/ VIL MINING CORPORATION LIMITED

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MEMORANDUM

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TO: R. L. Haffner

FROM: D. S. Jennings

SUBJECT: VISIT TO CANEX PLACER'S HOWARD'S PASS PROPERTY NEAR SUMMIT LAKE

DATE: September 17, 1973

Attached is a summary on Canex's Summit Lake Pb/Zn property visited September 12, 1973. For convenience, the recent information is included with earlier data on the property from the Northern Cordillera Mineral Inventory. An exploration proposal for similar deposits in correlative rocks will be submitted in the near future.

D. S. Jennings
Research Geologist

DSJ/mm

Attach.

PROPERTY NAME: Howard's Pass

LOCATION: Lat. 62°28' Long. 129°10' NTS 1051/6

METALS: Major - Lead, Zinc Minor - Silver

TYPE OF MINERAL DEPOSIT: Stratiform

HISTORY AND PREVIOUS WORK:

Staked by Canex Placer as a 450 claim block - X, etc. c l(Y64526) in Yukon and Y, etc. cl(A41901) in N.W.T. in July-Oct./72 following reconnaissance and grid geochem and mapping in 1968, 1971 and 1972. Only limited bulldozer trenching was carried out before fall. The discovery prompted a staking rush in Oct.-Dec. in which about 3000 claims were recorded. Companies which have staked or purchased fringe claims include Dynasty EL and Atlas EL, Cominco, Noranda, Vestor EL, Colt Res. L, Makaoo Dev CL, Belmoral ML, Acheron ML, Cream Silver ML, Tay River ML, Golden Gate EL, Worldex Ventures L, Texore ML, Maverick Mountain Res. L, Welcome North ML, Int. Obaska ML, Slocan Ottawa ML, White River ML, Bonus Res. L, Skyline EL, Belmoral ML, Galveston ML, United Chieftain Res. L, and Tanzilla EL. Teck Corp. staked about ten miles south near Summit Lake.

DESCRIPTION:

General:

Mineralization occurs in Unit 10 balck shales of probable Ordovician age and consists of sphalerite with lesser amounts of galena, which are strongly oxidized near surface. Canex Placer reported mineralization has been found near Howard Pass over a strike length of three miles in widths up to 150 feet, within which individual five foot samples assayed as high as 40-50 per cent combined lead and zinc. A second mineralized zone, on which little work has been done, is situated 13.5 miles northwest. This zone has not been visited by Anvil personnel.

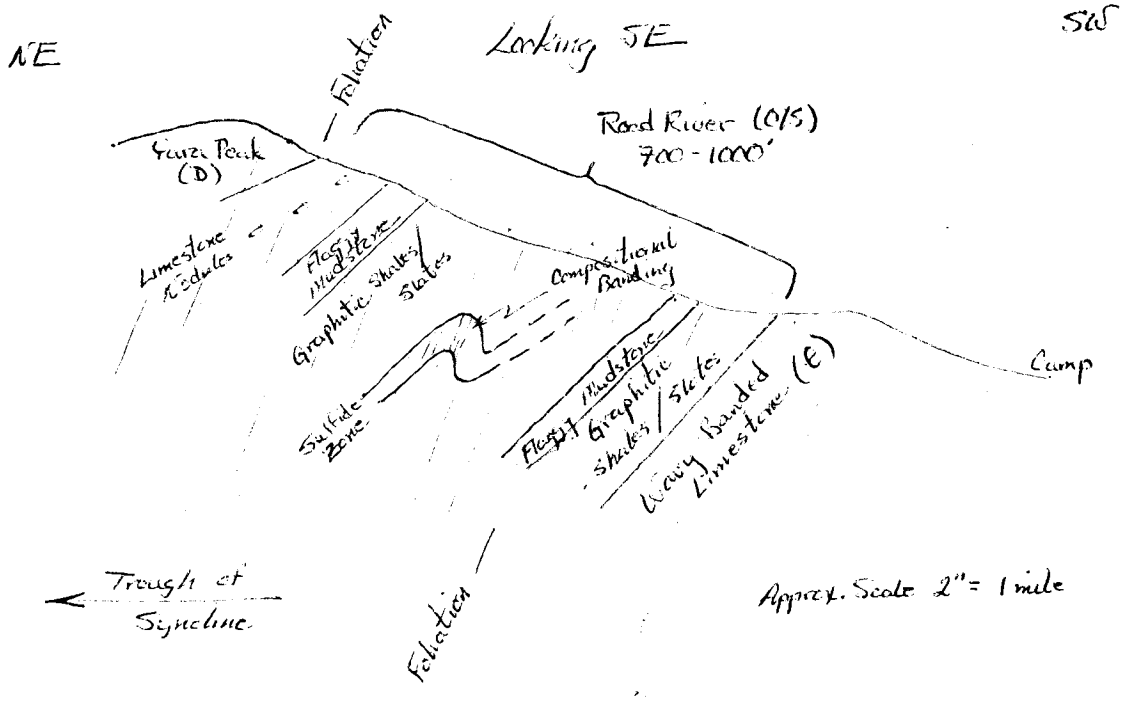
Stratigraphy:

Mineralization occurs within black, carbonaceous graptolitic shales to slates of the 700-1000 foot thick, Ordovician-Silurian Road River Formation (unit 10, GSC Map 8-1967). The Road River is overlain by an unknown thickness of bedded gray shales, siltstones and brownish medium to fine grained sandstones of the Devonian Yara Peak Formation (local name only; part of unit 18b, GSC Map 8-1967). Rocks of the Yara Peak are reportedly (B. Ainsworth) host to a characteristic black lichen on their weathered surface. Wavy, banded blue gray, Midde to Upper Cambrian limestones (unit 7b, GSC Map 8-1967) of unknown thickness underlie the Road River in the Howard's Pass area and elsewhere in Nahanni map area. The top 200-300 feet of the Road River is characterized by occasional limestone nodules up to 3 feet long underlain by a

gray-brown "flaggy mudstone" with dark brown to black carbonaceous lenses averaging 3/4-1 inch in length. This same mudstone unit (or a similar one) appears to underly the main sulfide zone. Pb/Zn mineralization appears, from preliminary data, to occupy a 150 foot thick interval in the middle 300-500 feet of the Road River graphitic shales/slates. This stratigraphic sequence is shown schematically in the structural cross-section below. Representative samples of these units are on file in the Exploration offices. It should be noted that Road River rocks are not identified on GSC Map 8-1967. This sequence was identified by Placer's reconnaissance mapping.

Structure:

The Cambrian to Devonian section described above lies on the south limb of a westerly plunging syncline as diagrammed below:



The mineralized band appears to be folded into a congruent drag fold on the S limb of the major structure. A slatey cleavage or low grade metamorphic foliation appears to be axial planar to the drag fold and, by inference, to the megascopic structure. Some sulfides are reported to be "remobilized" into the plane of this foliation and compositional banding in the massive sulfides parallels the foliation.

Mineralization:

PbS and ZnS are the main sulfides present as very fine grained disseminations and massive lenses of unknown dimension in the central graphitic portion of the Road River. Chemically, the Howard's Pass deposit is free of Ag and Cu. Pyrite and pyrrhotite do not occur as a significant part of the sulfide assemblage. The main sulfide zone is recognized on surface exposure by a light to medium blue gray to beige cast on the weathered surfaces of talus fragments caused by the development of secondary Pb/Zn carbonates and/or sulfates. The blue gray to beige cast stands out moderately well against the medium to dark gray weathered color of the unmineralized graphitic slates. Mineralization has been traced discontinuously over at least a 12,000 foot length near the Placer camp. No realistic estimates of dimensions, tonnages or overall grades can be made at present and no news release is expected on the property in 1973. Observed thicknesses of massive sulfides in trenches was 5-10 feet with disseminated mineralization distributed irregularly over about a 150 foot thickness. The disseminated mineralization is difficult to recognize because of its grain size and reported erratic distribution. The weathered appearance caused by secondary Pb/Zn minerals, specific gravity of mineralized samples and solution cavities (ashtray rock) allow its recognition. There is no problem identifying massive mineralization, but it does not outcrop commonly. Disseminated mineralization ranges from about 1-25% combined Pb/Zn and is seen with difficulty. Massive sulfide mineralization is easily visible in trenched outcrop ranges from about 25%-40% combined with occasional zones to 50% combined.

Discovery and Exploration Methods:

As indicated under "History and Previous Work" above, the deposit was found by reconnaissance geochemical surveys covering Road River rocks over at least a four year period. This program was a spin-off of the work done by Don Rotherham while in Cantung's employ. Five samples collected during 1970 in the Howard's Pass area were analysed in the winter of 1970-1971 and found to be anomalous. These samples led to a detailed follow-up program in 1971-1972 which eventually located the deposit (reported by B. Ainsworth). The 1973 field season has been spent 1) diamond drilling the deposit (at least 18 holes on a 15,000 foot contract with Caron), 2) completing reconnaissance mapping and detailed geochemical surveys of the claim group and 3) regional stream silt sampling in areas covering Road River rocks to north of the North Canol road adjacent to the Hess Project area of Atlas Explorations.

Canex routinely analyses stream sediments for Cu, Pb, Zn, Cd, Mo, Ni, Co, U, Ag, Ba, Au(?) and S(?). In selected areas (near acidic intrusive rocks?) they also analyse for Hg, W and Sn. A $HClO_4$ extraction is used for base metal atomic absorbtion determinations. Reconnaissance geochemistry appears to be the only practical exploration method for this type of deposit in the Road River sequence. Background values for these rocks are on the order of 1000 ppm Pb/Zn combined. The trace metal geochemistry of the Road River is characteristic and allows regional identification of the unit. Electromagnetic and magnetic geophysical methods are not feasible because of the conductive characteristics of the Road River and the absence of ferromagnetic minerals in the sulfides.

References:

NM, 23 Nov./72
Environmental Res. Synd, Claim Location Map - Summit Lake Area, 1 Mar./73