



## PLACER DEVELOPMENT LIMITED

MEMORANDUM:

TO: I. Thomson DATE: April 16th, 1985  
 FROM: R.H. Pinsent FILE: #35790 93N/11  
 RE: LUSTDUST Au, Ag, Pb, Zn PROPERTY

The Lustdust Au, Ag, Pb, Zn property is located near the head of Silver Creek between Dream Creek and West Kwanika Creek (Figures 1 and 2). The property is located 36 Km northeast of Takla Landing and 60 km southwest of Manson Creek. It is accessible by road from Manson Creek.

The Lustdust (KLM or Kay) property covers a block of highly deformed metasedimentary and metavolcanic strata, belonging to the Cache Creek Group, which lies in close proximity to the Pinchi fault. The property (locality #9, Figure 1) lies immediately to the west of the old Takla Mercury Mine (locality #8, Figure 1 and lots 6181-6188, Figure 5) on a section of the Pinchi fault noted for both polymetallic (localities 9, 124, 125, 126, Figure 1) and Hg (localities 8, 17, 18, 19, 142, 182, 183, Figure 1) vein deposits indicative of high level, epithermal, mineralization. Placer Au deposits occur on both Silver Creek (locality 50; figure 1) and West Kwanika Creek (locality 43, Figure 1).

The Lustdust property has received intermittent attention since the 1940's. It was reviewed by Placer Development Ltd. in 1956 and 1960 (Summary Report on Lustdust Property by E. Bronlund; PDL File #35790) and, according to assessment report 7059, Canex, Noranda and Bralorne Mines Ltd. were involved in a joint venture on the property from 1960-1962. There is no data on file to indicate what, if any, work was done. Takla Silver Mines Ltd. acquired the ground in 1964 but subsequently allowed the claims to lapse. Granby Mining Corporation staked the ground in 1977 and conducted geological, geochemical, geophysical and diamond drill exploration programs on the property in 1978 (assessment report 7059) and 1979 (assessment reports 7509 and 7759). Noranda drilled two holes on the property in 1980 (assessment report 8669). The Lustdust property is currently held by Pioneer Metals Corporation (see attachments).

The corporate business review (Pioneer Metals Corporation Business Review 1985 - 1986) states that there are three types of mineralization on the Lustdust property: (1) a quartz vein system with assays of 0.12 oz/ton Au and 27.4 oz/ton Ag over 7'

(2.1 m), (2) massive pyrrhotite, pyrite, chalcopyrite, sphalerite with minor Au and Ag over widths of 30 m. One intersection evidently ran 0.12% Cu, 0.54% Pb, 5.62% Zn, 0.29 oz/ton Ag and 0.006 oz/ton Au over 14' (4.3 m), and (3) a skarn zone with 2.3% Cu and 0.08 oz/ton Au over 3.5' (1.1 m). The review stresses that "massive sulphide" potential of the property, possibly reflecting a suggestion by Granby Mining Corporation (assessment report 7759) that the "massive sulphide" mineralization could be syngenetic.

The Lustdust property covers a mixed package which includes limestone, argillite, chert, carbonaceous phyllite and minor "greenstone" within the tectonic zone of influence of the Pinchi Fault (Figures 3 and 4). The package has been shattered and shot through with quartz porphyry dykes which follow the trend of the fault. There are four principal zones of mineralization on the property which, according to Bronlund (1960), lie along a structural break approximately 7000' (2134 m) long and 1000' (305 m) wide. Bronlund (PDL File #35790) gives a clear description of the zones as they were known in 1960. Zones #1 and 2 (Figure 5) consist of stringer veins and multiple bands of sulphide (galena, sphalerite, arsenopyrite, stibnite) with carbonate and minor quartz in limestone, chert and porphyry. The lenses and shoots are fault disrupted and complex to follow. Grades are variable but values of 0.1 - 0.2 oz/ton Au are common over intervals of 3-9' (0.9 - 2.7 m). Zone #3 consists of six oxidized primary ore shoots which are inferred to be bodies of near-massive sulphide (sphalerite, galena, pyrite, arsenopyrite and tetrahedrite) now altered on surface to limonite and goethite. The largest shoot (122 m long by 7.6 - 24.4 m wide) is estimated to run 0.20 - 0.35 oz/ton Au. The fourth zone (zone #4a, Figure 5) outcrops in the canyon of a creek which cuts the north end of the property. The mineralization consists of disseminated pyrrhotite, pyrite and chalcopyrite in calc-silicate skarn adjacent to a plug of quartz monzonite.

Granby Mining Corporation identified an additional zone (Zone #4b) midway between zones #3 and 4a (assessment report 7059). This new zone appears to have been the focus of all the more recent exploration activity. The zone consists of "lenses of almost massive pyrrhotite with pyrite and sphalerite occurring principally on the contact of limestone with greenstone and chert-argillite". Granby conducted a PVEM programme on the property and located two parallel conductors which they considered were consistent with the presence of a large sulphide body at depth under zone #4b and also with repetition of the sulphide bearing horizon through folding. Granby drilled the anomaly in 1979 and in one hole encountered "interbedded greenschist, limestone and phyllite with massive sulphides (pyrrhotite, pyrite, sphalerite, arsenopyrite, chalcopyrite in layers up to 3 meters thick" (assessment report 7759). The Noranda drill programme in the same general area encountered disseminated and vein-type sulphide over 150 m.

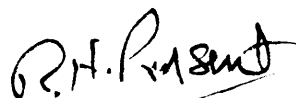
A review of the available data from Granby and Noranda shows that the Zone #4b mineralization is predominantly vein type, consisting of a weak stockwork of veins and disseminations of pyrrhotite and pyrite (with or without sphalerite and arsenopyrite) and a gangue of carbonate quartz and/or chlorite. The "massive sulphide" lenses found near the contact between limestone and greenstone are associated with intense chlorite alteration and it seems likely that they are of replacement origin. There is no real evidence to suggest a syngenetic origin and it seems somewhat coincidental to call on two distinct types of mineralization.

The evidence suggests that the Lustdust property covers a sulphide-rich hydrothermal system which developed within the Pinchi fault zone. The mineralization is epithermal in character and it probably represents the root zone of a high-level system. The eroded cap may well have contributed Au to the placer deposits found in Silver and west Kwanika Creeks.

The Takla Bralorne mercury deposit appears to be a somewhat similar epithermal deposit. It probably formed from a more recent pulse of mineralization as it is less deeply eroded and it is topographically lower.

The Lustdust property is interesting in that it appears to have had very little direct Au exploration in recent times. The Granby soil geochemical survey only included analysis for Pb, Zn, Ag and Cu. The soils were not analyzed for Au, As, Hg or Sb. Also the Granby drill core was selected for analysis on the basis of total sulphide content and presence of base metal sulphides. Gold values were admittedly low. Similarly, the zone #1 and 2 "ore shoots" discussed by Bronlund were sampled on the basis of high sulphide content. The Au values recorded by Bronlund (0.07 - 0.4 oz/ton Au) are not exceptional but they do not preclude the possibility of a large tonnage, low-grade, mineral deposit.

I recommend that we contact Pioneer Metals Corporation and ask to review any additional data they may have, and that we examine the property as soon as is feasible in the spring.



R.H. Pinsent

RHP/cs  
04:16:85

20<sup>th</sup> Feb. 1985. Nathan Mines

## Pioneer acquires new play, Maverick awaiting assays

Pioneer Metals has acquired a new property near Babine Lake in British Columbia with a massive sulphide zone tapped in previous drilling and outlined by geophysical and geochemical work.

Near the old Takla silver mine, the Lust Dust claim block has yielded copper, lead, zinc, silver and gold values. What interests President Robert Willis is an intersection from former drilling which assayed 19% zinc across a true width of 2 m.

This year Pioneer will follow up with a resampling of old trenches,

geological mapping and diamond drilling. A joint venture has not been ruled out by Pioneer, which holds a 100% interest in the ground.

In other developments, the company is awaiting assay results on the Puffy Lake, Man., gold bet being explored by **Maverick Mountain** and **Granges Exploration**. The former is owned 22% by Pioneer. Mr. Willis is president of Pioneer and Maverick Mountain.

Drilling last year on 200-ft. centres extended the strike length 3,400 ft. in a north-south direction. Step-out drilling, again on 200-ft. centres but spaced at the midway point of the first drilling fence holes, has confirmed the strike length and the relationship of parallel, alternating zones of waste or sub-economic rock with good-grade material.

The quartz-rich zones in biotite hornblende gneiss dip at 27° to the east.

Maverick Mountain plans to target exploration on one small section this year. Infill drilling on a 50-ft. grid in this sector should allow the company to drive a decline into ore-grade material.

Early cash flow is the goal, and depending on the money raised in a financing, the company is now considering exploration to determine depth potential.

Maverick will also be exploring ground adjoining the Equity Silver mine south of Houston, B.C. Maverick has a 39% interest, as does Teck Corp. while Equity Silver Mines has 22%.

Pioneer also has a precious metals property in New Mexico known as the Bonita Project, a joint venture program with Superior Oil Co. Ore reserves reported earlier (N.M. Jan. 17/85) were geologically inferred and not in the proven or possible categories.

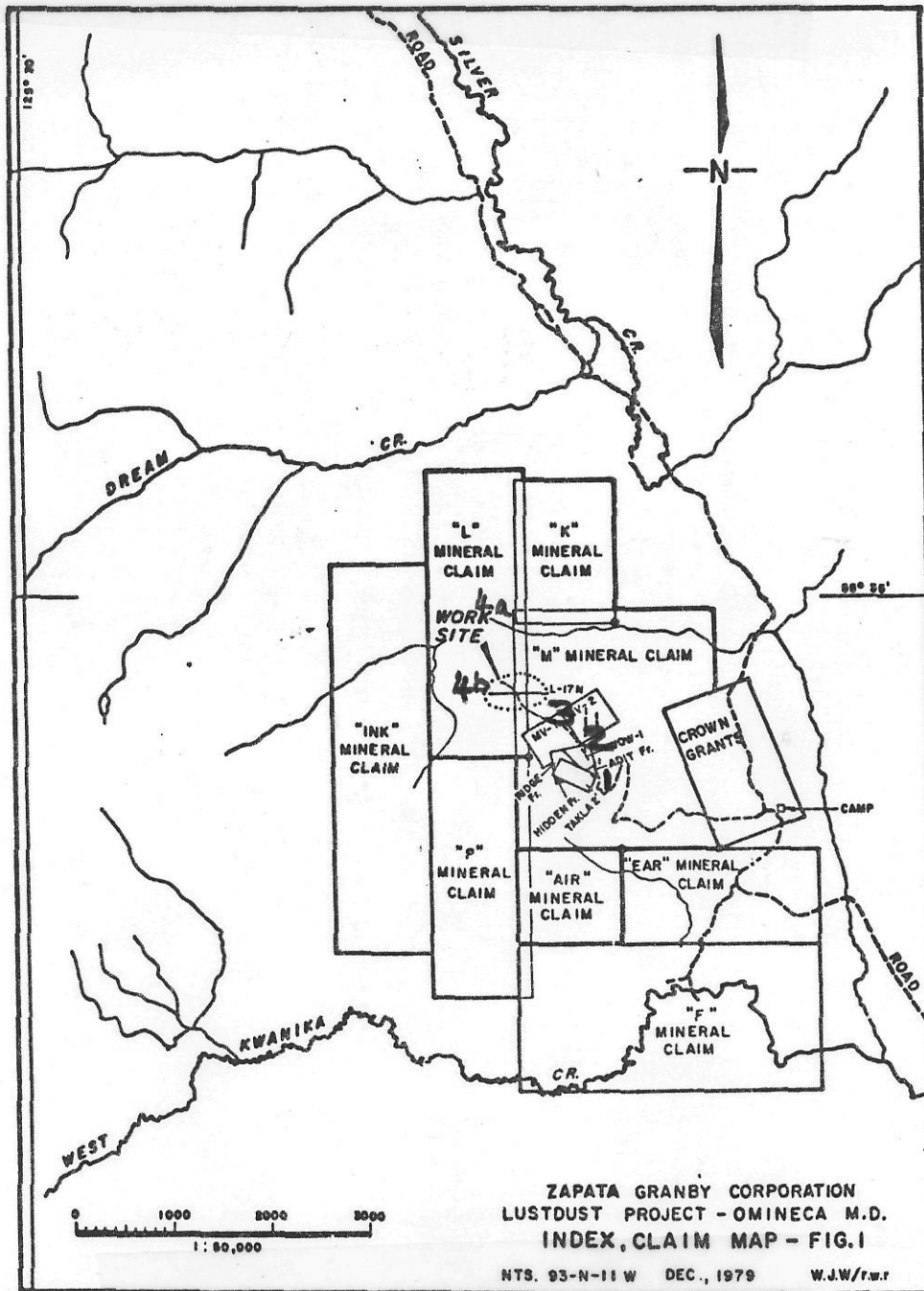


Figure 2: Zapata Granby Corporation  
Location Map: Lustdust Projects

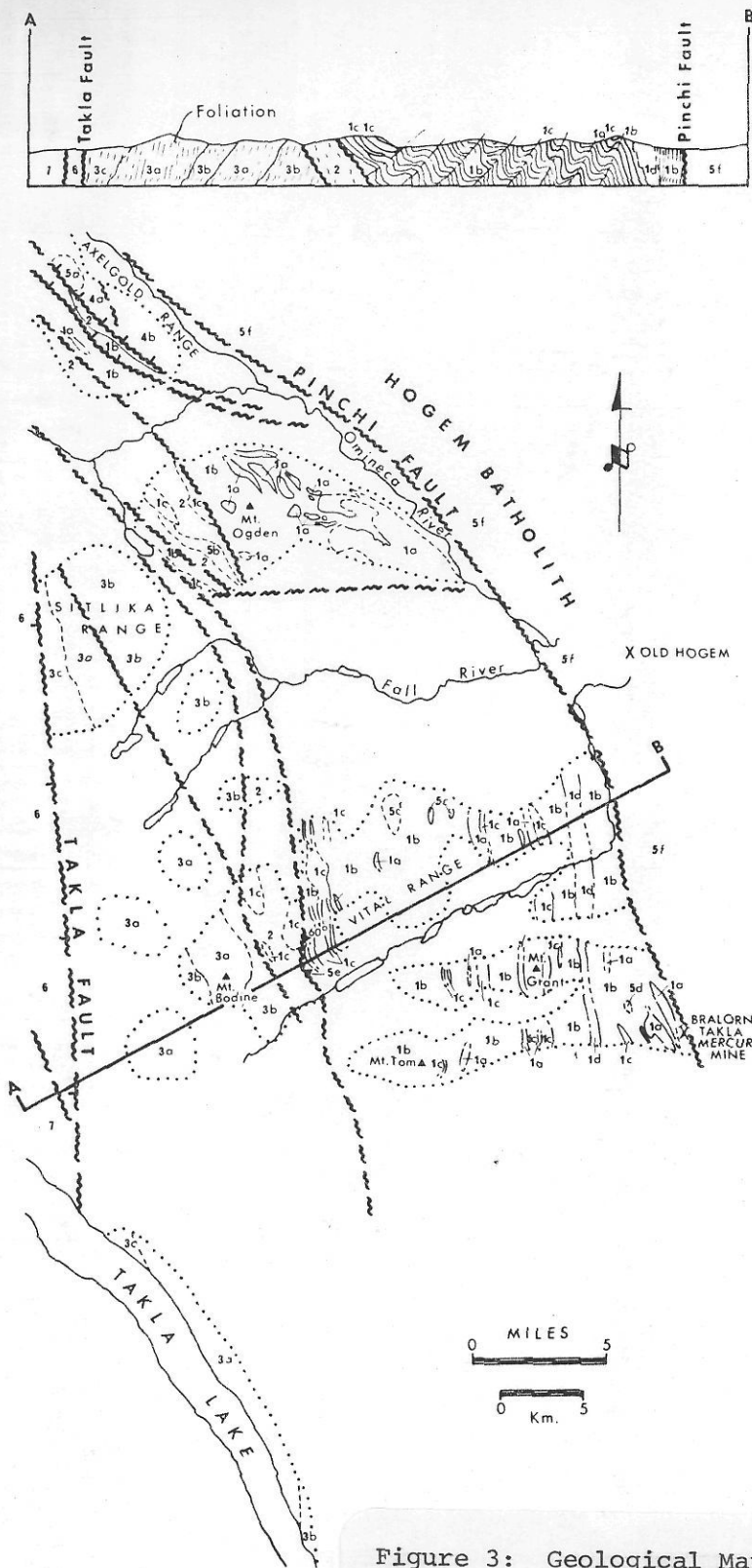


Figure 3: Geological Map Cache Creek Group

Figure 2. Geological map of Cache Creek Group and Mesozoic rocks at the northern end of the Stuart Lake Belt, central British Columbia.

## LEGEND

### UPPER CRETACEOUS and PALEOCENE SUSUT GROUP

7 conglomerate, shale, greywacks

### JURASSIC

#### HAZELTON GROUP

8 tuff, volcanic breccia

### UPPER TRIASSIC and JURASSIC

#### TAKLA GROUP (?)

4 (4a) chert pebble conglomerate;  
(4b) greywacke, argillite

### UPPER TRIASSIC (?), JURASSIC (?)

#### SITLIKA ASSEMBLAGE

(3a) tuff, volcanic breccia, rhyolite, feldspar porphyry  
3 (3b) greywacke, siltstone  
(3c) black phyllite or argillite

### UPPER PALEOZOIC

#### CACHE CREEK GROUP

1 (1a) limestone; (1b) chert & phyllite;  
(1c) greenstone; (1d) greywacke, laminated siltstone

### INTRUSIVES

#### MESOZOIC or TERTIARY

5 (5a) syenite; (5b) granite; (5c) biotite, hornblende feldspar porphyry; (5d) biotite, granodiorite; (5e) felsite

#### JURASSIC (Mainly ?)

5f granodiorite (Hogem Batholith)

#### PERMO-TRIASSIC

2 serpentinite, harzburgite

FAULT (defined, approximate, inferred).....

THRUST or high angle REVERSE FAULT.....

CONTACT (defined, approximate).....

LIMIT OF MAPPING.....

Figure 6. Map showing structural domains and distribution of metamorphic minerals.

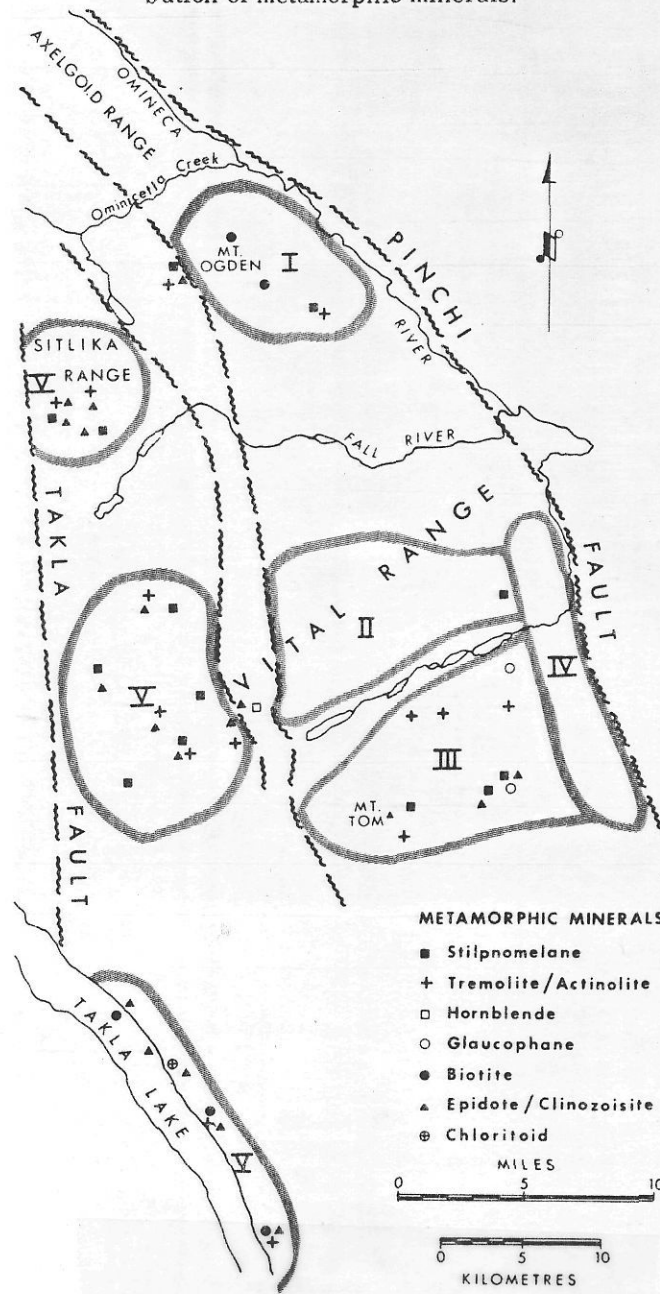


Figure 4: Structural Domain Map for  
I. Paterson  
(GSC Paper 74-1 Part B)

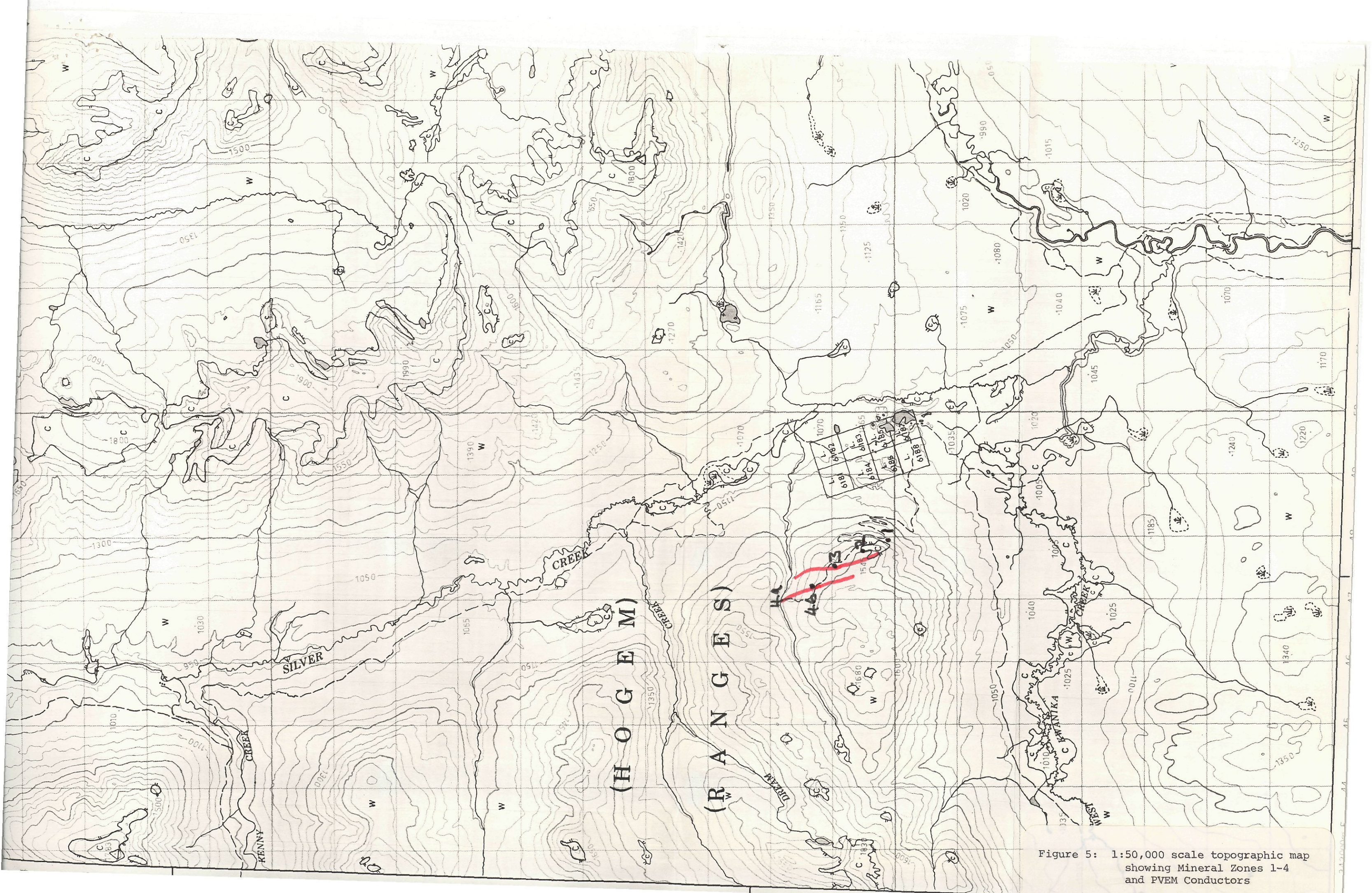


Figure 5: 1:50,000 scale topographic map showing Mineral Zones 1-4 and PVEM Conductors