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#5719

ASSESSMENT REPORT

ON THE

DAVID MINERALS (KIDD BRECCIA) PROPERTY

Situated 2 miles north of the

ASPEN GROVE STORE

NICOLA MINING DIVISION

N.T.S. 92 H/15 E

Latitude:  $49^{\circ} 55' N$ ; Longitude:  $120^{\circ} 35' W$ .

on behalf of

DAVID MINERALS LTD.

Vancouver, B. C.

Report by:

D.R. Cochrane, P. Eng.

Nov. 25, 1975

Delta, B. C.



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Geotechnical Consulting / Exploration Services

geology  
geophysics  
geochemistry

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Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 5719 MAP



PART A:

A - 1 INTRODUCTION

On September 26, 1975, the author inspected portions of the Aspen Grove Property of David Minerals Ltd., in the company of Mr. Hans Haveroen. This property examination was preceded by a fairly thorough study of the rather voluminous literature on the property (maps, notes, previous reports etc.) and with particular emphasis on the Kidd Breccia. The author worked on the property previously in the winter of 1968. The purpose of the field work, and subsequent office work, was to re-evaluate the prospect, with a more positive emphasis on the possibility of commercial quantities of silver, rather than copper, (for which the prospect is best known). Consequently a brief re-examination of the property was made, and this portion of the examination was augmented by cutting, polishing, and examining sections under the binocular microscope. Microscopic work was conducted to determine the mineralogic form of silver that is present in rocks in and around the breccia pipe, and to determine (if possible) why eyeball estimation of the "percent copper" in rocks in the Aspen Grove area is so often in excess of that reported by assay.

This report describes a portion of this work and was prepared for assessment work submission specifically on the Ex #1, Ex #2, and Ex #1 fraction claims, located immediately northwest of the breccia pipe where the specimens were collected.

A - 2 SUMMARY AND CONCLUSIONS

1. David Minerals Ltd. of Vancouver, B. C. owns some 50 claims and fractions in the Aspen Grove copper camp in southern B. C. The property lies immediately east of paved highway #5 between Princeton and Merritt.
2. Old workings on the property consist of trenches, adits, and pits; and fairly recent work has included soil chemistry and diamond drilling. Most of the several decades of exploration work had been centered to the north of the Kidd Breccia Pipe, and has been concerned atmost exclusively with possible economic values in copper.



3. The author re-investigated the property, on behalf of Mr. Hans Haveroen, in order to determine:

(a) The possibility that economic mineralization exists in and to the south of the breccia pipe.

(b) The possibility that silver, rather than copper mineralization was more persistent or more important and in addition the mineralogy associated with silver values. (reported up to several ounces of Ag per ton).

(c) The cause of often "over estimation", (hand lens wise), the percentage of copper in mineralization portions of bedrock in the Aspen Grove camp.

4. This report deals with portions of parts (b) and (c) of #3 above, and is based on observations described in section C of this report.

5. The Aspen Grove camp is well known for small copper showings, widespread areas of copper stain and chalcopyrite patches which when drilled, or channel sampled and assayed do not appear to "run" as high in copper as expected. Specimens observed microscopically by the author show that pyrite and chalcopyrite are often intimately admixed, and when these mixed "blebs" are (even the most slightly) tarnished then copper colors predominate thus making distinction, and "eyeball" estimation, almost impossible. In addition some of the admixed blebs are so small that when viewed with an ordinary, say 10x hand lens, the bright yellow chalcopyrite color predominates and therefore may bias the observer.

6. Silver values are somewhat sporadic but quite persistent in both Nicola and coarser grained (feeder) rocks in the Aspen Grove area. High silver zones are sometimes reported as simply shears in relatively unmineralized rocks.

The author did not positively identify any silver bearing mineral in the specimens examined, however some of the samples were selected for areas reported at plus 2 ounces Ag per ton. There is a possibility however that the chalcocite is of an argentiferous variety (stromeyerite,  $(Ag, Cu)_2S$ ).

Note: See Little, H. W. (1960) G.S.C. Memoir 308: Nelson Map area: re:

Silver King Mine, in the silver-copper belt where W. R. Bangar reports "stromeyerite is the only important argentiferous mineral".



7. The Kidd Breccia is an important structural and mineralization center and additional work on this copper - silver prospect is recommended.

Respectfully submitted,



A handwritten signature in black ink, appearing to read 'D. R. Cochrane', is written over a circular professional engineer's seal. The seal is partially obscured by the signature.

D. R. Cochrane, P. Eng.,  
Nov. 25, 1975  
Delta, B. C.



PART B: SETTLING

B - 1 LOCATION AND ACCESS

The settlement of Aspen Grove is 23 miles south of Merritt on Highway #5, and 35 miles north of Princeton. David Mineral's claims lie 2 miles northeast of the Aspen Grove store, and normal access is by a number of unsurfaced roads which proceed east from Highway #5 about one mile north of the store. The claims lie immediately south of the Golden Sovereign Group described in G.S.L. Memoir 243, and north of Alleyne Lake. The latitude is 49° 55' North and the longitude is 120° 35' West.

B - 2 CLAIMS AND OWNERSHIP

The Aspen Grove property of David Minerals Ltd. consist of a group of surveyed and unsurveyed claims and fractions, collectively called the Halo group. It includes the following:

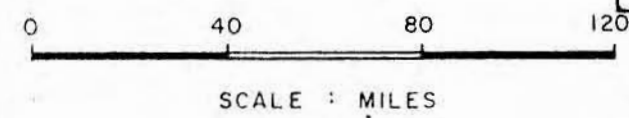
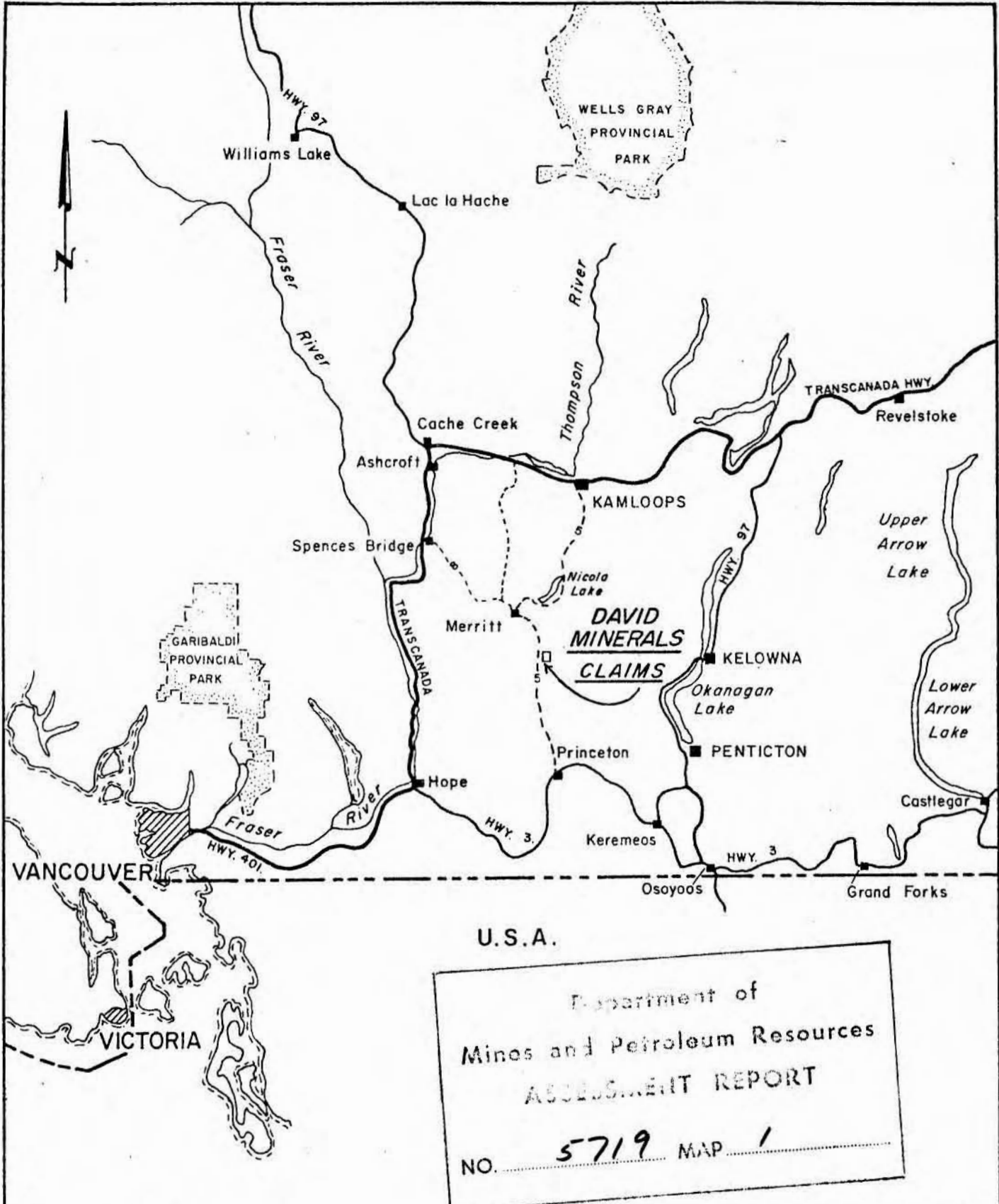
<u>Claim Name</u>	<u>Record Number</u>
Halo #1 to #6 inclusive	1363 to 1368 inclusive
Halo fraction	
Halo #2 fraction	21067
Broatch #1 and #2	21670, 21671
Broatch #3 and #4	
Ram fraction	32577
Ex #1, #2 and #1 fraction	50905 / 07 / 06
Touch #1 to #8	29446 to 29453

They lie in a contiguous block in the Nicola M.D. and are outlined on the B. C. Department of Mines minerals map 92 H/15.

B - 3 GENERAL SETTING

The Halo group is situated in the Thompson plateau subdivision of the British Columbian interior plateau physiographic system. This is, in general, a gently rolling upland of low to moderate relief. The local Aspen Grove area, lies within the Fairweather Hills, with elevations normally between 3500 and 4500 feet. It is rather impressive area of British Columbia, with a moderately dry climate, open fields, bushy





**DAVID MINERALS LTD.**  
 ASPEN GROVE AREA - KAMLOOPS MINING DIVISION, B.C.

LOCATION MAP



DRAWN R.K., B.C.	DATED NOV./75	FIG. NO. 1
CHECKED <i>AK</i>	JOB NO. 1064 - C	

draws, and the landscape dotted with lakes.

The ground control grid lies at about 4000 feet in elevation and covers a small hill, gently sloping in all directions from near the center of the area surveyed.

The general region is underlain dominantly by Upper Triassic Nicola group intermediate volcanics with minor amounts of sediments. It is intruded by stocks, plugs and dikes of Jurassic Coast Acidic intrusions. A series of north striking faults trend across the area surveyed. One of the focal points of economic interest is the Big Kid Breccia, consisting of altered brecciated diorite, with silicification, carbonatization and sections mineralized with magnetite, pyrite, chalcopyrite, bornite and chalcocite. A number of pits, adits, trenches and drill holes have partially explored the breccia.

It is believed that only a relatively thin mantle of glacial drift covers much of the bedrock surface.





PART C: WORK AND RESULTS

C - 1 GEOLOGICAL

The geology of the Kidd Breccia area is well described in previous reports, including private, assessment and in various B. C. Dept. of Mines Publications.

The author's inspection was greatly facilitated by the company of Mr. Hans Haveroen who has spent a great deal of time on the property during the last decade or two. An area to the north, then through the breccia, and then south of the breccia, was traversed. The author's geological observations agreed with those of T.J.R. Godfrey (1972); and P. Christopher of the Dept. of Mines. (Aspen Grove sheet).

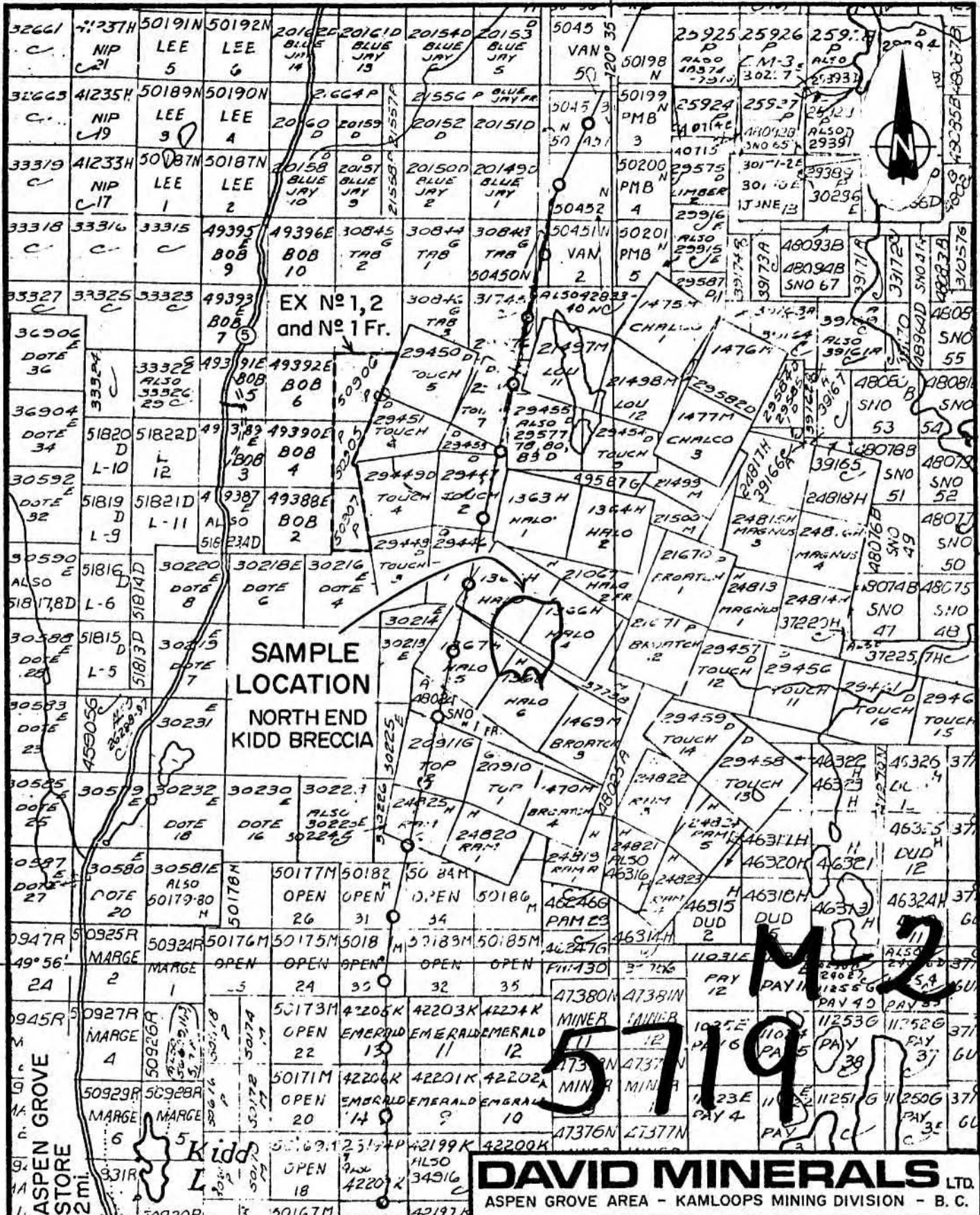
Readily observed metallic minerals in the hand specimen include pyrite, chalcopyrite, chalcocite, and magnetite. These minerals occur in various proportions and quantities in the breccia itself, (disseminated, in blebs and as fracture fillings) in certain areas of the microdiorite and greenstones to the north, and to the south (especially in shear zones).

The quantity of copper was somewhat self evident (in the percentage of secondary copper minerals, chalcopyrite and chalcocite), however there were no minerals observable by hand lens to indicate the nature of the silver mineralization. Consequently several samples were cut, polished and examined under the microscope in the hope of identifying the silver mineral(s) and various associations it may have with other minerals.

C - 2 MINERALOGY

A total of six polished sections were studied from the north end of the Kidd Breccia. In the hand specimens large blebs of both pyrite and chalcopyrite were easily identifiable (up to 4 mm. in diameter) in addition to euhedral, to subhedral, magnetite crystals. Limonite, malachite and azurite were the predominate secondary minerals. Chlorite, both K. and plagioclase feldspars, epidote, and quartz, formed





**DAVID MINERALS LTD.**  
 ASPEN GROVE AREA - KAMLOOPS MINING DIVISION - B. C.

**CLAIMS MAP**

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CHECKED: <i>pre</i>	JOB NO: 1064 - C	



most of the gangue. Angular fragments of altered greenstone, up to several inches across are juxtaposed with a breccia quartz-diorite in the breccia itself. Microscopic examination revealed the following metallic minerals in decreasing order of abundance: magnetite, pyrite, chalcopyrite, chalcocite, and native copper(?). The latter was so fine grained as to be only tentatively identifiable. The chalcocite was first noticed as a malachite stained iron black, rather massive mineral in a small carbonate vug. When probed with a needle it was found to be soft, and decidedly non-magnetic. Magnetite is disseminated throughout the groundmass in fine subcrystalline form and in some places makes up to 7 - 8% of the total value. It is easily confused at first glance with chalcocite. Chalcopyrite and pyrite occur predominantly along small fractures, and these two minerals are often intimately intergrown. The identification of chalcopyrite and eyeball estimation of % Cu in the Aspen Grove area is infamous for inaccuracy and the intergrowth of pyrite - chalcopyrite (and subsequent tarnish and presence of secondaries) would appear to confirm the difficulties involved in eyeball estimates. Some of the pyrite / chalcopyrite intergrowth blebs are so fine that casual (even 10x hand lens magnification) would lead one to believe the bleb was entirely chalcopyrite, thus leading to an over estimation of the percent copper in a given specimen.

Respectfully submitted,



D.R. Cochrane, P. Eng.,  
November 25, 1975  
Delta, B. C.



APPENDIX

ASSESSMENT WORK DETAILS

Project: David Minerals / Kidd Breccia

Location: 2 miles north of the Aspen Grove Store, Nicola M. D.  
N.T.S. 92 H/15 E.

Work Done: Property re-examination. Polished section work.

Dates: Field work: Mobilization, September 25, 1975  
Examination, September 26, 1975  
Demobilization, late September 26, 1975  
Review of data: early September, 1975  
Microscopic work: November 22 & 23, 1975  
Report preparation: November 24, 1975

Personnel: Mr. H. Haveroen: Prospector, field examination.  
D. R. Cochrane, P. Eng. - see dates above.  
B. A. Cochrane, A.O.C.A. Drafting (Nov. 26, 1975)  
V. Elliott - typing November 26, 1975.

Costs:

D. R. Cochrane P. Eng.:  
3 days @ \$ 200.00 / day \$ 600.00

D. R. Cochrane, P. Eng.  
September 25, 1975



DAVID MINERALS (KIDD BRECCIA) PROPERTY  
Photomicrograph of admixed pyrite and chalcopyrite (X 90)

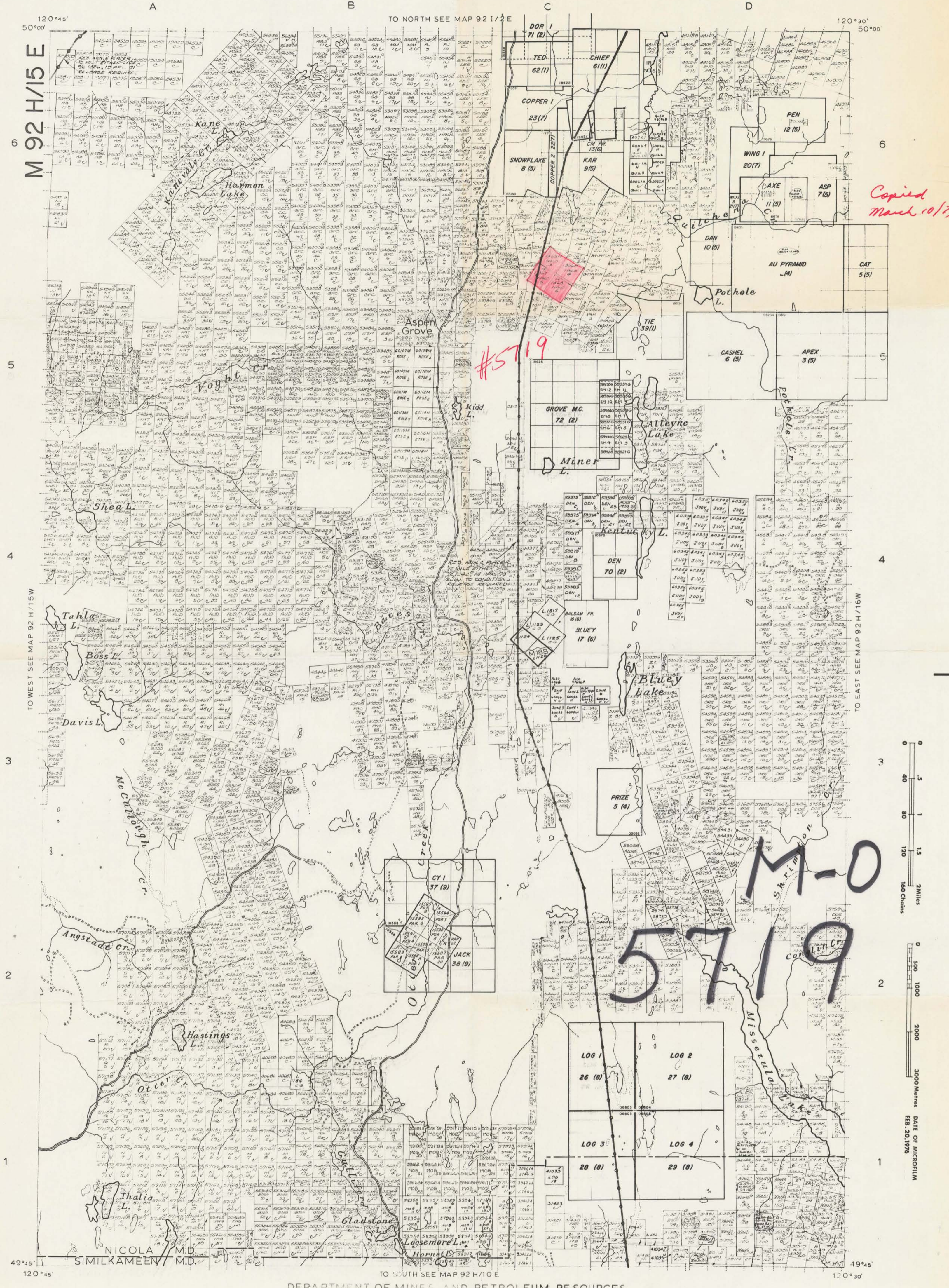
To accompany a report by D.R. COCHRANE, P. Eng., dated Nov. 25/75, at Delta, B.C.



DAVID MINERALS (KIDD BRECCIA) PROPERTY  
Photomicrograph of admixed pyrite and chalcopyrite (X 90)

To accompany a report by D.R. COCHRANE, P. Eng., dated Nov. 25/75, at Delta, B.C.

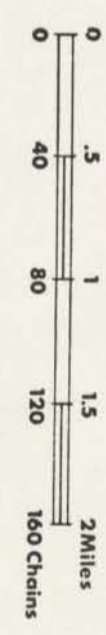




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