p. 770-791.

Peatfield, G.R., (1979): Late Paleozoic-Early Mesozoic Stratigraphic, Tectonic and Metallogenic Relationships "Boundary District" Southern B.C.: G.A.C. Abstract, February, 1979.

1600 - 1055 Dunsmuir Street, Vancouver, B.C. (604) 682-7082 Telex 04-55181
Mailing Address: P.O. Box 49330, Bentall Postal Station, Vancouver, B.C., Canada V7X 1P1


Adams
Lake
Shuswap
Lake
CANADA HIGHWAY
Kamloops
River
Vernon
Arrow
Lake
Kelowna
Okanagan
Lake
Penticton
Trail
Kootenay
Lake
FAULT
gnc
gns
MJg
MJd
EKq
PCg
PW
PP
CML
KTo
KTd
KTg
KTq
TJS
MTs
EJg
PTT
TPB
TB
KJ
KJT

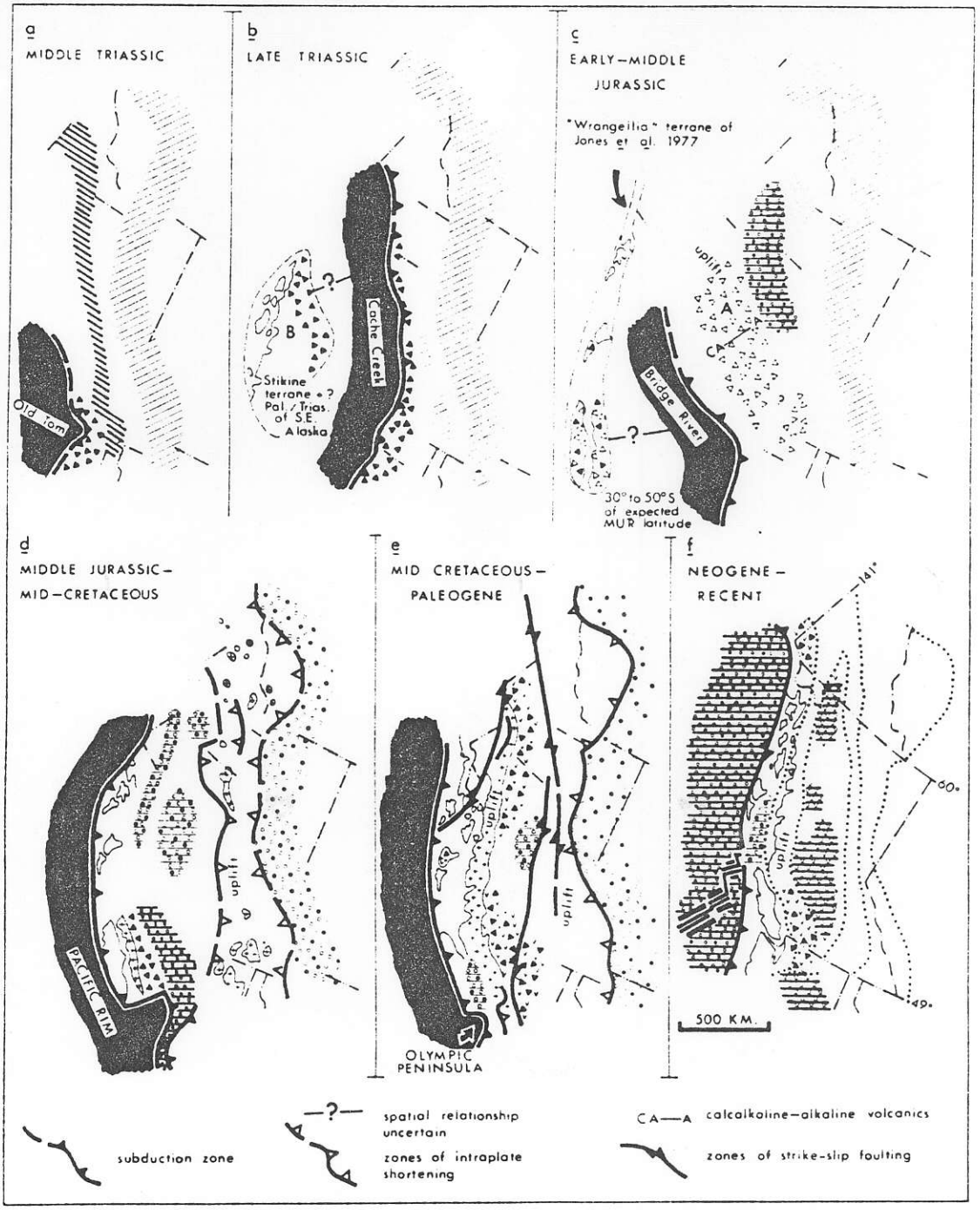


FIG. 10. Distribution of tectonostratigraphic assemblages on schematic, but conservative, palinspastic bases. Displacements built into maps have been reported, unless indicated by (?), in which cases the magnitude is unknown, but likely to be large.

TABLE 1. Nature and inferred tectonic settings of tectonostratigraphic assemblages

OROGENIC CLASTIC BASIN DEPOSITS: subdivided on (1) nature of underlying basement, namely continental crust (a), transitional ('eugeosynclinal') crust (b), and oceanic crust (c), and (2) nature of clasts, namely volcanic (X) (no tectonic uplift implied), and granitic and/or sedimentary and/or metamorphic + volcanic (Y) (implies tectonic uplift). Inferred depositional sites include foreland basins, successor basins, arc-related basins and clastic deposits on oceanic crust marginal to the orogen.

GRANITIC INTRUSIONS: commonly related to volcanic arcs

VOLCANOGENIC TERRANES: subdivided on composition of volcanics; superimposed 'v,v,v' indicate subaerial deposition

Assemblages with variable volcanic composition: submarine to subaerial, commonly calcalkaline, locally alkaline, basaltic to rhyolitic flows, abundant pyroclastics and associated sedimentary rocks, generally associated comagmatic intrusions that are commonly granitic but range from intrusive alkaline ultramafic to syenite. Different patterns indicate different assemblages in the same time-interval. Inferred to be volcanic arc deposits

Assemblages with basic volcanics

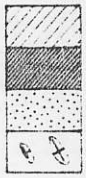
1 - submarine to subaerial tholeiitic to alkaline basalt, stratigraphically overlying older terranes of varied composition. Of great lateral extent, but with no known associated alpine-type ultramafics. Flood basalts; in part equivalent to 2?

2 - submarine, tholeiitic basalt, associated in places with alpine-type ultramafics and sedimentary rocks, stratigraphically overlying older terranes of variable composition. Inferred to be marginal basin deposits; may contain some rocks of 3, 1

3 - submarine, tholeiitic and locally alkaline basalt, associated with alpine-type ultramafics, radiolarian chert and other sediments; base where exposed in tectonic contact with underlying rocks; commonly a distinctive style of deformation and metamorphism. Inferred to be ocean basin deposits; may contain some rocks of 2

CRATON-RELATED DEPOSITS

Sedimentary rocks on and conterminous with the cratonic margin; where clastic, derived from cratonic sources. Inferred depositional sites: continental shelf, slope



Paleozoic to Late Jurassic

late late Proterozoic

early late Proterozoic

mid-Proterozoic crystalline basement

KETTLE RIVER RESOURCES LTD.

GREENWOOD B.C. MINING CLAIMS INCLUDING RECENT STAKING

GREENWOOD MINING DIVISION

BRITISH COLUMBIA

KILOMETRES 0 1 2 4 6 KILOMETRES

MILES 0 1/2 1 2 3 4 MILES

APRIL 15, 1983

- GREENWOOD PROJECT (KRR 100%)
- PHOENIX PROJECT (KRR 49% – NOR 51%)
- BLUEBELL PROJECT (KRR 33⅓ – NFR 33⅓ – FGO 33⅓)
- RAINBOW PROJECT (KRR 50% – DTA 50%)

- ▲ STRATABOUND Cu-Au-Ag MINE
- ⬢ QUARTZ VEIN Au-Ag MINE
- ■ SERPENTINITE ASSOCIATED MINE Au + Cu + Ag
- ◆ PORPHYRY PROSPECT

KENAR RESOURCES LTD. (KNA)

DENTONIA RESOURCES LTD. (DTA)

MAR-GOLD RES LTD (MAR)

BIG DUKE EXPL

KENERGY RESOURCE CORPORATION (KNY)

RIMACAN RES.

BLACK VELVET RESOURCES LTD.

NEW FRONTIER PETRO. (NFR)

FAIRMONT GAS & OIL (FGO)

KETTLE RIVER RES. (KRR)

GREAT WEST PETROLEUM

CANBEC RES.

MASCOT GOLD MINES (MSG)

DISCOVERY

NEW FRONTIER PETROLEUM CORP. (NFR)

GREENWOOD SKYLARK RESOURCES LTD. (SKR)

PACIFIC CYPRESS MINERALS (PCY)

GOLDEN CONCORD MINING CORP.

VISCOUNT (VIS) RESOURCES LTD.

SKYLARK RES. LTD. (SKR)

MUNDEE MINES LTD. 50% (MNU)

CONSOLIDATED BOUNDARY EXPL. LTD. (CBX) 50%

ILIXOR RES. CORP.

K.S.

ROBERT MINES LTD. (RRT)

STAKED

MARCH RES. LTD. (MHL)

J. CARSON

BANQWEST RESOURCES LTD. (BAQ)

MAR-GOLD RES. LTD. (MAR)

AMIGO SILVER MINES LTD. (AMG)

STAKED

KETTLE RIVER RESOURCES LTD. 50% (KRR)

DENTONIA RESOURCES LTD. 50% (DTA)

MAYMAC EXPLORATIONS LTD. (MMA)

CHARLESTON RES. (CNJ)

AVANCE INTERNATIONAL INC. (AVA)

POWERGEM RESOURCE CORP.

GRENOBLE ENERGY LTD. (GRN)

(JOINT VENTURE WITH [illegible] CORP.)

AZURE RESOURCES LTD. (AZR)

PIT

MIDWAY

Grand Forks

HIGHWAY 3

KETTLE RIVER

BOUNDARY CREEK

GIBBS CREEK

WASHINGTON

BRIT[illegible]

YUKON

GREENWOOD GOLD AREA

ALBERTA

VANCOUVER

B.C.

U.S.A.

VICTORIA

PRINCE GEORGE

PRINCE RUPERT

FORT ST JOHN

KAMLOOPS

NANAIMO

KETTLE RIVER RESOURCES LTD.

LISTED ON THE VANCOUVER STOCK EXCHANGE

TICKER TRADING SYMBOL KRR

FOR INFORMATION

PHONE CANADA (604) 542-8960

U.S.A. (619) 452-7175

LETTERS IN BRACKETS INDICATE VANCOUVER STOCK EXCHANGE TRADING SYMBOLS.

THIS MAP DOES NOT GUARANTEE CLAIM LOCATIONS OR OWNERSHIP